

REVIEWED BY:

R.R. Keimig R. Keimig  
(NAME) (SIGNATURE)

NRC: RI 9-12-88  
(ORGANIZATION) (DATE)

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report Nos. 88-26  
88-26

Docket Nos. 50-277  
50-278

License Nos. DPR-44  
DPR-56

Licensee: Philadelphia Electric Company  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Facility Name: Peach Bottom Atomic Power Station, Units 2 & 3

Inspection At: Delta, Pennsylvania

Inspection Conducted: July 25-29, 1988

Type of Inspection: Routine, Unannounced Physical Security

Date of Last Physical Security Inspection: June 27-July 1, 1988

Inspectors: W.K. Lancaster 9/8/88  
W. K. Lancaster, Physical Security Inspector date

Julie A. Madden 9/8/88  
J. A. Madden, Physical Security Inspector date

Approved by: R. Keimig 9-8-88  
Richard R. Keimig, Chief, Safeguards Section, date  
Facilities Radiological Safety and Safeguards  
Branch, DRSS

Inspection Summary: Routine, Unannounced Physical Security Inspection on  
July 25-29, 1988 (Combined Report Nos. 50-277/88-26 and 50-278/88-26)

Areas Inspected: Management Effectiveness; Assessment Aids - Protected Area;  
Access Control - Personnel; onsite followup of two reports of non-routine  
events; and follow-up on previous licensee commitments.

Results: Apparent violations of the NRC-approved Physical Security Plan were  
identified in the following areas: Assessment Aids - Protected Area; Locks,  
Keys, and Combinations; and Access Control of Personnel to Vital Areas.

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## DETAILS

### 1. Key Persons Contacted

#### a. Licensee and Contractor Personnel:

- \*D. Smith, Vice President, Peach Bottom Atomic Power Station (PBAPS)
- \*D. Meyers, Support Manager, PBAPS
- \*R. Weindorfer, Corporate Director, Nuclear Plant Security
- \*J. Pratt, Manager, Quality Assurance
- \*F. Larkin, Nuclear Security Coordinator, Limerick Generating Station (LGS)
- \*M. Berner, Acting Chief Security Coordinator, PBAPS
- \*R. Bixler, Corporate Analyst, Nuclear Plant Security
- \*P. Supplee, Corporate Analyst, Nuclear Plant Security
- \*G. Bird, Senior Auditor, Nuclear Quality Assurance
- \*W. Bowers, Nuclear Security Coordinator, PBAPS
- V. Vitale, Project Manager, Protection Technology, Inc. (PTI)
- S. Tharpe, Chief Coordinator, Nuclear Security, PBAPS

#### b. U. S. Nuclear Regulatory Commission Personnel:

- \*R. Bellamy, Chief, Facilities Radiological Safety and Safeguards Branch
- \*T. Johnson, Senior Resident Inspector
- \*L. Meyers, Resident Inspector

\*Indicates those present at the exit interview

The inspectors also interviewed other licensee and contractor security personnel.

### 2. Management Effectiveness - Security Program

#### a. Background

As a result of several allegations by a member of the security force to the licensee regarding implementation of the security program at Peach Bottom Units 2 and 3, the licensee's Claims/Security Division conducted an investigation, starting in February, 1988, into those allegations. Since shutdown of the plant on March 31, 1987, the NRC had also received numerous similar allegations. Both the licensee's investigation and the NRC's inspections into the allegations confirmed the existence of programmatic weaknesses. Additionally, an annual audit of the security program by the licensee's Nuclear Quality Assurance (NQA) Division in April, 1988, identified similar programmatic weaknesses.

On February 26, 1988, at a licensee requested management meeting with NRC Region I personnel, the licensee discussed several general actions it planned to correct previously identified problems. On June 3, 1988, the licensee provided to NRC Region I, a copy of: (1) the Claims/Security Division Investigation Report, dated April 15, 1988; (2) the NQA report of the April, 1988 annual security audit; and (3) a Site Status Report that identified actions taken and planned in response to the findings of (1) and (2). NRC Region I personnel reviewed the documents submitted on June 3, 1988 and held a management meeting on June 9, 1988 to obtain clarifying information and to express concern about the magnitude of the program weaknesses and the adequacy of the licensee's corrective actions. Documentation of additional corrective actions was provided to NRC Region I by licensee letters dated June 13 and June 17, 1988. The June 17, 1988 letter also provided a commitment to perform a Root Cause Analysis of the programmatic weaknesses identified and to submit the results of the analysis to the NRC upon completion. A June 24, 1988 letter from the licensee provided the status of the Root Cause Analysis and an expected completion date of July 22, 1988 for it and a corrective action plan. The analysis and corrective action plan was provided to NRC Region I by letter dated July 27, 1988 and is under review and evaluation.

On July 18, 1988, the licensee announced that it had awarded the security contract for Peach Bottom Units 2 and 3 to another contractor, Protection Technology, Inc. (PTI), effective September 1, 1988. This is the same security contractor that the licensee uses at its Limerick Generating Station. The licensee believes that this change will contribute significantly to an improved security program at Peach Bottom, along with other changes already underway and proposed.

b. Continuing Indications of Weaknesses Identified During this Inspection

During this inspection, the inspectors identified several problems that are either directly or indirectly related to previously identified program weaknesses. They are as follows:

- (1) Details concerning two licensee identified and reported events (July 9 and 15, 1988) involving vital area degradations were not available to the inspectors from a single responsible source until late in this inspection. This indicates that responsibility for the program is still fragmented.
- (2) One of the events in b.(1) above resulted from a lack of communications between maintenance and security personnel, a recurring weakness. The second event resulted from the failure of two supervisory security personnel (one proprietary and one contract) to follow an established security procedure. That failure went undetected during two required, routine checks and

when it was detected, the required compensatory measures were not properly implemented. The second event is indicative of a general indifference to established security program procedural requirements.

- (3) The inspectors found that a vital area access control post had been established at a location where the posted guard could not observe entry into the area and was not provided with orders detailing the duties of the post. Interviews by the inspectors with licensee security personnel revealed that the post location problem was identified by them and corrected on the previous day. Somehow the post was physically returned to its original location, and post checks by contract supervisors every two hours, before and after its relocation, failed to identify that the post was established in a location where the guard could not carry out the intent of establishing the post. This indicates that the contract supervisors lack adequate knowledge of nuclear power plant security objectives and that post checks by supervisors are perfunctory.
- (4) The inspectors found two "dead" spots in the perimeter intrusion detection system assessment aids one day after a Surveillance Test (ST) had been conducted on the assessment aids. The ST failed to detect the "dead" spots. This is indicative of either inadequate SIs, perfunctory conduct of the STs, or inadequately trained personnel.
- (5) The inspectors reviewed six post orders and found them to be vague and inconsistent with the security plan implementing procedure from which they were derived. For example, Post Order No. 54 lacked six requirements contained in the security plan implementing procedure PP-27 (i.e., Sections 2.2.1, 2.2.2.1, 2.3, 2.3.1, 2.3.3 and 2.3.5) from which it was derived. This indicates that procedural requirements are poorly translated into the instructions that security force members are responsible for implementing.
- (6) The inspectors identified four compensatory posts that have been in effect for up to one year, and in one that has been in effect for two years. Interviews with licensee security personnel revealed confusion regarding the status of maintenance and modification projects that affect security equipment. Therefore, man-power intensive, long-term compensatory posts continue to exist. In addition, security equipment problems, e.g., PIDS nuisance alarms and card reader failures, which require short-term compensatory posts, appear to recur at a high frequency. This is indicative of a weak preventive and corrective maintenance program, failure to track equipment

maintenance and assign responsibility for this task to one individual, and possibly, indifference to the proper maintenance of security related equipment.

- (7) The inspectors found that unscheduled and, at times, forced, excessive overtime and long periods on posts, without a break, are still impacting morale and, therefore, possibly performance. Work schedules for security force members are posted only one week in advance and are changed on a daily basis, as unanticipated requirements and "call-outs" occur. A review of records by the inspectors revealed that some members of the security force are working twelve hours a day for eight and nine consecutive days. Despite this having been identified as a serious problem by the NRC during recent previous inspections, the licensee still has not been able to get the problem under control. In addition, the turnover rate in the security force continues to be high - fifteen members resigned in the month of July. The overtime problem is indicative of a lack of adequate direction, or fragmented direction, on the part of the licensee's on-site security management in combination with the excessive use of compensatory posts, as a result of previously mentioned factors, and inadequate oversight of the contractor.

In addition to the specific weaknesses identified above, the inspectors also found that there is generally inadequate communications among other plant groups and the security force, a lack of "team" approach to resolving problems in the plant, and poor integration of security requirements in plant procedures. Also, while licensee Security Shift Assistants (SSAs) have been assigned to each shift to oversee the activities of the contract security force, the SSAs do not appear to have sufficient knowledge of nuclear power plant security objectives to be effective in identifying and correcting problems that occur.

While the foregoing weaknesses were obvious during this inspection, the inspectors also found that the licensee had initiated actions in several areas in an effort to correct previously identified weaknesses and that some progress was apparent. Due to the number and magnitude of the programmatic weaknesses, strong and consistent direction and oversight, as well as time, will be required to re-establish a sound program.

- c. The following major actions have been taken by the licensee since the last security inspection to initiate improvements in the security program:
- (1) A contract has been awarded to a new security force contractor to be effective September 1, 1988. The new contractor had eleven personnel on site during this inspection for transition purposes. These personnel, and personnel from the existing contractor, were divided into transition teams to review

operations, training, personnel and logistics. The transition teams were given goals by the licensee to be accomplished prior to September 1, 1988. Communications among team members, including licensee security personnel, appeared to be effective and progress in meeting established goals was apparent.

- (2) Licensee security personnel from Limerick Generating Station (LGS) have been temporarily assigned to the Peach Bottom Power Station (PBAPS) in order to upgrade the PBAPS security program. The licensee's LGS Nuclear Security Specialist has been at PBAPS since July 11, 1988; a licensee LGS Shift Security Assistant has been acting as Chief Security Coordinator at PBAPS since July 4, 1988; and the LGS Technical Assistant - Security is on-site on a part-time basis.

The LGS security personnel have identified numerous areas where the PBAPS security program can be improved to increase its effectiveness. The inspectors found that dates had been established to develop and implement these identified improvements.

- (3) A new Nuclear Security Specialist for PBAPS was hired, is on site and is actively involved in the security contractor transition. The LGS Nuclear Security Specialist is assisting the PBAPS Nuclear Security Specialist. A nuclear security consultant is also expected to be on site by August 2, 1988, to assist in the training and orientation of the PBAPS Nuclear Security Specialist.
- (4) A Security Incident Review Committee (SIRC) has been established to review all security incidents and to determine root causes. The SIRC will also review corrective actions taken to prevent recurrences of security incidents.
- (5) The inspectors noted during this physical security inspection that operational security force supervision is no longer responsible for both security and firewatch personnel. Since July 29, 1987, security force supervisors have not been responsible for supervising firewatch personnel. Note: This had been a concern expressed to the licensee during a previous inspection conducted June 28 - July 2, 1987 (Combined Inspection Report Nos. 50-277/87-20 and 50-278/87-20).

### 3. Onsite Follow-up of Two Reports of Non-Routine Events

#### a. Unit 3 Drywell Head

(1) Background

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(2) NRC Review

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(3) NRC Findings

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The inspector's determined that the licensee's failure to comply with the above requirements in the NRC-approved Physical Security Plan, resulting in a vital area barrier degradation with no compensatory action, is an apparent violation of NRC requirements (50-277/88-26-01 and 50-278/88-26-01).

b. Uncontrolled Vital Area Key

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2. NRC Review

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(3) NRC Findings

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The inspectors determined that the licensee's failure to comply with the above requirements in the NRC-approved Peach Bottom Physical Security Plan, resulting in not positively controlling access to a vital area, is an apparent violation of NRC requirements (50-277/88-26-02 and 50-278/86-26-02).

4. Vital Area Access Control - Personnel

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The inspectors determined that the licensee's failure to comply with the above requirements in the NRC-approved Physical Security Plan, resulting in a vital area access control post to be located such that the guard could not observe or control access, is an apparent violation of NRC requirements (50-277/88-26-03 and 50-278/88-26-03).

5. Assessment Aids (Protected Area)

The inspectors observed the use of assessment aids between approximately 1330 hours and 1430 hours on July 28, 1988, and other security equipment in operation at the Secondary Alarm Station (SAS).

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Failure to comply with the requirements in the NRC-approved Physical Security Plan, in that assessment aids for two areas of the protected area barrier and associated inner isolation zones had not been identified as being unsatisfactory for alarm assessment and properly compensated for, is an apparent violation of NRC requirements (50-277/88-26-04 and 50-278/88-26-04).

6. Follow-up on Previous NRC Commitments

The inspectors continued to review the status of licensee corrective actions as identified in correspondence from PECO to the NRC that began in Combined Inspection Nos. 50-277/88-23 and 50-278/88-23. References to that correspondence, and the status of the items as determined by the inspectors, are provided below. (Item designations correspond to those in the referenced letter).

- a. PECO letter dated June 13, 1988, concerning PECO corrective actions as a result of the NQA Audit Report (AP88-48P6)

Attachment 1

- AP88-48-01 - Shift Managers routinely tour the plant and are expected to monitor Security Force Member activities. (Closed) The inspectors confirmed that shift managers were monitoring security force member activities during routine tours of the plant.

NOTE: All items in Attachment 1 are closed.

Attachment 2

- AP88-48-02 - No formal program for training of SFMs on newly issued security equipment by qualified instructors (ex: new weapons, gas masks, bullet-proof vests) exists. (Closed) The inspectors determined that in addition to the training on these topics provided to current security force members, the topics have been included in training lesson plans and will be given to all future security force members undergoing armed responder training.

- AP88-48-02 - No formalized training program exists for PBAPS Safeguards Contingency Plan Training Drills. (Closed) The inspectors confirmed that a tracking mechanism has been developed and implemented by the licensee to record participation of individual security force members on a regular basis.
- AP88-48-02 - Search train SFMs failed to identify a 35mm camera placed in the auditor's briefcase and did not routinely request personnel to remove their hard hat when walking through the metal detectors. (Closed) The inspectors confirmed that SFMs were retrained and retested on proper search train procedures. Inspectors' observations confirmed that search train operators require personnel entering the Protected Area to remove their head gear.
- AP88-48-02 - Four of four randomly selected armed responders were unable to demonstrate to the auditors their weapons proficiency and related knowledge of "use and care". All four armed guards failed to obtain the required minimum score. (Closed) The inspectors, confirmed that the security force contractor had retrained, requalified and retested all armed SFMs.

#### Attachment 3

- AP88-48-03 - Maintenance and repair of security related equipment is being tracked. (Closed) The inspectors confirmed that the PBAPS Security Maintenance Coordinator is tracking maintenance and repair of security related equipment.

NOTE: All items in Attachment 3 are closed.

- b. PECO letter, dated June 24, 1988, concerning the status of a root cause analysis of security program related problems. (Closed) The completed report on the Root Cause Analysis was provided to the NRC resident inspector and Region I security inspectors on July 27, 1988, and was forwarded to NRC Region I on that date.
- c. PECO letter, dated June 30, 1988, addressing the Security Contractor Transition Plan and special monitoring efforts.

#### Attachment 1

1. Closed - See Combined Inspection Report Nos. 50-277-88-23 and 50-278/88-23.
2. Any security personnel judged to be significantly lacking job knowledge or performance will immediately be replaced on post and retrained. (Closed) The inspectors confirmed that the PECO

performance assessment group was testing security force members on their job knowledge and, when necessary, removed individuals from their posts until they were retrained and retested. Random interviews with on-duty security force personnel by the inspectors verified that personnel were knowledgeable of their post orders and duties.

3. A nuclear security consultant will be retained for a period of at least 6 months beginning in August, 1988 to help oversee the Security Force Contractor Transition and planned improvements. (Closed) The inspectors confirmed that a nuclear security consultant had been retained and was scheduled to report to the PBAPS on August 2, 1988.
4. The LGS Technical Assistant - Security will coordinate with the PBAPS Technical Assistant - Security, once he is aboard, to assure that he receives the proper indoctrination training. (Closed) The inspectors found that the LGS Technical Assistant - Security, is temporarily filling this position at the PBAPS. He will assist the nuclear security consultant and other licensee personnel in overseeing the contractor transition and in monitoring other security improvements.
5. PECO security supervision will interview key personnel of leading bidders. These interviews will be the first in a series of meetings, where PECO will coordinate requirements with the new contractor. (Closed) Protection Technology, Incorporated was awarded the security contract for the PBAPS. Transition teams comprising contractor, PBAPS and LGS personnel are on site working on the transition details. This transition team meets on a daily basis with PECO security management to help ensure a complete and efficient transition of the security force contractors.
6. PECO has notified the existing Burns contract employees that the request for bids to which contractors are responding stated that the proposal shall contain a program whereby existing SFMs and firewatch personnel, if selected to be utilized by awarded contractor, may at the contractor's discretion, retain their current level and stature, or near equivalent, when commencing employment with awarded contractor. (Closed) PECO issued a letter to Burns in mid-July, which in turn was distributed to all Burns personnel, explaining PECO's position that the incoming security contractor should make every attempt to retain existing security force personnel to augment their ranks upon being awarded the contract.



7. Interviews by the contractor, of existing, suitable Burns employees will begin within one week of award of the new contract. The selection process will place an emphasis on candidate's knowledge of operation, attitude, and physical fitness. (Closed) Interviews with existing Burns security force members has been completed. Protection Technology, Inc. is currently in the process of making its final evaluation and selection of personnel, with employment offers expected shortly.
8. PECO will coordinate the following activities with the new contractor's Training Transition Team Members:
  - a). Immediate transfer or duplicating of existing training records from Burns to the new contractor. (Closed) Interviews with on-site members of the Protection Technology, Inc. transition team, by the inspectors, indicates that this step in the transition process is complete.
  - b). through g). - remain open.
9. through 12. - remain open.
13. The new contractor will immediately bring a trailer on site or PECO will provide space for the contractor's site office. Initially this space will be utilized by the contractor's transition teams. (Closed) A trailer, located just outside the protected area, has been provided to Protection Technology, Inc. for office space. The inspectors verified that the trailer office space was adequate and was being utilized by the transition team.

Attachment 2 (Summary of Special Monitoring of the Security Force at PBAPS June 16-June 28, 1988) (Closed) This attachment did not list any corrective actions or open items. Rather, it provided an overview of the procedures and findings of the Performance Assessment Group as it monitored security force members' performance.

- d. PECO letter, dated July 27, 1988, addressing the security problem root cause analysis and providing an action plan to resolve the identified problems. NOTE: No items on the action plan were reviewed out during this inspection.

The following items in the aforementioned correspondence remained open at the conclusion of this inspection. The items are listed for tracking purposes and will be reviewed during subsequent inspections of the licensee's program.

