

ROBERT E. DENTON
Vice President
Nuclear Energy

Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657
410 586-2200 Ext. 4455 Local
410 260-4455 Baltimore



April 8, 1994

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Root Cause Analysis Results - 10 CFR 50.9: Erroneous Information
Supplied in a License Amendment Request

REFERENCES: (a) Letter from Mr. R. E. Denton (BGE) to Document Control Desk
(NRC), dated February 9, 1994, 10 CFR 50.9 Notification Concerning
Erroneous Information Supplied in a License Amendment Request

(b) Letter from Mr. R. E. Denton (BGE) to Document Control Desk
(NRC), dated April 1, 1993, License Amendment Request; Onsite
Power Distribution Systems, A.C. Distribution - Operating

As stated in Reference (a), we have performed a root cause analysis to identify why inaccurate information was not detected during our review and approval of a License Amendment Request [Reference (b)].

Attached are the results of the root cause analysis. Should you have any further questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,

RED/MDM/bjd

Attachment

9404140337 940408
PDR ADOCK 05000317
P PDR

cert# 2799387229

ADD

Document Control Desk

April 8, 1994

Page 2

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
R. A. Capra, NRC
D. G. McDonald, Jr., NRC
T. T. Martin, NRC
P. R. Wilson, NRC
R. I. McLean, DNR
J. H. Walter, PSC

ATTACHMENT (1)

10 CFR 50.9 - LICENSE AMENDMENT REQUEST ROOT CAUSE ANALYSIS REPORT RESULTS

EVENT SUMMARY

In October, 1992, the Baltimore Gas and Electric Company (BGE) Nuclear Operations Section requested Nuclear Regulatory Matters (NRM) to prepare a License Amendment Request (LAR) to add a new Action requirement to Technical Specification 3.8.2.1. The LAR was requested to address the situation when a 120 VAC vital inverter is out of service.

In accordance with Calvert Cliffs Instruction (CCI)-143, NRM requested the Design Engineering Section (DES) to provide the technical justification for the LAR. On October 23, 1992, a DES Engineering Technician sent the responsible Licensing Engineer in NRM the proposed justification. Because the DES Technician was not a qualified Design Engineer, under BGE's design policies, his qualified work group leader reviewed and signed the justification. The justification contained the inaccurate information regarding the inverter backup bus being powered by a Class 1E 480/120 VAC regulated transformer [Reference (a)].

In January, 1993, Licensing provided the draft LAR, with the inaccurate information, to DES and the Plant Engineering Section (PES) for technical review. It was also provided to the Operations Section and Electrical and Controls (E&C) Maintenance Section so they could review it for impact on their respective organizations. The final LAR was presented to and recommended for approval by the Plant Operations and Safety Review Committee (POSRC) on March 24, 1993. The Off-Site Safety Review Committee (OSSRC) reviewed and recommended the LAR for approval on March 25, 1993. All of these groups did not detect the inaccurate information.

On April 1, 1993, BGE submitted the LAR to the Nuclear Regulatory Commission (NRC) for approval, and on October 29, 1993, the LAR was approved and an NRC Safety Evaluation Report (SER) was issued. On February 3, 1994, the DES engineer who signed the original technical justification was reviewing the SER and identified the error. On February 7, 1994, we determined the error could be significant and notified our NRC Project Manager. An Issue Report was also written to document the event.

ROOT CAUSES

The root cause analysis identified two problems:

1. The initial technical justification contained, and the subsequent Responsible Design Organization (RDO) review failed to catch, the error. The technician and engineer who prepared the technical justification were both aware they were accountable for the LAR's technical accuracy and were aware of their supervisor's expectations in this area. They did not know how they missed the error but felt it had to do with their familiarity of the issue (both had worked with this issue since January, 1991). The technician's intent was to state the power to the transformer was Class 1E and diesel backed, not that the transformer itself was Class 1E.

The technical justification memo and the RDO review of the draft LAR, required by CCI-143, were both initialed by the technician's work group leader, unit supervisor, and General Supervisor. The unit supervisor and General Supervisor's signatures did not mean they had reviewed the LAR for technical content. Rather they indicated that the appropriate qualified individual (work group leader in this case) had reviewed it.

ATTACHMENT (I)

10 CFR 50.9 - LICENSE AMENDMENT REQUEST ROOT CAUSE ANALYSIS REPORT RESULTS

2. Plant Engineering Section failed to catch the error in the LAR. As subject experts, PES was expected to review the LAR for technical accuracy. The other organizations who were part of the overall review process were not procedurally required or expected to detect this type of error. Operations and E&C sections reviewed the LAR for organizational impact rather than for technical accuracy. Licensing, POSRC, and OSSRC reviewed it from a safety perspective.

SAFETY IMPLICATIONS

Although there was no actual plant safety challenge associated with this event, it revealed a weakness in the review process used for License Amendment Requests sent to the NRC for approval.

CORRECTIVE ACTIONS

In response to this event, two specific actions have been taken to improve the thoroughness and quality of the review of LAR submittals:

1. The Nuclear Engineering Department will have an independent review performed for all NRC submittals that require an RDO review. This independent review will verify the same information as reviewed by the individual performing the RDO review.
2. Licensing will revise CCI-143 to clearly define the responsibilities of individuals performing technical reviews of LARs. The changes will apply to both the RDO reviewers in the Nuclear Engineering Department and other groups such as PES.