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

Docket No. 50-272

JUN 13 1980

Public Service Electric and Gas Company
ATTN: Mr. F. W. Schneider
Vice President - Production
80 Park Place
Newark, New Jersey 07101

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 Salem Nuclear Generating Station. Areas examined during this appraisal are described in the enclosed report (50-272/80-03). 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 Salem indicate that although your overall health physics program is adequate for present operations, several significant weaknesses exist. These include the following:

(1) an inordinate reliance on contracted health physics personnel.

(2) a general lack of technical proficiency among the staff assigned to health physics, and

(3) 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.

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

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. 50-272/80-03

cc w/encls:
F. P. Librizzi, General Manager, Electric Production
E. N. Schwalje, Manager - Quality Assurance
R. L. Mittl, General Manager - Licensing and Environment
H. J. Midura, Manager - Salem Generating Station

APPENDIX A

SIGNIFICANT APPRAISAL FINDINGS

I. Organization

a. Technical Competency (Technical Depth) of the Health Physics (HP) Organization

There is a general lack of technical proficiency in the HP Staff predominently due to:

- failure to select, qualify and train personnel (particularly technicians) specifically in the HP specialty. The current program attempts to qualify and train technicians so that they are capable of performing activities in the Instrument and Control, Chemistry and HP specialities. To further confound the development of proficiency, the personnel job assignments are rotated continually through each of the specialities so that personnel are not afforded sufficient time and experience to appreciate and develop the technical skills necessary to perform in a responsible position.

- failure to develop and implement a technician retraining program to assure that the technicians' skill and knowledge is maintained at a satisfactory level. Previous training sessions were given on an ad hoc basis, however these were given without reviewable lesson plans, formalized procedures or training documentation. Currently, another retraining session is underway but lesson plans, training procedures and training documentation systems have yet to be formalized;

- failure to have an adequate back-up for the Senior Performance Supervisor - Radiation Protection (RPM). Currently there are no individuals on the HP staff at the station with management and technical abilities sufficient to act as an alternate to the RPM, including the HP foreman. At this time, essentially all of the technical and managerial expertise is vested in a single individual, the RPM.

b. Inordinate Reliance on HP Contractor Personnel

Because of the attempt to cross train and qualify personnel (technicians particularly), to perform in I&C, Chemistry and HP specialities, few PSE&G personnel are ever qualified to assume responsible positions as technicians. To support a two unit operation, the station's Performance Department has identified the need for about 55 people. Of this number PSE&G supplies approximately 12 people (1 RPM; 2 Foremen; 4 Technicians Nuclear (ANSI-N18.1 qualified); and 5 Technical Assistants or Helpers). The remainder are supplied by a contractor organization (Rad Services, Inc. (RSI)). RSI provides the entire technical and administrative support, all in-plant radiological controls and monitoring; all HP training; and radioactive waste coordination. PSE&G personnel provide dosimetry and records maintenance, operation of counting equipment, and provides the respiratory protection program. In these areas RSI provide up to 50% of the manpower needs.

RSI is relied on heavily in all normal, off normal and emergency conditions. However, the technicians (some are ANSI-N18.1 qualified in terms of 2 years previous experience) are not subjected to any formalized academic training related to their specialty. Their knowledge comes from either previous experience or on-the-job training. On the average, technicians spend about 6 to 8 months at Salem Nuclear Generating Station. Therefore, they are generally not familiar with the plant's characteristic systems. In emergency or off normal conditions this could greatly reduce the effectiveness of the HP organization.

Generally 80-90% of the HP staff openings essential for two unit operation are filled by contractor personnel.

II. Radioactive Waste Management

a. Responsibility

Although the RPM is designated as the individual responsible for coordination of radioactive waste management, there is essentially no program in this area at this time. The licensee's response to Inspection Report 272/79-31 appears to address this concern and indicates that a program will be formally implemented by March 30, 1980 as a function of a new Administrative Procedure (AP) called "Radioactive Waste Management." In actuality, the AP is to provide for an interim solution for the management of solid rad-waste. Currently, there is no program underway to deal effectively with the management of all types of rad-waste.

b. Effluents

- There is currently no system in place for reviewing noble gas recorders to quantify anomolous releases that may occur between the weekly grab samples taken of gaseous effluents.

- Procedure PD 3.8.016 contains an erroneous formula for calibrating total activity in Waste Gas Decay Tank releases, causing underestimating of noble gas, iodine and particulate activity by as much as 20%.

- Procedures have not been developed for primary sample collection and analysis in emergency conditions.

- Interim actions pertaining to high-range capability in Noble Gas monitoring have not been completed as required by the NRR Lessons Learned directives issued October 30, 1979, as specified in NUREG-0578.

III. Health Physics Surveillance Activities

a. An acceptable Respiratory Protection Program has not been demonstrated in that several deficiencies pertaining to quality assurance, training, equipment maintenance were observed.

b. There is no routine review by station personnel of radiation protection instrumentation and equipment calibration records for procedure adherence and accuracy for those instruments and equipment calibrated by contractors.

c. Arbitrary efficiency factors are utilized for HP 210 detectors used to evaluate radioactive contamination. No actual efficiency determination has been made.

d. Bioassay procedures are deficient in that there is no provision to collect baseline or termination data on individuals subjected to exposure to airborne activity.

IV. Emergency Preparedness

a. There is a lack of assignment of emergency duties and responsibilities for radiation protection personnel, the Station Manager and repair/corrective actions teams.

b. There is no clearly defined program for training all individuals who may be assigned emergency duties.

c. Procedures governing radiation protection and security activities during emergencies do not exist.