UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

DEC 11 1980

Docket Nos. 50-317
50-318

Baltimore Gas and Electric Company
ATTN: Mr. A. E. Lundvall, Jr.
Vice President, Supply
P. O. Box 1475
Baltimore, Maryland 21203

Gentlemen:

Subject: Health Physics Appraisal

The NRC has identified a need for licensees to strengthen the health physics programs at nuclear power plants and has undertaken a significant effort to assure that action is taken in this regard. As a first step in this effort, the Office of Inspection and Enforcement is conducting special team appraisals of the health physics programs, including the health physics aspects of radioactive waste management and onsite emergency preparedness at all operating power reactor sites. The objectives of these appraisals are to evaluate the overall adequacy and effectiveness of the total health physics program at each site and to identify areas of weakness that need to be strengthened. We will use the findings from these appraisals as a basis not only for requesting individual licensee action to correct deficiencies and effect improvements but also for effecting improvements in NRC requirements and guidance. This effort was identified to you in a letter dated January 22, 1980, from Mr. Victor Stello, Jr., Director, NRC Office of Inspection and Enforcement.

During the period of May 12-May 23, 1980, the NRC conducted the special appraisal of the health physics program at the Calvert Cliffs Nuclear Power Plant Units 1 and 2. Areas examined during this appraisal are described in the enclosed report (50-317/80-09; 50-318/80-07). Within these areas, the appraisal team reviewed selected procedures and representative records, observed work practices, and interviewed personnel. It is requested that you carefully review the findings of this report for consideration in effecting improvements to your health physics program.

The findings of the appraisal at Calvert Cliffs indicate that although your overall health physics program is adequate for present operations, several significant weaknesses exist. These include the following:

-- ambiguous assignment of responsibility to the Plant Health Physicist;

-- unreasonably large span of supervisory control being exercised by the Radiation Safety Foreman;

-- lack of a formally established ALARA program (personnel exposure maintained As Low As Reasonably Achievable) in accordance with the guidance of Regulatory Guide 8.8;

-- lack of adequate management controls in Emergency Preparations;

-- lack of effective methods to meet the requirements of certain TMI Lessons Learned recommendations.

These findings are discussed in more detail in Appendix A, "Significant Appraisal Findings." We recognize that an explicit regulatory requirement pertaining to each significant weakness identified in Appendix A may not currently exist. However, to determine whether adequate protection will be provided for the health and safety of workers and the public, you are requested to submit a written statement within twenty (20) days of your receipt of this letter, describing your corrective action for each significant weakness identified in Appendix A including: (1) steps which have been taken; (2) steps which will be taken; and (3) a schedule for completion of action. This request is made pursuant to Section 50.54(f) of Part 50, Title 10, Code of Federal Regulations.

During this appraisal, it was also found that certain of your activities did not appear to have been conducted in full compliance with NRC requirements as set forth in the Notice of Violation enclosed herewith as Appendix B. The items of noncompliance in Appendix B have been categorized into the levels of severity as described in our Criteria for Enforcement Action dated December 31, 1974. Section 2.201 of Part 2, Title 10, Code of Federal Regulations, requires you to submit to this office, within twenty (20) days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

You should be aware that the next step in the NRC effort to strengthen health physics programs at nuclear power plants will be the imposition of a requirement by the Office of Nuclear Reactor Regulation (NRR) that each licensee develop, submit to the NRC for approval, and implement a Radiation Protection Plan. Each licensee will be expected to include in the Radiation Protection Plan sufficient measures to provide lasting corrective action for significant weaknesses identified during the special appraisal of the current health physics program. Guidance for the development of this plan will incorporate pertinent findings from all special appraisals and will be issued by NRR in the fall of this year.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this material contains any information that you believe to be proprietary, it is necessary that you make a

written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (B)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, this letter and the enclosures will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Boyce H. Grier
Director

Enclosures:
1. Appendix A, Significant Appraisal Findings
2. Appendix B, Notice of Violation
3. Combined Office of Inspection and Enforcement Inspection Report Number 50-317/80-09; 50-318/80-07

cc w/encl:
R. M. Douglass, Manager, Quality Assurance
L. B. Russell, Plant Superintendent
T. Sydnor, General Supervisor, Operations QA
R. C. L. Olson, Principal Engineer
J. Deegan, Assistant General Supervisor, Programs Unit
J. A. Tiernan, Manager, Nuclear Power
R. E. Denton, General Supervisor, Training and Technical Services

APPENDIX A

SIGNIFICANT APPRAISAL FINDINGS

In the course of this appraisal, the following items were identified as needing improvement in order to achieve an acceptable program:

1. The position of Plant Health Physicist is deficient in that the individual has not been delegated the necessary authority commensurate with the responsibilities charged to him. Lack of a functional admendment to either assign the necessary authority or to relegate the position to one of technical assistance to the RPM has created a responsibility/authority dilemma which could be amplified in the new organizational structure.

   Particular details relating to this finding are contained in Section 1.2 of this report.

2. The current span of control for the Radiation Safety and Chemistry (RSC) Foreman is beyond reasonable expectation of affecting adequate management of the responsibilities assigned to the individual. The current situation (one supervisor managing 80 persons) could result in the condition that decisions that should be subject to professional review, will actually be made by technical level personnel or lower due to unavailability of the supervisor. Additional management personnel in this area to support and supervise this portion of the licensee's program should be considered to achieve an acceptable performance in the area.

   Particular details relating to this finding are contained in Section 1.3 of this report.

3. The Whole Body Counter, the licensee's primary device for bioassay is not subject to any adequate calibration sufficient to assure reproducible quantitative evaluation in humans. Lack of such calibration significantly decreases confidence in the results indicated and the reliability of the licensee's efforts in respiratory protection.

   Particular details relating to this finding are contained in Section 3.2 of this report.

4. A formally established ALARA program commensurate with the requirements of Regulatory Guide 8.8 has not been established, particularly in regard to the lack of any policy statement or commitment to ALARA from the licensee's management, the failure to establish measurable goals and objectives, and the means necessary to determine the success of the efforts taken in this area. Additionally, there is no analytical method, program or procedure now used by the licensee that provides guidance in determining if exposure reduction efforts produce results that are as low as is reasonably achieveable.

   Particular details relating to this finding are contained in Section 5.0 of this report.

5. The licensee's actions in regard to establishing techniques and procedures sufficient to meet the "Category A" requirements of NUREG 0578 relating to Items 2.1.8.a, 2.1.8.b and 2.1.8.c are deficient in that the procedures do not provide adequate user instructions to complete the operation satisfactorily, nor does the specified technique assure that personnel exposures will be as low as reasonably achieveable.

   Particular details relating to these findings are contained in Section 4.0 of this report.

6. There is no formal performance criteria established to determine the technical ability of personnel designated to perform as Radiation Safety and Chemistry technicians. The current practice in this area is not written or documented, and does not involve any testing or practical demonstration of technical ability.

   Particular details relating to this finding are contained in Section 2.0 of this report.

7. In regard to the aspects of the licensee's program which involve activities pertaining to Emergency Planning and Preparation, the following significant findings were noted:

   a. There is no assignment of an individual onsite to perform as an Emergency Planning Coordinator or a clear description of the individual's responsibilities and authority.

   b. There is no clarification of the onsite emergency organization by designation of the management structures for oversight of emergency environmental monitoring and in-plant radiation protection aspects of an emergency response.

   c. There is no separate procedure for each class of emergency specified in the Emergency Plan which specifies the Emergency Action Levels (EALs) and preplanned response actions required to be considered or implemented in response to each class of emergency.

   d. The emergency notification procedures do not clearly specify the action levels which will result in notification of the response organization, and reflect use of the Emergency Notification System (ENS) for notification of the NRC.

   e. There are no specific procedures governing the performance of offsite, onsite and in-plant radiation surveys and for the performance of emergency personnel monitoring and decontamination.

   f. There are no provisions for integrating and coordinating all sources of radiological and operational assessment information and data for evaluation.

g. There are no provisions for conducting an Emergency Radiological Environmental Monitoring Program.

h. There are no provisions covering the scope and nature of the radiation protection program under emergency conditions.

i. There are no procedures covering the conduct of emergency repair/ corrective action(s) or teams.

j. There are no procedures for inventorying and operationally checking all items of emergency equipment and all emergency facilities.

k. There are no provisions for using observers during drills and for evaluating and correcting items highlighted during drills as needing improvement.

Particular details relating to this finding are contained in Sections 7, 8, 9, 10 and 11 of this report.