U. S. NUCLEAR REGULATORY COMMISSION

REGION I

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Licensee:	PECO Energy Company P. O. Box 195 Wayne, PA 19087-0195	
Facility Name:	Peach Bottom Atomic Power Station Units 2 and 3	
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Inspectors:	W. L. Schmidt, Senior Resident Inspector F. P. Bonnett, Resident Inspector R. K. Lorson, Resident Inspector P. Peterson, NDE Specialist, DRS J. Shea, Project Manager, NRR	

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Reactor Projects Branch 4
Division of Reactor Projects

EXECUTIVE SUMMARY
Peach Bottom Atomic Power Station
Inspection Report 95-22

Overall Assurance of Quality:

Overall the PECO staff performed excellently this period, which included the tenth Unit 3 refueling outage begun on September 22. The outage was well planned, controlled, and managed in a professional manner (Section 2.3).

PECO inspected the Unit 3 core shroud and concluded that significant crack growth had not occurred since the previous refueling outage (Section 2.3). PECO managed the Unit 3 license change submittal process well and demonstrated a good approach to safety; however, a licensing submittal to relax commitments previously made regarding inspection of the core spray downcomer piping provided insufficient engineering justification (Section 4.3). PECO's repair of the cracks in the Unit 3 core spray downcomers was comprehensive and effective (Section 4.2), and controls established for the replacement of the control rod position indication probes were appropriate (Section 3.5).

PECO effectively managed the backlog of uncompleted non-outage corrective maintenance items and for identifying repeat maintenance tasks (Section 3.3).

Plant Operations:

PECO operated both units safely over the period. Operators responded well to two unexpected transients including: a minor steam leak from the electro-hydraulic control (EHC) pressure averaging manifold at Unit 2 that caused a divergence between reactor pressure and EHC system pressure (Section 2.4); and an unexpected reactor recirculation pump (RRP) trip at Unit 3 (Section 2.1).

Unit 3 operators performed well during the Unit 3 shutdown for the tenth refueling outage (Section 2.2) and throughout the outage (Section 2.3).

Maintenance and Surveillance:

PECO technicians performed in an excellent manner during the simulated loss of offsite power test (Section 3.1), and the discharge testing on all Unit 3 safety-related batteries (Section 3.4). Technicians demonstrated good performance during the maintenance activities on the 3A low pressure coolant injection outboard injection valve (MO-25A) (Section 3.2).

A reactor recirculation pump trip at Unit 3 caused by a maintenance technician who exercised poor judgement by going into the 3A RRP control cabinet without informing the control room was of minimal safety significance (Section 2.1).

Engineering and Technical Support:

PECO responded well by performing an inspection of the Unit 3 torus proper, as a precautionary measure, following difficulties at the Limerick Generating Station. PECO sampled the torus water and visually inspected the torus and found it to be free of crud and fibrous materials (Section 4.1).

PECO performed volumetric inspections of the Unit 3 core spray downcomer piping and discovered extensive cracking in all four downcomers. PECO subsequently obtained clamps and installed them during the course of the outage which provided the needed structural support (Section 4.3).

Plant Support:

PECO's Radiation Protection organization demonstrated excellent performance during the Unit 3 refueling outage. Radiation workers demonstrated very good cooperation in maintaining high radiological performance standards. No major radiological events occurred during the outage (Section 5.1).

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DETAILS

1.0 PLANT ACTIVITIES REVIEW

1.1 PECO Energy Company Activities

The PECO Energy Company (PECO) conducted normal operating and shutdown activities safely at Peach Bottom Atomic Power Station (PBAPS) Unit 2 (Unit 2) and Unit 3 (Unit 3) over the inspection period.

Unit 2 operated at essentially 100% power over the entire period. On October 2, PECO discovered a minor steam leak from the main steam pressure averaging manifold that was causing a larger than normal divergence between reactor pressure and the indicated main steam manifold pressure (Section 2.4). The steam leak was not power limiting, however, PECO plans to repair the leak during a future outage.

Unit 3 began the inspection period operating at about 58% power in the end-of-cycle coastdown mode. On September 19, an unexpected reactor recirculation pump (RRP) motor generator (MG) set trip occurred due to a maintenance technician inadvertently bumping a loose resistor lug in the RRP MG control cabinet. PECO tightened the resistor lug, restarted the RRP, and restored reactor power (Section 2.1).

PECO shutdown Unit 3 on Friday, September 22, to begin the tenth refueling outage (Section 2.2). During the outage, PECO conducted inspections of the core shroud and determined that significant growth had not occurred on the cracks identified during the previous refueling outage (Section 2.3). PECO also performed inspections on the core spray downcomer sleeves (Section 4.2) and found cracks in all four of the downcomer sleeves. PECO installed mechanical clamps on each of these sleeves during the outage (Section 4.3). PECO began reassembly of the reactor pressure vessel on October 12.

1.2 NRC Activities

The resident and region based inspectors conducted routine and reactive inspection activities in several areas including: operations (Section 2.0); surveillance and maintenance (Section 3.0); engineering and technical support (Section 4.0); and plant support (Section 5.0).

The following specialist inspections also occurred during the report period:

Date	Subject	Report No.	Inspector
10/2-6/95	Radiation Exposure	95-24	Nimitz

2.0 PLANT OPERATIONS REVIEW (71707, 92901, 93702)[1]

The inspectors observed that operators conducted routine Unit 2 activities well. Operators responded well to several minor steam leaks from the pressure averaging manifold located downstream of the main steam isolation valves (MSIVs). This steam leakage caused a larger than normal divergence between reactor pressure and measured main steam manifold pressure (Section 2.4). A good safety conscienceness was maintained by the operators in controlling Unit 2 with the steam leakage problem for the remainder of the period.

The Unit 3 control room operators conducted routine operations well. Operators responded well to the trip of the 3A reactor recirculation pump motor generator set (Section 2.1), and displayed good teamwork during the Unit 3 shutdown (Section 2.2), and throughout the refueling outage (Section 2.3).

The operations crews made correct determinations of safety system operability and reportability of identified conditions. The crews adequately tracked and controlled entry into and exit from technical specification (TS) limiting conditions for operation (LCOs). The inspectors routinely verified the operability of safety systems required to support plant conditions at both units and did not identify any concerns. Housekeeping at both units was good.

2.1 Recirculation Pump Trip - Unit 3

PECO responded well to an unexpected trip of the 3A reactor recirculation pump motor generator (RRP MG) set on September 19, stabilizing the reactor and establishing single loop operation in accordance with procedure OT-112, "Recirculation Pump Trip." PECO operations, maintenance, and engineering personnel promptly assessed the possible causes for the event, developing a plan to identify and correct the cause for the RRP trip.

PECO's investigation of the event identified that a maintenance technician, who had been working inside the 3A RRP MG control cabinet, removed a piece of electrical tape from a lug on the loss of field relay external resistor. PECO determined that bumping the resistor resulted in a rapid resistance change causing the RRP MG trip. The technician had applied the tape the previous day as a safety measure while working inside the 3A RRP MG control cabinet. The technician entered the 3A RRP MG cabinet, without informing the control room, to verify that he was satisfied with the cabinet's condition following the previous day's maintenance activities when he detected and removed the tape. Following the trip, PECO tightened the resistor lug, returned the 3A RRP MG set to service, restored reactor power, and initiated a performance enhancement program (PEP) review.

The inspector concluded that this event was of minimal safety significance and that PECO took good initial actions. However, the maintenance technician exercised poor judgement by going into the 3A RRP MG control cabinet without informing the control room. PECO's followup actions included discussing the

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[1] The number given indicate the NRC Inspection Manual procedures used as guidance by the inspectors.

event with the other electrical maintenance technicians to reinforce the expectation to keep the control room informed of all maintenance activities, and also initiating a preventive maintenance requirement to check the tightness of the external resistor connections. The inspector was satisfied with PECO's response and followup actions.

2.2 Unit 3 Shutdown

The operators performed well during Unit 3 shutdown for the 1995 refueling outage on September 22. The inspector observed good control over reactor power and excellent communications between operators performing different tasks. The control room supervisor provided excellent oversight of ongoing activities.

2.3 Refueling Outage - Unit 3

PECO conducted the tenth Unit 3 refueling outage in an excellent manner. The outage began September 22 and was essentially completed at the end of the report period. Major activities included the core shroud inspection, core spray downcomer piping repair, and jet pump diffuser cleaning. Modifications included uprating the core thermal power to 3458 megawatts, installation of a new transversing incore probe system, and installation of the 4kV bus off-tie breaker transfer circuitry (Mod 5414) for the E-23 and E-43 vital buses. The modifications will be installed on the E-13 and E-33 vital buses and on the emergency diesel generator (EDG) output breakers for Unit 3 vital buses during the upcoming EDG outage windows. Overall, the outage was well planned and controlled in a professional manner.

- **Core Shroud Inspection**

PECO conducted a thorough inspection of the weld heat-effected zones on the core shroud. Using ultrasonic testing techniques and video cameras, PECO determined from the data collected that significant crack growth had not occurred since the previous Unit 3 refueling outage. PECO plans to continue monitoring the core shroud cracks during future outages.

- **Outage Meetings**

The inspectors frequently attended outage planning, status, and management meetings and assessed them to be very effective in coordinating and communicating outage efforts. PECO staff and management were well informed of outage conditions and addressed emerging problems proactively. This proactive approach was instrumental in maintaining the excellent coordination between working groups.

- **Drywell/Torus Tours**

The inspectors toured the drywell and torus proper and noted excellent material conditions and general housekeeping. Drywell personnel access and egress walkways were kept clear of mirror insulation, loose tools, and scaffolding components. The inspectors noted that this was an improvement from the Unit 2 drywell condition during its refueling outage last year. PECO

maintained the undervessel area clean and dry throughout the outage which contributed to achieving low personnel radiation doses during under vessel work. The inspector noted some surface corrosion throughout the torus which may require attention at a future date.

- **Refueling Bridge Tours**

PECO fuel handling personnel performed operations in a professional and well coordinated manner. Observations of core alterations from the refueling platform indicated that the Fuel Handling Director, the Refueling Platform Operator, and the Reactor Operator were focused on their job and functioned well. Communications between the operators and the use of fuel location aids were excellent. Further, the use of a closed-circuit television camera mounted at the end of the grapple mast was a strength. PECO completed core alterations and core verification without mishap.

- **Unit Tours**

The inspectors conducted detailed plant tours observing good procedure usage and good housekeeping practices. The inspectors found ongoing modification and maintenance activities well coordinated and controlled, with very good radiation worker practices. The inspectors concluded that PECO personnel conducted activities on the refueling floor, including reactor disassembly, inspection of the core shroud, core spray piping repair, and refueling operations in a well supervised and controlled manner.

2.4 Unit 2 Steam Leak

PECO responded appropriately on October 2 after the Unit 2 Reactor Operator (RO) alertly identified that the divergence between the indicated main steam pressure averaging manifold pressure and reactor pressure had increased outside of its normal range. Pressure instruments located off the manifold, sense main steam pressure and provide an input signal to the electro-hydraulic control (EHC) system. The EHC system controls reactor pressure by modulating steam flow to the main turbine. The RO observed that the indicated manifold pressure was about 12 pounds per square inch (psig) lower than expected.

PECO determined that the most likely cause for the divergence was a steam leak from the pressure averaging manifold. PECO instructed the operators to increase monitoring of the manifold pressure, about the potential indications, and the expected actions to be taken should the manifold leak increase. PECO maintenance personnel entered the turbine building moisture separator area and observed the minor steam leak issuing from the packing of three manifold isolation valves.

PECO engineering personnel developed a comparison plot between the manifold and the turbine steam chest pressures and determined that the leak had initiated at the beginning of August. PECO is developing a plan to correct the manifold leaks during a future outage. The inspectors concluded that PECO's actions to date have been appropriate and will review their final actions to repair the steam leaks.

3.0 MAINTENANCE AND SURVEILLANCE TESTING (61726, 62703, 92902)

The inspectors routinely observed the conduct of maintenance and surveillance tests (STs) on safety related equipment. This involves the review of ongoing activities to ensure: the proper use of approved procedures and skills of the craft, the calibration of testing instrumentation, the qualification of personnel, and the implemented administrative controls including blocking permits, fire watches, ignition sources, and radiological controls.

In the maintenance area the inspectors reviewed maintenance procedures, action requests (AR), work orders (WO), and radiation work permits (RWP). During observation of maintenance work, the inspectors verified appropriate Quality Verification (QV) involvement, plant conditions, TS LCOs, equipment alignment and turnover, post-maintenance testing and reportability review.

In the surveillance area the inspector reviewed test procedures and completed tests to verify the adequate demonstration of safety functions and that test acceptance criteria were met. During surveillance observations, the inspectors verified that tests were properly scheduled and approved by shift supervision prior to performance; control room operators were knowledgeable about testing in progress, and that redundant systems or components were available for service, as required. The inspectors routinely verified adequate performance of daily STs including instrument channel checks and the jet pump and control rod operability tests.

3.1 Loss of Power Test - Unit 3

PECO technicians and operators performed in an excellent manner during the emergency diesel generator (EDG) simulated automatic actuation and load acceptance test (ST-O-052-110-3) on October 11. The test verified ability of all the EDGs to automatically start on a loss of offsite power condition coincident with a simulated loss of coolant accident signal and assume the emergency loads within the required time. During the test, all equipment functioned as designed.

The inspectors reviewed the test procedure, attended the Plant Evolution/Special Tests (PEST) briefing, and witnessed conduct of the test from the control room, cable spreading room, and the EDG building. The PEST Coordinator clearly and thoroughly communicated the importance of exercising self-checking practices and maintaining a questioning attitude. The Test Coordinator conducted the test in an orderly, well planned and controlled manner. Technicians in the cable spreading room and the control room demonstrated excellent communications and exercised self-checking techniques.

3.2 Low Pressure Coolant Injection Valve - Unit 3

The inspector noted good performance by the maintenance and engineering departments during the 3A low pressure coolant injection system outboard injection valve (MO-25A) maintenance activities. The MO-25A maintenance resolved an increased motor operating current anomaly during the upper portion of the valve stroke as discussed in NRC Inspection Report 94-03.

PECO's planned the job well and included the use of walkthroughs to familiarize technicians with the planned work activities. PECO disassembled the MO-25A valve was disassembled in a controlled manner and carefully inspected the valve components. PECO's inspections identified a valve yoke distortion and a bent valve stem. The valve seats, wedge, and body were found to be in good condition.

PECO hypothesized that the yoke distortion had been caused by heat during the previous weld installation of stiffeners. Based on the inspections discussed above, PECO decided to replace the MO-25A yoke, stem, stem nut, and hairpin guide. The inspector observed the initial valve reassembly activities and noted the good internal valve condition, including the seats. During the reassembly, the vendor maintenance supervisor, noted a gouge on the valve bonnet and PECO decided to also replace the bonnet. PECO completed the valve reassembly and tested the valve satisfactorily.

The inspector reviewed the completed work package and noted that PECO documented the job activities well. The test data indicated satisfactory valve operation. The inspector concluded, based on personnel interviews, field observations, and review of test data that PECO had planned and performed the MO-25A maintenance activities well.

3.3 Safety Related Maintenance Backlog

PECO effectively managed the programs for reducing the backlog of uncompleted non-outage corrective maintenance items and for identifying repeat maintenance tasks. PECO management reviews the maintenance backlog status weekly at the plant leadership meeting and has periodically lowered the goal for the number of uncompleted corrective maintenance items to maintain the focus on reducing the backlog. The inspector reviewed the list of outstanding corrective maintenance items and noted that all items were either coded as minor maintenance items, scheduled for repair, or had a specific work hold assigned (i.e. parts). The strong oversight of the maintenance activities and focus on the outstanding corrective maintenance items enabled PECO to reduce the maintenance backlog from approximately 1500 items to about 500 items over the past two years.

Maintenance Guideline MAG-CG-101, "Monitoring Performance Of Maintenance Activities," describes PECO's program for monitoring the effectiveness of maintenance activities. The program requires the maintenance planner to identify potentially repeat maintenance tasks that have been performed on a component within the previous two years. The appropriate maintenance supervisor confirms that the corrective maintenance activity involves a repeat maintenance task and to initiate a PEP review if necessary.

The inspector reviewed the PEP database and identified several PEPs related to repeat maintenance activities. The inspector performed a detailed review of selected repeat maintenance PEPs and noted that they specified appropriate corrective actions to prevent the identified failures from recurring. For example, PEP I0004228 involved a failed diesel generator exhaust manifold gasket. The investigation into this failure determined that the gasket failed due to mis-alignment during installation. The corrective actions involved

maintenance personnel training and revising the procedure to require the use of a vendor approved adhesive to better secure the gasket in place during the flange assembly process. The inspector determined that PECO properly identified and reviewed repeat maintenance tasks to prevent recurrence.

3.4 Battery Testing - Unit 3

The inspectors observed the performance of the safety-related battery testing conducted during the Unit 3 outage. Maintenance technicians conducted a performance discharge test on the 3A battery and service discharge tests on the 3B, 3C, and 3D, which had been replaced within the several weeks prior to the unit shutdown as discussed in NRC Inspection Report 95-19. The technicians used the procedures well in installation of the test equipment and the actual conduct of the testing. The testing results showed that all Unit 3 batteries performed within the manufacturers designed ratings.

3.5 Position Indication Probe Replacement - Unit 3

The inspector reviewed a PECO plant operating review committee (PORC) position that allowed the jumpering of the fully inserted contact for control rod position indication probes (PIP) being repaired or replaced during the outage. This jumpering allowed the refueling to continue in parallel with the PIP work. Normally if more than one PIP produced a signal that its control rod was not fully inserted the refueling bridge interlock would prevent fuel movement. PECO took appropriate measures including tagging the control rod movement switches to prevent operators from moving any control rod during the PIP work.

4.0 ENGINEERING AND TECHNICAL SUPPORT ACTIVITIES (92903, 37551)

The inspectors routinely monitor and assess licensee support staff activities. During this inspection period, the inspectors focused on the activities discussed below.

4.1 Torus Inspection - Unit 3

PECO responded well to followup an emergency core cooling system (ECCS) clogged suction strainer event that occurred at the Limerick Generating Station in September 1995. As a precautionary measure, PECO elected to inspect the Unit 3 torus proper during the refueling outage to ensure that the torus was clear of any foreign material that could reduce the ECCS pump suction head.

During the torus inspection, PECO sampled the torus water for fiber content and visually examined the bottom of the torus and ECCS pump suction strainers (A Loop Side) for crud and other foreign material. PECO analyzed the torus water samples and found the samples to be free of fibers. The inspector reviewed a video recording of the visual inspection and did not observe any foreign material on the suction strainers and noted a minor silt buildup (approximately 1/16 of an inch deep) on the bottom of the torus. The silt particles would have dispersed and would not have presented a hazard to the

ECCS pump suction strainers. PECO found and removed an approximately 2 inch piece of duct tape that could not have blocked the ECCS pump suction strainers.

Based on the torus water sample and inspection results, PECO decided not to desludge the torus during the refueling outage. PECO's planned long term actions included participation in the BWR Owner's Group initiatives in this area and developing a procedure to continuously clean the torus.

4.2 Core Spray Downcomer Ultrasonic Examination - Unit 3

During the in-vessel visual examination of the core spray piping downcomers, cracks were discovered in 3 of the 4 coupling sleeves. To determine the extent of the cracks, PECO ultrasonically inspected the downcomers. Through wall dimensions were not a factor considered for the analysis of the downcomer since any crack indication was considered to be 100% through wall.

PECO's contractor demonstrated the proposed technique to the NRC inspector and PECO Energy NDE Level III technician. The tooling and inspection technique were similar to that performed by the contractor at another boiling water reactor. The inspection technique used the GE Smart 2000 Ultrasonic Inspection System with an outside diameter (OD) creeping wave transducer. The manual transducer manipulator consisted of a horseshoe shaped bracket, holding three separate transducers, attached to a 60 foot pole. Each transducer was connected to a separate channel on the Smart 2000 system with one channel displayed at a time to view the A-scan. A remote underwater camera was used to guide the UT operator, as well as to determine the location of the transducer.

The coupling sleeve is welded to the pipe with a 3/8" fillet weld. The technique was applied to both the coupling sleeve and the pipe. The ultrasonic demonstration was performed on a mock-up of the core spray downcomer. The mock-up contained eight thermal fatigue cracks, four in the coupling and four in the pipe. The depth of the cracks on the coupling side were 25% inside diameter (ID), 50% ID, 45% OD, and 100% through wall. The depths of the crack on the pipe side are 25% ID, 50% ID, 25% OD, and 100% through wall. The location of the flaws on the mock-up represented where the cracks were expected on the component, in the heat effected zone and at the root of the fillet weld.

UT inspection was performed on all four of the core spray downcomer coupling sleeves. Cracks were found in all four of the downcomer coupling sleeves. No cracks were found in the pipe side inspection. After the UT results were analyzed, PECO Energy elected to install mechanical clamps on all four of downcomer coupling sleeves. The NRC staff reviewed the use of the mechanical clamp as discussed in Section 4.3 below.

4.3 Outage Related Licensing Activities - Unit 3

The NRC staff concluded that PECO's facility license change submittal process was well managed and demonstrated a good approach to safety. The staff also found PECO's repair to the cracks in the Unit 3 core spray downcomers to be comprehensive and effective.

In a public meeting on May 31, 1995, PECO described its approach to submitting the licensing activities needed to support the September 1995 Unit 3 refueling outage. PECO stated that its goal was to have outage related licensing actions submitted to the NRC no later than six months prior to the start of the refueling outage. For the Unit 3 refueling outage, PECO submitted licensing applications related to the following topics:

1) Authorization for 5% increase in licensed thermal power limit;

2) Request for exemption to 10 CFR 50, Appendix J, Type A Integrated Leak Test Requirements;

3) Request for Exemption to 10 CFR 50, Appendix J, Type B and C Local Leak Rate Test (LLRT) requirements;

4) Application to amend the Technical Specification related to LLRT hold time requirements;

5) Application to amend the Technical Specification containment penetration requirements associated with the traversing in-core probe (TIP) system;

6) Authorization to relax commitments made regarding Generic Letter 88-01 reactor water cleanup system weld inspections;

7) Request for Relief from ASME Code requirements related to excess flow check valve testing requirements;

8) Request to adopt ASME Code Case N498-1 and N-416 related to hydrostatic test requirements;

9) Request for approval of alternative repair to the Unit 3 core shroud. The submittal was made on a contingency basis and the repair was to be installed based on the results of planned inspections of the Unit 3 core shroud.

10) Request to relax commitments made regarding previously identified cracks in a Unit 3 core spray system downcomer within the Unit 3 reactor vessel.

The staff found that for the most part, PECO's submittals were complete, comprehensive, and demonstrated a good approach to safety as it pertained to each request. Of note, the proposed core shroud repair was provided in a timely manner and was very detailed in its presentation and considered as a very proactive action on the part of PECO. The staff considered the TIP

related license amendment request and the Type A test exemption request similarly comprehensive and well supported. The staff concluded that PECO's management of outage related licensing actions was thorough and proactive.

One exception to the above conclusion involved PECO's request to relax commitments related to a previously identified flaw in the Unit 3 core spray downcomer. PECO identified the flaw during the fall 1993 Unit 3 refueling outage. PECO informed the staff of the flaw in letter dated November 5 and 10, 1993, and provided justification and analyses to support operation of the Unit without repairing the flaw for the duration of Unit 3 Cycle 10. In a letter dated November 16, 1993, the staff approved PECO proposal to operate without repairing the flaw.

In a letter dated December 8, 1993, PECO docketed its commitment to conduct volumetric inspections of the flaw and perform additional analysis as appropriate. In a subsequent letter dated June 13, 1995, PECO stated that it had elected to forego the volumetric inspections and requested approval to defer installation of the clamp, predicated on the condition that visual examinations did not show flaw growth greater then that predicted in its November 1993 letters.

During the staff review of PECO's June 1995 request, the staff requested additional information to support PECO's decision not to perform the volumetric inspection and additional information regarding its analysis of the core spray pipe integrity. PECO provided additional information in a letter dated September 28, 1995. PECO did not provide a detailed specific rationale for not performing volumetric inspections. The staff concluded that the analytical approach outlined in the September 28, 1995 submittal lacked significant information and could not be resolved within the time frame requested by PECO in its June 13, 1995 letter. Based on discussions with PECO, the staff did not observe clear management sponsorship of this licensing action.

Ultimately, however, PECO did perform the volumetric inspections and discovered extensive cracking in all four core spray downcomers. PECO subsequently obtained clamps and installed them during the course of the outage. The staff found PECO's repair to the as-found cracks in the Unit 3 core spray downcomers to be comprehensive and effective.

4.4 Closed - Potential Effects of Not Maintaining a Negative Reactor Building Pressure (Unresolved Item 94-13-02)

PECO engineering adequately addressed inspector concerns regarding the potential effects of not maintaining a negative reactor building to atmosphere differential pressure (dp). PECO's customized TS contained no requirement for a negative pressure to be maintained in the reactor building. The inspectors were concerned about the effect that a positive reactor building pressure would have on the potential for a ground level release of radioactive material, the operability of the reactor building ventilation system radiation monitor, and the response time of the standby gas treatment system.

PECO maintains the reactor building at a negative dp through in-place administrative controls. Station procedures, alarms, and operator logs and daily surveillance keep the control room staff aware of any abnormalities or adverse trends. The inspector concluded that the reactor building dp is maintained negative and methods exists to alert the operators of adverse conditions with regards to reactor building dp.

During the development of the Improved TS submittal to the NRC, PECO took exception to a requirement to maintain the reactor building at a negative 0.25 inches of water because that requirement was not included in the plant original licensing bases. However, the inspector noted in his review of the newly issued (September 1995) Improved TS, that the standby gas treatment (SBGT) system is required to be able to draw down the secondary containment to greater than -0.25 inches in less than 120 seconds and maintain the building at that pressure for at least one hour with one SBGT subsystem. The inspector reviewed the "Secondary Containment Capability Test," ST-O-009-200-3, performed on October 11, 1995, near the end of the Unit 3 refueling outage. The test was satisfactory with all parameters within the Improved TS requirements.

The reactor building ventilation system radiation monitor setpoint contains sufficient margin, with respect to the TS required setpoint, to adequately detect adverse radiological conditions and isolate the reactor building ventilation system in the event of a positive building dp. PECO's data indicated that the detector's sensitivity was sufficient to effectively detect an adverse radiological condition with decreased flows in the ventilation exhaust duct. The conservative detector setpoint would ensure that the ventilation system isolates. PECO's response to these items satisfied the inspector.

5.0 PLANT SUPPORT (71750, 92904)

5.1 Radiological Controls

The inspectors examined work in progress in both units to verify proper implementation of health physics (HP) procedures and controls. The inspectors monitored the ALARA (As Low As Reasonably Achievable) program implementation, dosimetry and badging, protective clothing use, radiation surveys, radiation protection instrument use, handling of potentially contaminated equipment and materials, and compliance with RWP requirements. The inspectors observed that personnel working in the radiologically controlled areas met applicable requirements and were frisking in accordance with HP procedures. During routine tours of the units, the inspectors verified that a sampling of high radiation area doors were locked, as required. All activities monitored by the inspectors were found to be acceptable.

PECO's HP organization demonstrated excellent performance during the Unit 3 refueling outage. HP technicians at major control points were very knowledgeable of radiological conditions and helpful to ensure radiation worker compliance with regulations. Radiation workers demonstrated very good cooperation in maintaining high radiological performance standards, as

evidenced by the low number of personnel contamination reports (72 PCRs for the outage) and a final accumulated outage dose of 240 person-REM (60 person-REM under the projected dose). The inspector noted that no major radiological events occurred during the outage.

5.2 Physical Security

The inspectors monitored security activities for compliance with the accepted Security Plan and associated implementing procedures. The inspectors observed security staffing, operation of the Central and Secondary Access Systems, and licensee checks of vehicles, detection and assessment aids, and vital area access to verify proper control. On each shift, the inspectors observed protected area access control and badging procedures. In addition, the inspectors routinely inspected protected and vital area barriers, compensatory measures, and escort procedures. The inspectors found PECO's activities to be acceptable.

6.0 MANAGEMENT MEETINGS (71707)

The resident inspectors provided a verbal summary of preliminary findings to the station management at the conclusion of the inspection. During the inspection, the inspectors verbally notified PECO management concerning preliminary findings. The inspectors did not provide any written inspection material to PECO during the inspection. PECO did not express any disagreement with the inspection findings. This report does not contain proprietary information.