

MAR 9 1994

DES

Docket Nos. 50-317
50-318

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

Dear Mr. Denton:

SUBJECT: NRC REGION I COMBINED INSPECTION REPORT NOS. 50-317/94-07
AND 50-318/94-07 - LOSS OF 120 VAC VITAL ELECTRICAL PANEL

This letter transmits the NRC Region I Inspection Report for the announced inspection conducted by Mr. James Trapp and other members of our staff from January 26-30, 1994, at Calvert Cliffs Units 1 and 2, in Lusby, Maryland. Mr. Trapp discussed the findings of this inspection with members of your staff at the conclusion of the inspection.

The objective of this inspection was to conduct a detailed review of the circumstances surrounding the loss of a 120 Vac vital electrical panel and an associated Unit 1 reactor trip on January 24, 1994. The causes for the subsequent temporary loss of electric power to safety-related bus 14 were also reviewed by the inspectors. The inspection consisted of conducting interviews, reviewing documents, observing troubleshooting activities and assessing the adequacy of the corrective actions. This event was important because the combination of routine surveillance testing and the failure of a static inverter resulted in a reactor trip and the subsequent loss of a safety-related electrical bus.

The inspectors concluded that the plant safety-related systems responded as designed to the conditions that existed during this event. The root cause evaluations and trouble-shooting activities conducted to determine the causes for the static inverter failure were comprehensive and generally well controlled with the exception of the troubleshooting activity that caused the failure of the buffer amplifier card. The corrective actions taken to repair and test the static inverter were appropriate. The Plant Operations Safety Review Committee demonstrated a conservative approach to safety by establishing sound test criteria prior to restoring the static inverter to service. A modification which will improve the engineered safety feature actuation system response to a loss a vital 120 Vac panel, scheduled for installation during this refueling outage, was noted as a positive trip reduction initiative. However, the inspectors noted that a recent failure to properly control work activities had resulted in a loss of ventilation to static inverter 12 and the inverter became overheated. The inspectors concluded that this event may have contributed to the failure of this inverter.

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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Your cooperation with us is appreciated.

Sincerely,

[Signature]

William H. Ruland, Chief
Electrical Section
Engineering Branch
Division of Reactor Safety

Enclosure: Combined NRC Inspection Report Nos. 50-317/94-07 and 50-318/94-07

cc w/encl:

G. Detter, Director, Nuclear Regulatory Matters (CCNPP)
R. McLean, Administrator, Nuclear Evaluations
J. Walter, Engineering Division, Public Service Commission of Maryland
K. Burger, Esquire, Maryland People's Counsel
R. Ochs, Maryland Safe Energy Coalition
K. Abraham, PAO (2)
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of Maryland (2)

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bcc w/encl:

Region I Docket Room (with concurrences)

C. Cowgill, DRP

L. Nicholson, DRP

R. Fuhrmeister, DRP

P. Wilson - Calvert Cliffs

bcc w/encl: (VIA E-MAIL)

M. Shannon (MXS1)

V. McCree, OEDO

R. Capra, NRR

D. McDonald, NRR

RI:DRP
Fuhrmeister

2/27/94

RI:DRS
Wiggins

3/1/94

RI:DRS
Della Greca

4/4/94
2/22/94

RI:DRS
Trapp

2/24/94

RI:DRS
Ruland

3/9/94

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