



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

JUL 22 1980

Docket No. 50-293

Boston Edison Company M/C Nuclear
ATTN: Mr. G. Carl Andognini
Manager, Nuclear Operations
Department
800 Boylston Street
Boston, Massachusetts 01299

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 January 28 - February 8, 1980, the NRC conducted the special appraisal of the health physics program at the Pilgrim Nuclear Power Station. Areas examined during this appraisal are described in the enclosed report (50-293/80-05). 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 Pilgrim indicate that although your overall health physics program is adequate for present operations, several significant weaknesses exist. These include the following:

- lack of technical proficiency among the staff assigned to health physics
- lack of an established health physics training and retraining program

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- an inadequate internal exposure control program
- inadequate facilities for maintenance/storage of respiratory protection equipment, radiation monitoring instrument calibration, internal dosimetry and radwaste storage
- several deficiencies associated with the ability to organize and mobilize personnel, particularly, in health physics, in the event of an emergency.

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 do 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 13, 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.

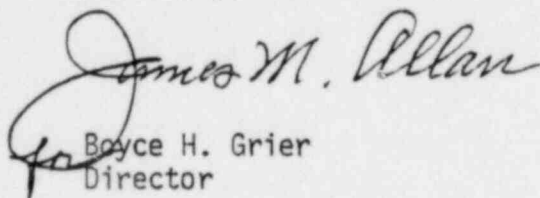
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In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this material contains any information that 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 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. Office of Inspection and Enforcement Inspection Report No. 50-293/80-05

cc w/encls:

P. J. McGuire, Pilgrim Station Manager

APPENDIX A

SIGNIFICANT APPRAISAL FINDINGS

A. Internal Exposure Control Program

The overall program for internal exposure control was found to be inadequate and not effective due to:

- . lack of confidence in the direct measurement activities (whole body counter). There was a lack of technical oversight for this operation and weakness in personnel training and qualifications of those individuals assigned to operate and calibrate the whole body counter.
- . lack of procedures to provide for proper collection, handling and analysis of indirect bioassay samples; together with a lack of procedures establishing biological models and calculational techniques necessary to evaluate monitoring data in terms of dose assessment and compliance with intake limitations set forth in 10 CFR 20.103.
- . failure to ensure consideration of engineering controls for airborne radioactivity areas or to evaluate and document the practicability of applying process or engineering controls in airborne radioactivity areas. Excessively high loose radioactive contamination levels existed in many areas of the plant and a program to reduce and maintain significantly lower levels was not implemented.
- . lack of adequate facilities for cleaning, inspecting and maintaining respiratory protection equipment.
- . lack of adequate training for contractor health physics technicians in the operation of the respirator fitting booth.
- . lack of in-plant surveillance to insure proper usage of respiratory equipment.
- . failure to have a technically knowledgeable individual assigned responsibility for maintaining cognizance of developments in respiratory protection use and equipment and evaluation of the effectiveness of the respiratory protection program.

Additional concerns relating to the internal exposure control program are documented in Appendix B, "Notice of Violation" and are identified as items of noncompliance.

B. Personnel Selection and Training Program

A program for training/retraining members of the health physics staff at Pilgrim is essentially non-existent. The level of formal training and education of most of the staff and the contractor personnel is limited. Appraisal findings established that:

- . there is no formal training/retraining program that exists for members of the plant health physics staff. A check sheet (qualification) is used to document that personnel have received new hire orientation and some on-the-job orientation.
- . there is no established retraining program in radiation safety for general employees.
- . there was minimal effort to determine the qualifications of the contractor supplied health physics personnel. The program in place consisted of only a screening process. The training provided these individuals is lacking and the qualifications of many of the contractor health physics technicians used during the refueling outage were questionable.

C. Emergency Preparedness

- . The present equipment configuration for emergency environmental monitoring in conjunction with existing procedures are inadequate since there is an inability to detect, measure and project radiation levels and radionuclide concentrations in air equivalent to the lower limits of the Protective Action Guides.
- . The present procedure for declaring an emergency is based solely on the results of the rapid protected area survey. The survey method is inadequate and dependence upon it is unacceptable.
- . Several emergency plan implementing procedures have become outdated due to changes in personnel and facilities and have not been updated.
- . The current emergency plan training program as written in the Pilgrim Station Training Manual is not being implemented. The 1979 radiation emergency plan training was not performed in accordance with the training manual program.

- . The state of readiness of emergency equipment, i.e., items missing and out of calibration, appeared to indicate some maintenance problems.
- . There was a lack of a clear assignment of emergency duties and responsibilities for radiation protection and emergency repair/corrective actions.