

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-277/86-18
50-278/86-19

Docket No. 50-277
50-278

License No. DPR-44 and DPR-56 Category C

Licensee: Philadelphia Electric Company

2301 Market Street

Philadelphia, Pennsylvania 19101

Facility Name: Peach Bottom Atomic Power Station Unit 2 and Unit 3

Inspection At: Delta, Pennsylvania

Inspection Conducted: September 8-12, 1986

Inspectors:

T. Dragoun
T. Dragoun, Sr. Radiation Specialist

9/23/86
date

A. Weadock
A. Weadock, Radiation Specialist

9/23/86
date

Approved by:

M. Shanbaky
M. Shanbaky, Chief, Facilities Radiation
Protection Section

9/30/86
date

Inspection Summary: Inspection on September 8-12, 1986 (Combined Inspection Report Nos. 50-277/86-18 and 50-278/86-19).

Areas Inspected: Routine, unannounced inspection of the licensee's radiation safety program including: organization and staffing; routine radiological surveys; fuel pool diving operations; an allegation concerning an altercation in a radiation area.

Results: One violation was identified (failure to follow procedure A-86 "Administrative Procedure for Correction Action").

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DETAILS

1.0 Persons Contacted

During the course of this routine inspection the following personnel were contacted or interviewed:

1.1 Licensee Personnel

- *G. Leitch, Superintendent, Nuclear Generation Division
- R. Fleischmann, Station Manager
- *D. Smith, Superintendent-Operations
- *J. Cotton, Superintendent-Plant Services
- W. Casey, Superintendent-Maintenance
- A. Hilsmeier, Senior Health Physicist
- J. Davenport, Supervising Engineer-Maintenance
- D. Kemper, Maintenance Supervisor
- S. Nelson, Health Physicist-Applied
- G. McCarty, Health Physicist-Technical Support

Other licensee and contractor employees were also contacted or interviewed during this inspection.

*Attended the Exit Interview on September 12, 1986

1.2 NRC Personnel

- *T. Johnson, Senior Resident Inspector
- *H. Williams, Resident Inspector

2.0 Purpose

The purpose of this routine inspection was to review the licensee's radiation program with respect to the following elements:

- Organization and Staffing
- Routine Radiological Surveys
- Diving Operations
- Allegation Regarding an Altercation in a Radiation Area.

3.0 Organization and Staffing

The licensee has drafted a proposal to increase staffing levels in the Health Physics organization to support program improvements recommended by the NRC. The status of this proposal was determined from interviews with the Senior Health Physicist and Plant Service Superintendent and a

review of PECO document "Health Physics Group Recommended Reorganization and Additional Staffing Needs" dated April 29, 1986. The inspector determined that the licensee's initial emphasis will be in two areas:

- to revise and improve all HP procedures and to implement these new procedures in a timely manner,
- to improve tracking of commitments to NRC and to analyze program weaknesses for additional corrective action.

Approval has been obtained for the addition of a Special Projects line function to be managed by an Assistant Radiation Protection Manager. Contractor personnel will be used until permanent personnel can be hired. Additional approved staff includes an ALARA engineer, several Technical Assistants (TA) and six professional health physicists to provide oversight in the field. The licensee advised that these additional personnel will begin arriving on site within the next few months. The increased staffing should have a positive effect on the HP program performance. This matter will be reviewed again in a future inspection.

4.0 Routine Radiological Survey Program

The licensee's routine radiological survey program was reviewed against regulatory criteria contained in 10 CFR 20.201, "Surveys," and 10 CFR 20.401, "Records of surveys, radiation monitoring, and disposal." Implementation of the survey program was evaluated by the following methods.

- Review of the following procedures:
 - HPO/CO-90, Rev. 2, Routine Surveys,
 - HPO/CO-2, Rev. 4, Contamination Survey Techniques and Evaluations,
 - HPO/CO-1, Rev. 7, Radiation Dose Rate Survey Techniques,
- review of completed routine radiation, contamination, and airborne activity surveys,
- discussion with cognizant HP personnel.

The above review indicated the licensee is conducting an adequate routine survey program. However, procedure HPO/CO-90, the controlling procedure for the routine survey program, was a one page procedure which failed to include the following necessary details:

- designation of specific responsibilities,
- identification of specific areas (i.e., by building and elevation) to be surveyed and applicable survey frequencies,

- identification of actions to be taken when unusual conditions are observed,
- identification of specific record keeping requirements.

The inspectors determined that although HPO/CO-90 did not identify specific areas to be surveyed, an informal routine survey schedule had been developed and was used by the Senior HP technicians to make assignments for the survey technicians. Review of this informal schedule indicated that it provided a fairly comprehensive coverage of plant areas.

The inspector reviewed selected routine radiation, contamination and airborne activity survey results. Numerous administrative errors were noted which included failing to provide instrument serial numbers, calibration dates, technician's full name, etc. Surveys were routinely documented on uncontrolled, inconsistent survey maps. These errors and practices are not consistent with current industry practice regarding survey recordkeeping. It was also not apparent that all surveys received supervisory review as a space for the reviewer's signature was not included on all survey records. When questioned, the licensee was not able to verify specific surveys had received supervisory review due to the lack of this documentation. Several examples were identified where surveys were not performed as required by the informal survey schedule.

The licensee indicated that problems with the routine survey program had been identified and development of a revised routine survey program had been initiated early in 1986. The inspector reviewed various aspects of the revised program, still under development, and identified licensee efforts have included the following:

- development of a draft procedure to effectively control and implement the revised survey program,
- identification of specific plant areas to be surveyed and frequencies,
- development of new, procedurally controlled survey data forms,
- development of HP technician guidelines, specific for each required survey, to insure conformity in the performance of surveys,
- establishment of record keeping requirements.

The licensee indicated that the revised program requires additional modification and field testing prior to formalization. The licensee indicated this program should be fully in place by the end of 1986. The inspector determined that, once completed and formally instituted, the revised program should correct the inadequacies noted in the current survey program.

Failure of procedure HPO/CO-90 to adequately define and implement a routine survey program is an apparent violation of Technical Specification Section 6.8.1, which requires, in part, that procedures shall be implemented and maintained that meet the requirements of Appendix "A" of USAEC Regulatory Guide 1.33 (November 1972). Appendix A of that Regulatory Guide specifically requires procedures to control radiological surveys and monitoring. However, in an effort to encourage licensee self-identification and correction of problems, NRC Enforcement Policy (10 CFR 2, Appendix C) allows the mitigation of violations if they were identified by the licensee and certain criteria are met. The licensee's identification of and ongoing corrective actions for their inadequate survey program will therefore not be cited as a violation but will remain unresolved pending review of the completed revised, program during a subsequent inspection (50-277/86-18-01, 50-278/86-19-01).

5.0 Control of Underwater Diving Operations

During the week of this inspection the licensee was performing Spent Fuel Pool fuel rack modifications. This re-rack work had been initiated earlier during the year and was reviewed during a previous NRC inspection. At that time several areas for improvement in the conduct of the diving operations were identified by the inspector. The licensee terminated diving operations for a month and responded to NRC concerns with a review and upgrade of procedures controlling diving operations. These newly-revised procedures were being implemented during this inspection.

The adequacy of the licensee's control over diving operations was reviewed by the following methods:

- discussion with contractor diving personnel, and licensee support and HP personnel,
- review of the following procedures:
 - HPO/CO-1000, Rev. 1, Health Physics Survey Requirements when Supporting Diving Operations in the Spent Fuel Pool,
 - HPO/CO-1001, Rev. 1, Health Physics Procedure for Coverage of Diving Operations in the Spent Fuel Pool,
 - HPO/CO-1002, Rev. 0, Personnel Emergencies Involving Divers in Radiation Areas,
 - review of various RWPs and associated surveys controlling diving and support operations.

The inspector observed a pre-dive briefing and the performance of a dive on September 9, 1986. Activities were generally well-controlled. The licensee's revised procedure appeared to provide effective control and

resolved NRC concerns in this area; they also incorporated specific guidance as contained in IE Information Notices 82-31, and 84-61. Fuel pool survey information was available and extensively referred to during the pre-dive briefing. The inspector noted, however, that the results of the most recent fuel pool water tritium analysis were not readily available at the diving control point; these results had to be specifically requested by the inspectors. Other radiological parameters of the fuel pool water were available and within specifications.

Within the scope of this review no violations were observed.

6.0 Allegation Regarding an Altercation in a Radiation Area

The NRC received an allegation (#RI-86-A-0107) from a contractor technician formerly employed at Peach Bottom station expressing the following concerns:

- PECO maintenance personnel are orally and physically abusive to HP technicians.
- Maintenance personnel are allowed to sidestep radiological controls to avoid confrontations with HP technicians.
- The licensee's investigation of an altercation in a radiation area was inadequate.

The results of the inspector's review of these concerns are as follows:

6.1 Abuse of HP Technicians

The inspector assessed the occurrence of physical and verbal abuse of HP technicians by the following:

- review of written logs maintained by HP technicians at various control points in the Power Block,
- interviews with a cross section of permanent and contractor HP technicians,
- review of selected personnel files,
- discussions with HP and maintenance department supervisors,
- review of "A-86" reports.

Within the scope of this review the inspector determined that the physical abuse of HP technicians is not substantiated except for the isolated instance discussed in Section 6.3. However, verbal abuse occurs, primarily by certain groups within the maintenance department. The licensee acknowledged this finding and stated that the following action will be taken:

- A special meeting has been scheduled with all Maintenance Department personnel by the Maintenance Division Superintendent (M. McCormack) for September 16, 1986 to emphasize the need for cooperation between maintenance and HP personnel
- HP and Maintenance Department site management will continue to review this problem and identify individuals or groups for counseling.

The inspector also discussed with management methods to encourage a positive participation in the HP program by maintenance personnel, particularly in regards to ALARA suggestions. These matters will be reviewed in a future inspection. (50-277/86-18-02 and 50-278/86-19-02).

6.2 Side stepping Radiological Controls

The inspector determined if maintenance personnel are allowed to side step radiological controls from:

- Discussions with technicians
- Reviews of "A-86" reports, selected RWP's and exposure logs
- Observation of work in progress

Within the scope of this review the inspector concluded that this allegation is not substantiated. Although maintenance personnel occasionally challenge the need for certain protective measures (e.g. respirators), the RWP requirements were met.

6.3 Investigation into Altercation

The adequacy of the licensee's review and corrective action relative to an altercation in the Unit 3 Demin Alley during filter replacements was determined from:

- Reviews of written statements obtained from the work crew and the HP technician.
- Interviews with the Maintenance Superintendent, Maintenance Supervisor, Applied Health Physics Supervisor, and contractor technician site coordinator.
- Reviews of the RWP, logs, and discussions with selected technicians.

The inspector concluded that a pushing-shoving encounter occurred on August 25, 1986 between a maintenance worker and a contractor technician during demineralizer filter replacement in Unit 3. The RWP for the job, #3-05A-0586, required full protective clothing and respiratory protection. The work zone was classified as a high radiation area. This event was investigated and resolved by the supervisors of the two individuals involved. No formal report was issued.

Station procedure A-86 "Administrative Procedure for Corrective Action" describes the method for investigation, documentation, tracking, closure, and trending of identified discrepancies. Failure to follow this procedure for this event constitutes a violation of PORC approved procedures. (50-277/86-18-03 and 50-278/86-19-03)

During the course of this investigation the inspector also noted the following weaknesses in regards to procedure A-86:

- The processing of discrepancy reports and resolution of identified problems is often delayed by several months.
- Corrective action is occasionally inadequate and does not prevent recurrence.
- Several personnel stated that written and verbal reports made to supervision pursuant to 10 CFR 19.12 were not resolved via this system.

Workers are required to report radiological discrepancies in accordance with 10 CFR 19.12 Instruction to workers. Technical Specification 6.8 Procedures requires written administrative policies. Procedure A-86 was found to be inadequate in assuring effective corrective action to preclude repetition. This constitutes an apparent violation of NRC requirements. However, the licensee is aware of the inadequacies of procedure A-86 and has initiated corrective action including the drafting of a new radiological deficiency report procedure. Therefore, in accordance with 10 CFR 2 Appendix C Section V, no violation is issued. However, this matter remains unresolved pending implementation of an improved program. (50-277/86-18-04 and 50-27886-19-04).

Also during this review the inspector noted that certain radiologically significant events had recently occurred and been reported in accordance with procedure A-86. Since action was not complete, the following matters will be reviewed in a future inspection (50-277/86-18-05, 50-278/86-19-05):

- o Report 86-170 - corrective action taken
- o Report 86-182 - results of investigation and corrective action.

7.0 Exit Interview

The inspector met with the licensee personnel denoted in section 1.1 at the conclusion of the inspection on September 12, 1986. The scope and findings of the inspection were discussed at that time.