



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

March 4, 1983

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

Director of Nuclear Reactor Regulation
Attention: Mr. R. A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2; Dockets Nos. 50-317 and 50-318
Request for Exemption from Fire Protection Requirements

Gentlemen:

Baltimore Gas and Electric Company, pursuant to 10 CFR Part 50, paragraph 50.12, hereby requests an exemption from certain physical protection requirements of 10 CFR 50, Appendix R, paragraph III.G.2.b and from certain schedular requirements of 10 CFR 50.48(c) as they relate to fire protection features requiring plant shutdown for installation.

BACKGROUND

In our letter dated February 23, 1983 we requested exemption from the schedular requirements of 10 CFR 50.48(c) for certain non-outage related emergency lighting modifications required by 10 CFR 50, Appendix R, paragraph III.J. In addition, that letter provided clarification on the fire detection and suppression systems which are installed in the Calvert Cliffs main control room and intake structure. During subsequent conversations with NRC personnel it was determined that under the provisions of 10 CFR 50.48(b), previous NRC acceptance of our fire protection provisions for the control room and the intake structure documented in safety evaluation reports issued prior to January 1, 1979 was modified to require conformance with Appendix R requirements since these provisions fall under the scope of Section III.G, "Fire protection of safe shutdown capability."

The Fire Protection Safety Evaluation Report (FPSE) issued by the NRC acknowledges that no sprinkler system is installed in either the intake structure or the main control room (Room 306). This fact has also been reflected in fire protection inspection reports that have been issued by the NRC. Contrary to these acknowledgements, the final supplement to the SER dated September 27, 1982, states (Page 4, Item C) that our submittal listed alternate shutdown areas and that all other areas would meet Section III.G.2 of Appendix R. This list, however, was submitted as a clarification to the Interactive Cable Analysis (ICA) for Unit 1. The ICA, and therefore the list, was written with reference to electrical cables and equipment and was created within the framework of previously issued SER's. The purpose for the clarifying

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statements in our February 23, 1983 letter was to ensure that you had not construed the list as an intention on our part to install sprinklers in the control room and the intake structure. Rather, it is our intention to pursue exemptions from the requirements of Appendix R such that automatic fire suppression can be waived for these areas.

As stated above, our February 23, 1983 letter requested exemption from the schedular requirements of 10 CFR 50.48(c) for certain non-outage related fire protection modifications. It is our desire to expand our request for schedular relief to cover all outage related modifications such that these modifications would not be required before the next scheduled refueling outage for each unit.

EXEMPTION REQUESTS

- I. 10 CFR 50, Appendix R, paragraph III.G.2.b would require installation of automatic fire suppression systems and separation of redundant equipment in the control room and intake structure to provide adequate fire protection for safe shutdown equipment located in these areas. Pursuant to the following discussion, we request an exemption from the requirement to install automatic fire suppression systems in these areas.

A. Control Room

This room contains redundant wiring and control equipment in consoles and cabinets, equipped with metal dividing baffles, and open at the top for ventilation. As demonstrated in our Unit 1 and Unit 2 Interactive Cable Analysis, alternate shutdown capability exists independent of a fire in this area.

The control room is continuously manned. Therefore, plant personnel are able to personally and constantly monitor its contents. Personnel will be able to observe signs of an incipient fire. To supplement detection by plant personnel, the area is equipped with smoke detectors in the control room and in the HVAC ducts for additional warning of an incipient fire. With these two forms of detection, plant personnel can rapidly detect and extinguish a fire with the local manual fire suppression systems (i.e., hose stations and portable extinguishers).

As required by previous SER's, we have: (1) provided nozzles for manual hose protection compatible with the hazards and equipment in the control room; (2) removed all wooden furniture and shelves from the control room except for work benches in the Log and Test Instrument Room; and (3) provided metal partitions to separate adjoining panels from the computer terminal.

Since this area is continuously manned and has a low fire load, automatic fire detection and rapid extinguishment capability, we feel that no further modifications are required to comply with the intent of Appendix R for fire protection in the control room.

B. Intake Structure

The intake structure is an enclosed concrete structure having the capability of a three-hour minimum fire rating. The structure contains two watertight steel doors which are commensurate with the fire hazard on both sides of the doors and which provide fire fighter access/egress. The area immediately west of the fire wall is protected by automatic sprinklers, reducing potential exposure fires to the intake structure.

Salt water pumps (three per unit) are located in separate concrete-lined pits below the floor level of the structure and are separated by approximately 61 feet. Each pump's motor is mounted approximately 14 feet above floor level directly above the pump. Power cables from each salt water pump are routed in conduit to the west wall of the intake structure and are separated by a minimum of 45 feet horizontally from those of the adjacent pump.

The circulating water pumps (six per unit) are each set in a pit in the floor of the structure to contain any oil which may leak from the pump. They are separated from the salt water pumps by approximately 20 feet and from each other by over 30 feet.

BG&E has installed a fire detection system and additional hose stations in this area as required by the September 14, 1979 FPSEER. Unit 1 and Unit 2 Interactive Cable Analyses have documented cable locations. If a fire consuming all combustibles could be postulated within the Intake Structure, the low fire load (16,000 BTU/ft²) would result in an equivalent fire exposure of approximately 12 minutes.

The combination of equipment arrangement, large spatial separation*, low fire loading, assured hose coverage, and early warning fire detection capability make fire damage of more than one saltwater pump and its associated power cable highly unlikely. Consequently, we conclude that no further modifications are required to comply with the intent of Appendix R for fire protection in the intake structure.

- II. 10 CFR 50.48(c)(4) states that fire protection modifications requiring plant shutdown and prior NRC approval per paragraph (c)(5) shall be implemented in accordance with paragraph (c)(3) before startup after the earliest of the following events commencing 180 days after NRC approval:

- (i) the first refueling outage;
- (ii) another planned outage that lasts for at least 60 days; or
- (iii) an unplanned outage that lasts for at least 120 days.

We request exemption from scheduler requirements (c)(3)(ii) and (c)(3)(iii). Our engineering and construction schedules would not be capable of supporting all remaining outage-related fire protection modifications if an unplanned outage were to occur prior to the next scheduled refueling outages for each unit. Our current schedule lends priority status to those modifications not requiring an outage and which must be completed by March 27, 1983 (or by September 1, 1983 if our extension request of February 23, 1983 is granted). In excess of 50,000 manhours are required to perform the work necessary to carry out the modifications as described in our Unit 1 and 2 Interactive Cable Analyses. An unplanned outage could occur at any time and may not be of sufficient duration to permit completion of all

* The protection afforded equipment by separation and equipment arrangement is confirmed in the NRC Fire Protection SER dated September 14, 1979, Section 5.21.3, which states: "Floor area around each circulating water pump slopes down toward the pump forming a pit around the pump which is capable of containing a possible lube oil leakage from the pump. A fire involving one of the salt water pumps or circulating water pumps would be unlikely to affect redundant safety-related equipment."

modifications even if the outage were to extend beyond 120 days. At present, there are no planned outages of 60 days or greater duration scheduled between now and the next Unit 1 and 2 refueling outages; however, if such an outage were to be planned, completion of the remaining outage-related modifications on such short notice would be impractical.

SAFETY ANALYSIS

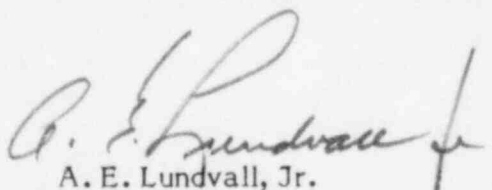
We have reviewed the exemptions requested by this letter and have determined that inasmuch as these requests are within the conditions set forth in 10 CFR 50, paragraphs 50.12, 50.48 and Appendix R, they will not endanger life or property or the common defense and security. This is based, in part, on the fact that adequate fire detection and manual extinguishment capability is provided in the areas in question. These facts, when considered in light of the low fire loadings that exist in these areas, support the conclusion that a fire resulting in damage to redundant trains of safe shutdown equipment is highly improbable.

FEE DETERMINATION

We have determined, pursuant to discussions with your staff, that this request is not fee-bearing contingent upon approval by the NRC.

BALTIMORE GAS & ELECTRIC COMPANY

By:


A. E. Lundvall, Jr.
Vice President - Supply

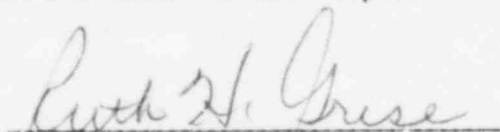
STATE OF MARYLAND :

TO WIT:

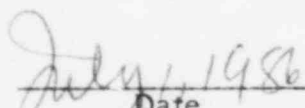
CITY OF BALTIMORE :

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 executed the foregoing for the purposes therein set forth; that the statements made therein are true and correct to the best of his knowledge, information, and belief; and that he was authorized to execute the same on behalf of said Corporation.

WITNESS My Hand and Notarial Seal:


Notary Public

My Commission Expires:


Date

AEL/BSM/MDP/gvg

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