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PHILADELPHIA ELECTRIC COMPANY

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June 5, 1981

Docket Nos. 50-277 50-278

Inspection Nos. 50-277/80-18 50-278/80-10

Mr. Boyce H. Grier, Director Region I Office of Inspection and Enforcement U.S. Nuclear Regulatory Commission 631 Park Avenue King of Prussia, PA 19406

Dear Mr. Grier:

Your letter of April 2, 1981, forwarded combined Inspection Report 50-277/80-18 and 50-278/80-10. Appendix A of your letter addressed "Significant Appraisal Findings" identified during review of our Health Physics program. Our April 22, 1981, letter, which included our response to the Appendix B items of non-compliance, indicated that an agreement had been reached with Region I, NRC, to extend our submittal date for the Appendix A items by forty-five days. This submittal completes our response to Inspection Report 50-277/80-18 and 50-278/80-10.

The Health Physics Appraisal Team conducted an exit interview at Peach Bottom Station following the subject inspection on June 27, 1980. In attendance at this exit interview were S. L. Daltroff, Vice President, Electric Production; J. W. Gallagher, Manager, Electric Production; M. J. Cooney, Generation Division-Nuclear, Superintendent; W. T. Ullrich, Station Superintendent, and other interested Philadelphia Electric personnel. It was and is the unanimous opinion of Philadelphia Electric attendees that although the

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inspection team identified certain weaknesses in the program and made some recommendations for improvement, the team felt that the overall Radiation Protection Program was well above average and thac certain unique programs were in existence which enhanced radiation safety. We believed that we had a good program and the complimentary comments made by the Inspection Team at the exit interview strengthened this perception. The NRC and our own Quality Assurance inspections and audits conducted subsequent to the Appraisal Team's visit have confirmed the overall quality of our program. It is, therefore, with considerable consternation that we received the Inspection Report dated April 21, 1981 which could lead the reader to conclude that our Radiation Protection Program has serious defects, a conclusion we believe to be incorrect and one not intended to be conveyed by the Commission. We urge that the Commission note our concerns and consider changes in the report format which would avoid such improper conclusions.

The "Significant Appraisal Findings" identified in Appendix A of your letter are restated with our responses in the attached Appendix A.

Very truly yours,

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Attachment

INSPECTION REPORT 50-277/80-18 and 50-278/80-10

A. Radiation Protection Organization

 Job/Position descriptions had not been developed for all positions within the Radiation Protection and Radwaste Departments.

Response

The station health physics and chemistry section organization has been changed. The position of Engineer-Health Physics and Chemistry has been elevated to the Technical Enginee level. This position reports directly to the station management, and is the responsible position for supervising the health physics and chemistry section. A senior level professional is presently in training to assume this position which we anticipate will be filled by December, 1981.

Job descriptions for individuals at the technician level have been completed. Positions ranging from the Engineer-Health Physics and Chemistry to the Technical Assistant level are in draft form. It is expected that job descriptions for all positions within the Health Physics group will be completed by March 1, 1982.

 Administrative procedures had not been developed which defined the authorities and responsibilities of the Radiation Protection Department.

Response

The authorities and responsibilities of individuals in the Radiation Protection group are being incorporated into job descriptions and in certain cases, in specific procedures. This program is expected to be completed by January 1, 1982.

 An inordinate reliance was placed on contractor health physics personnel.

Response

1.

We do not believe that our dependence on contract assistance is inordinate, but recognize that this assistance is still an important part of our program and have been aggressively moving to reduce contractor dependence. A formal training program for health physics assistant technicians was initiated in 1977. To date, five classes have been started into this program. The program consists of approximately five months of formal lectures, plant tours, self study and quizzes designed to provide the student with the fundamentals necessary to absorb the addicional radiation protection and chemistry related material. Additional training for a period of five years is composed of on-the-job training and monthly formal training modules. The company views the completion of this technician training program as the equivalent of a twoyear associate degree in technology. To date, this program has resulted in a significant decrease in the number of contractor technicians. Presently, there are 32 Philadelphia Electric Company (PECo) technicians and 16 contractor technicians for the normal health physics activities at the power plant. There are no contractor health physics technicians currently supervising the Philadelphia Electric Company employees. By 1985 we expect the current training program to provide sufficient numbers of PECo technicians so that less than five contractor technicians will be required under normal conditions. Philadelphia Electric expects to supplement its technician force during periods of refueling outage with contractor technicians.

- B. Personnel Selection, Qualification and Training
 - A formal training/qualification program had not been established for individuals responsible for technical areas such as TLD systems, external dosimetry, internal dosimetry, and respiratory protection.

Response

A formal training/quaification program in the operation of the TLD system and whole body counting system is not considered to be valuable and for that reason is not provided. The systems are unique to Peach Bottom. Our experience indicates that the personnel assigned to these functions become quite capable with on-the-job training. We believe, however, that additional training for dosimetry supervisory personnel in external and internal dosimetry to be appropriate and will incorporate additional formal training in these activities into our radiation protection training program. Development of this program is being directed by the Superintendent-Nuclear Training and implementation is expected during 1982. Formal classes have been conducted on the use, cleaning and repair of respirators.

 Formal job descriptions and selection criteria had not been established for licensee and contractor personnel.

Response

Selection criteria for both contractor and company technicians as it relates to technician classification and work assignments are as required by ANSI 18.1 (1972). As indicated in our response to A.1 a formal job description development program is currently in progress and is expected to be completed by January, 1982.

3. Requirements had not been established for an annual general employee retraining program.

Response

Currently, all General Employee Training (GET) retraining consists of an annual repeat of the General Employee Training program or a demonstration of General Employee requirements by satisfactory completion of a written bypass examination. This annual General Employee retraining is discussed in administrative procedure A 50, Appendix D. The bypass examination is limited to those personnel whose duties routinely involve the GET topics. Changes, however, are planned in this retraining program. It is planned to expand the scope and avoid wasteful repetition. The lesson formats will be designed for the various groups of workers to be retrained and will consider their normal work assignments. The development of this program is being directed by the Superintendent-Nuclear Training. Implementation is expected during 1982.

4. A training program had not been established for the health physics professional staff.

Response

The training program for the health physics professional staff is being coordinated by the Corporate Supervising Engineer-Radiation Protection on an informal basis. Training is generally provided at seminars or brief courses of a few days to several weeks in duration offered by various vendors and universities. The selection of courses and the personnel to attend is made by the Supervising Engineer-Radiation Protection based on the needs and availability of supervisory personnel. Future training programs will be initiated with the cooperation of the Superintendent-Nuclear Training.

5. Some individuals in supervisory positions lacked practical experience in the areas they were assigned to supervise.

Response

Details regarding this item are found in section 2.3.4 where, specifically, on-the-job training is viewed as a poor practice for individuals in dosimetry and respiratory fitting because of the potential propagation of poor work practices. The transfer of instructional information from employee to employee is viewed by Philadelphia Electric to be a valuable and legitimate method of training and is to be encouraged. The fact that an individual in a supervisory position might receive instructions from a technician in a lower job classification is not viewed as detrimental nor germaine. Our experience with on-the-job training shows it to be an effective technique to gain practical experience and, for this reason, believe it to be superior for certain work activities. We believe our position is supported by the objective results of the many programs undertaken by Philadelphia Electric utilizing on-the-job training.

C. Exposure Control

- 1. External Exposure Control
 - a. Adequate QA/QC programs had not been established for the offsite TLD vendor and the licensee's inhouse dosimetry program.

Response

The dosimetry QC program has been enhanced since the inspection. The program consists of 100% QC of all Harshaw TLD chips received. These chips are segregated by sensitivity characteristics. Those not meeting the established criteria are discarded or returned to Harshaw.

The current QC program involves spiking a minimum of 75 TLD badges per month to at least three different dose levels.

Eberline Instrument Corporation, fur offsite TLD vendor, submitted their Quality Assurance Program for approval in March, 1980. Subsequently, an audit of Eberline was performed which revealed that certain practices and procedures were deficient. These deficiencies were identified to the contractor.

In addition, we have been corresponding with Eberline since our initial review of their QA program and to the present time in order to establish a workable program acceptable to both Philadelphia Electric Company and Eberline. b. The differences between the offsite vendor and the licensee's in-house TLD results had not been resolved.

Response

Recent data shows a marked reduction in frequency and magnitude of discrepancies between the monthly Eberline exposures and summation of the daily Harshaw exposures. This is believed attributable to the reduction in conservatism in processing the daily Harshaw badges, plus the improved QC at Eberline.

Complete elimination of discrepancies between the offsite vendor and the in-house TLD results is not expected. A program is in progress to meet the objective of establishing a second in-house badge processing system to replace the contractor service as the official exposure data. TLD readers and TLD chips are presently being studied and evaluated. It is expected that the second in-house badge processing system will be implemented by June, 1983.

2. Internal Exposure Control

a. An adequate whole body counter QA/QC program had not been established.

Response

The whole body counter QC program is considered adequate. A re-calibration has been performed within the past year. A phonom has been provided to the station by our radiation consultant Radiation Management Corporation (PMC). Procedures have been revised to clarify requirements for whole body counter operational checks. RMC remains under contract for maintenance of the whole body counter system. RMC will also be relied upon for backup expertise in evaluating and interpreting whole body data; for calculating doses due to internal deposition; and for advice on follow-up bioassay programs.

b. Formal procedures had not been established for collection, handling, shipping, and processing excreta bioassay samples.

Response

Station procedure HPO/CO-26 has been revised to provide additional details relating to bioassay sampling and analysis.

c. Formal procedures had not been established that detailed the action to be taken if an individual received a significant internal deposition of radioactive material.

Response

Station procedure HPO/CO-26 will be augmented to describe actions following significant personnel internal deposition which will emphasize the importance of medical/radiation advice from physicians associated with our consultant Radiation Management Corporation. Existing procedures establish action levels for initiation of investigations based on percentages of body burden from whole body counting. Because of our effective respiratory protection program, the investigation level has been exceeded only rarely. Even on these occassions, the internal deposition was insignificant compared to external radiation exposures. Investigatory techniques used as part of the program include recounts, review of workers' activities and area survey data, interviews with the worker, and consultation with RMC. These techniques are logical health physics practices and would be initiated by health physics supervision as deemed necessary. Formal procedures are not considered valuable.

D. Surveys and Access Control

Comprehensive in-plant continuous air monitoring and breathing zone sampling programs had not been established.

Response

The station has always maintained an extensive and comprehensive in-plant air monitoring program. High volume and low volume air samplers are the main hardware used in this program. Both of these types of air samplers are used to obtain grab samples for general area and breathing zone data. Continuous Air Monitors (CAM) are located at specific areas of the plant to monitor unique activities. These Continuous Air Monitors reveal trends or sudden changes in airborne. Efforts have been expended to obtain breathing zone sampling. Since the report identifies this effort as being unacceptable, additional efforts have already been implemented to assure that the program provides for adequate breathing zone sampling. We believe our CAM and breathing zone sampling programs are now satisfactory.

E. Radwaste Management

Full range calibration had not been performed on the effluent monitor.

Response

Calibration of the upper ranges of effluent radiation monitors involves the use of very active sources. The risk of discharging such high activities to the environment has served as a deterent. Also, the discharge of high activity calibration source material would be chargeable against the Technical Specification release limits. For the upper ranges to be calibrated, alternate techniques must be employed. Available alternates will be explored and, if appropriate, a procedure will be developed by January 1, 1982.

F. ALARA Program

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A formal ALARA program had not been established.

Response

The Radiation Protection Handbook contains an introductory letter signed by the Vice President of Electric Production which documents the Corporate position on safety including radiation safety. Section V, page 22 of this handbook contains the Company endorsement of ALARA. On page 24 under the heading "Administrative Guide" is another statement concerning radiation exposure control under our ALARA program. This handbook is distributed to employees completing their initial General Employee Training class.

The ALARA program responsibility and authority rests within the plant radiation protection group. Assistance is provided from Corporate headquarters. An ALARA coordinator has been designated from the station Health Physics and Chemistry staff. Procedures are being developed as part of our formal ALARA program and are expected to be completed and approved by January 1, 1983.

The formal ALARA program will incorporate preplanning and review of proposed projects and modifications which have actual or potential radiation exposure significance.

ALARA objectives are to reduce both individual doses and collective man-rems to values as low as reasonably achievable. The attainment of the objectives will vary with the specific job evaluations. Engineering controls will be applied only if their incorporation into the activity will result in an acceptably lower exposure than would result if they were not applied. Experience and documentation from previous jobs will provide an important basis for using engineering controls and budgeting exposure.

Procedures will specify the requirement for de-briefing or critiques following special jobs which involve significant personnel exposure.

G. Internal Audits

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An audit had not been performed on the offsite vendor providing calibration services for portable survey meters and TLD quality control irradiations.

Response

Audits of vendors have been conducted by Corporate QA on both Eberline for dosimetry and Triangle Resources Industries for portable instrument calibration. Deficiencies were discovered and are being corrected by the vendors. Efforts continue toward establishment of station capability for all dosimetry and instrument calibration independent of vendors. This includes acquisition of official dosimetry data.

Radiation Management Corporation facilities are used for dosimetry QC programs. Corporate QA has also audited RMC and no deficiencies were noted. only had protection

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Eberlines program to wiknopp - with uncentation for dosimetry wiknopp - Cultbration Emergency Preparedness

The items H to K all dealing with emergency planning are addressed as a single entity.

Response

At the time of the appraisal, a concerted effort was under way to revise the emergency plan and implementing procedures. This effort has continued to this day and will continue until the required integrated exercise has been successfully completed. The specific items in the appraisal are items requiring attention under 10 CFR 50 and NUREG 0654. Copies of the revised plan which addresses administration of the plan, training, notification, and assessment actions were sent to the NRC for their review and approval. Copies of implementing procedures have also been sent to the NRC. Revisions to these procedures will be forwarded to the NRC on a continuing basis per 10 CFR 50. Since the NRC has established unique emergency preparedness review teams, it

- 11 -

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seems appropriate to await the outcome of their review of our recent submittals rather than comment or commit to emergency preparedness items in the appraisal.

COMMONWEALTH OF PENNSYLVANIA : COUNTY OF PHILADELPHIA :

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S. L. Daltroff, being first duly sworn, deposes and says:

SS.

That he is Vice President of Philadelphia Electric Company, the Applicant herein; that he has read the foregoing response to Inspection Report 50-277/80-18 and 50-278/80-10, Appendix A, and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

Alacta, P

Subscribed and sworn to before me this 8^{76} day of 100^{6} , 198^{1}

Judith y Franklin Notary Public

Notary Public, Philisdephia, Philisdelphis Co. My Commission Explices July 28, 1993