

CHARLES H. CRUSE
Vice President
Nuclear Energy

Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
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January 20, 1997

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
Reply to Notice of Violation -- NRC Region I Integrated Inspection Report
Nos. 50-317(318)/96-08 and Notice of Violation

REFERENCE: (a) Letter from Mr. L. T. Doerflein (NRC) to Mr. C. H. Cruse (BGE), dated
December 20, 1996, NRC Region I Integrated Inspection Report
Nos. 50-317/96-08 and 50-318/96-08 and Notice of Violation

In response to Reference (a), Attachment (1) is provided.

Should you have questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,

for

C. H. Cruse
Vice President - Nuclear Energy

CHC/RCG/bjd

Attachment

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
Director, Project Directorate I-1, NRC
A. W. Dromerick, NRC

H. J. Miller, NRC
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ATTACHMENT (1)

REPLY TO NOTICE OF VIOLATION NOS. 50-317(318)/96-08-02 FAILURE TO MONITOR CRITICALITY OF NEW REACTOR FUEL

Notice of Violation Nos. 50-317/96008-02 and 50-318/96008-02 describe a non-conformance involving the criticality monitoring requirements for special nuclear material (SNM). The Notice of Violation states, in part, that:

"Part 70.24(a) of Title 10 of the Code of Federal Regulations, requires, in part, each licensee authorized to possess special nuclear material (SNM) of sufficient quantity, to maintain a radiation monitoring system in each area where SNM is handled or stored that will alarm if accidental criticality occurs. Furthermore, applicable emergency procedures must be maintained to ensure personnel are withdrawn to an area of safety when the alarm sounds.

Contrary to the above, as of November 30, 1996, BGE never installed a radiation monitoring system capable of alarming should an accidental criticality occur in the common Calvert Cliffs Units 1 and 2 new fuel storage areas. Furthermore, BGE's initial exemptions for the requirements of 10 CFR 70.24(a) (contained as part of its original NRC Materials License for possessing SNM) expired when the Calvert Cliffs Units 1 and 2 construction permits were converted to operating licenses in 1974 and 1976 respectively. At that time, BGE failed to install a radiation monitoring system and implement appropriate emergency procedures, or renew its exemptions."

I. REASON FOR THE VIOLATION

The violation above cites a failure to meet the criticality monitoring requirements of 10 CFR 70.24. Specifically, 10 CFR 70.24(a) requires a monitoring system that will energize clearly audible alarms if accidental criticality occurs in each area in which licensed quantities of SNM are handled, used, or stored. This section of the Code further requires that emergency procedures be maintained for each area in which licensed quantities of SNM are handled, used, or stored, to ensure that all personnel withdraw to an area of safety when the alarm sounds. These procedures must include the conduct of drills to familiarize personnel with the evacuation plan, designation of responsible individuals for determining the cause of the alarm, and placement of radiation survey instruments in accessible locations for use in such an emergency. Although prior exemption from the requirements of 10 CFR 70.24(a) was granted with the issuance of Calvert Cliffs SNM License Nos. SNM-1364 and SNM-1624, the exemption was not specifically carried forward with the issuance of the Part 50 Operating License. The Nuclear Regulatory Commission (NRC) inspectors concluded that the Baltimore Gas and Electric Company's (BGE) failure to have a criticality monitoring system and emergency procedures for the new fuel storage area and the spent fuel pool was a violation of 10 CFR 70.24(a).

On August 23, 1973, Amendment No. 1 was issued to BGE SNM License No. SNM-1364. This amendment added item No. 12 which states, "the licensee is hereby exempt from the requirements of Section 70.24, 10 CFR 70, insofar as this section applies to material held under this license." On July 31, 1974, Facility Operating License No. DPR-53 was issued for Calvert Cliffs Nuclear Power Plant Unit 1. However, the previously granted exemption discussed above was not carried forward with the issuance of DPR-53.

On May 18, 1976, NRC Materials License No. SNM-1624 was issued to BGE. The license authorized, in part, the receipt, possession, inspection, and storage of SNM in the form of fuel assemblies. The NRC stated in the accompanying cover letter that, "In your application you have requested an exemption from

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the provisions of 10 CFR 70.24, which would exempt you from the requirement of installing a criticality accident alarm system. Because of the inherent features associated with storage and inspection of new unirradiated fuel and the near impossible prospect of accidental criticality, it is hereby determined that you have shown good cause for granting the exemption and that granting such exemption will not endanger life or property or the common defense and security and is otherwise in the public interest." Item No. 11 for SNM-1624 stated that, "the licensee is hereby exempted from the requirements of Section 70.24, 10 CFR 70, insofar as this section applies to materials held under this license." On August 13, 1976, Facility Operating License DPR-69 was issued for Calvert Cliffs Nuclear Power Plant Unit 2. However, the previously granted exemption request, Item No. 11 for SNM-1624, was not carried forward with issuance of DPR-69.

The cause of the violation is not known at this time and is being addressed; see Section III.

II. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

During an audit conducted at Calvert Cliffs during April and May 1996 to assess nuclear fuel management and the Independent Spent Fuel Storage Installation, a member of our Quality Audits Unit discovered that Calvert Cliffs Units 1 and 2 did not appear to meet the criticality monitoring requirements of 10 CFR 70.24(a). The auditor wrote an issue report, dated May 22, 1996, documenting his concern and recommended requesting an exemption to these requirements.

On August 19, 1996, pursuant to the requirements of 10 CFR 70.14(a) and 10 CFR 70.24(d), BGE submitted to the NRC a request for a permanent license exemption for Calvert Cliffs Units 1 and 2 from the criticality monitoring requirements specified in 10 CFR 70.24(a). Section 70.24(d) provides for licensee exemption, in whole or in part, from the requirements of 10 CFR 70.24, if "good cause" is shown. The application for exemption shall specify the reason for the requested relief. Under Section 70.14(a), the NRC is authorized to grant an exemption provided the exemption: (a) is authorized by law; (b) will not endanger life, property, or the common defense and security; and (c) is in the public interest.

Baltimore Gas and Electric Company believes that good cause exists and that the exemption requirements of 10 CFR 70.14(a) are satisfied as addressed in the exemption request dated August 19, 1996 (Reference 1). This exemption request states, in part, that BGE believes the requested exemption: (a) is clearly authorized by law; (b) is consistent with the common defense and security since the presence or absence of a criticality monitoring system does not ensure against the loss or diversion of SNM; (c) will not endanger life or property because the manner in which SNM is used, stored, and handled at Calvert Cliffs provides adequate protection for the health and safety of the public. Specifically, design characteristics, procedural controls, and accident analysis ensure that accidental or inadvertent criticality will not occur at Calvert Cliffs; and (d) is in the public interest because the installation and continued maintenance of a criticality accident monitoring system would require a considerable expenditure of resources on a system that has been shown by evaluation to be unnecessary. These resources could be better used to augment the safe operation of the plant in other areas.

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In addition, the license exemption request cited examples where other Part 50 licensees have been granted exemptions from the requirements of Section 70.24(a). The approval for these exemptions were published in the Federal Register on October 29, 1991. Calvert Cliffs Nuclear Power Plant is similar to these other facilities granted such an exemption.

At this time, BGE has not received notification approving or denying this requested exemption.

III. CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

An investigation is being conducted to determine the cause(s) of this violation, and to determine if the potential for missing similar requirements exists. Corrective actions will be developed based upon the results of the investigation.

IV. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved upon notification that BGE's requested permanent exemption from the criticality monitoring requirements specified in 10 CFR 70.24(a) has been approved. If this request is denied, then full compliance will be achieved upon installation of the criticality monitoring system and procedures necessary to meet the requirements of 10 CFR 70.24(a). We are currently evaluating compensatory actions and plan to have these actions in place prior to any fuel movement.

V. REFERENCE

- (1) Letter from Mr. C. H. Cruse (BGE) to Director, Office of Nuclear Material Safety and Safeguards (NRC), dated August 19, 1996, Exemption from Criticality Monitoring Requirements