ENCLOSURE 1

FINAL SALP REPORT

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

REPORT NUMBERS: 50 277/90-99; 50-278/90-99

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

UNITS 2 AND 3

ASSESSMENT PERIOD: JUNE 1, 1990 - AUGUST 3, 1991

BOARD MEETING DATE: September 23, 1991

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I INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) is an integrated Nuclear Regulatory Commission (NRC) staff effort to collect observations and data and to periodically evaluate licensee performance on the basis of this information. The SALP process is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. SALP is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful feedback to the licensee's management to improve the quality and safety of plant operations.

An NRC SALP Board met on September 23, 1991, to review the collection of performance observations and data and to assess the licensee's performance at the Peach Bottom Atomic Power Station. This assessment was conducted in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance," dated September 28, 1990.

This report is the NRC's assessment of the licensee's safety performance at the Peach Bottom Atomic Power Station for the period June 1, 1990 through August 3, 1991.

The SALP Board for the Peach Bottom Atomic Power Station assessment consisted of the following individuals:

Chairman:
C. W. Hehl, Director, Division of Reactor Projects (DRP)

Members:

L. Bettenhausen, Chief, Operations Branch, Division of Reactor Safety (DRS)
R. Blough, Chief, Projects Branch 2, DRP
W. Butler, Director, Project Directorate I-2, Office of Nuclear Reactor Regulation (NRR)
R. Cooper, Deputy Director, Division of Radiation Safety and Safeguards (DRSS)
J. Lyash, Senior Resident Inspector, DRP
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Others Participating:

N. Blumberg, Chief, Performance Programs Section, DRS
R. Bores, Chief, Effluents Radiation Protection, DRSS
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II SUMMARY OF RESULTS

II.A Overview

The facility was operated safely and conservatively during the assessment period. Licensee management continued to maintain strong involvement in site activities and to promote a safety conscious approach. Significant progress was made toward achievement of some long-term goals, including improved operator staffing and career paths. Licensee resource commitments in the form of personnel development programs, plant modifications and several process improvement efforts were evident. Also, the licensee initiated a series of comprehensive self-assessments that were effective in identifying program and personnel performance areas for improvement.

The positive effects of some of these self-assessment efforts were offset by ineffective root cause analyses and implementation of corresponding corrective actions. Indication of this included continuing programmatic weaknesses in the areas of surveillance testing, radiation work practices and the corrective action process. Also, personnel errors, procedure weakness and lack of attention to detail continued to be persistent problems in the conduct of routine activities. As a result, licensee performance improvement efforts were slowed and there was no consistent trend in the overall level of performance.

In summary, licensee performance was variable but remained at an overall level consistent with the last assessment period. Licensee management continued to promote a safety conscious approach; however, continuing problems with the performance of routine activities indicate that this standard has not been fully accepted at all levels of the plant staff. Management attention is needed to identify and address factors contributing to the observed performance weaknesses, if further improvement is to be realized. This includes ensuring root cause analyses are of sufficient depth to consistently identify contributing factors so that effective corrective actions can be developed and implemented; and establishing adequate work standards which are communicated and reinforced with all levels of the plant staff and supervision.

II.B Facility Performance Analysis Summary

Functional Area	Rating, Trend Last Period	Rating, Trend This Period
Plant Operations	2	2
Radiological Controls	2	2
Maintenance/Surveillance	2	2
Emergency Preparedness	1	1
Security and Safeguards	1	1
Engineering/Technical Support	2	2
Safety Assessment/ Quality Verification	2	2

Previous Assessment Period: July 1, 1989 through May 31, 1990

Present Assessment Period: June 1, 1990 through August 3, 1991

III PERFORMANCE ANALYSIS

III.A Plant Operations

III.A.1 Analysis

The NRC assessed Plant Operations as Category 2 in the previous SALP period. The philosophy consistently reinforced by management and largely accepted by the staff was one of a careful, thoughtful and safety conscious approach. Licensed operators responded well to challenging plant transients and displayed a sound knowledge of plant design and procedures. Lapses in personnel attention to detail were noted, particularly during routine activities. Licensee programs to ensure that proper equipment status was established and periodically verified weren't wholly successful, and resulted in several problems during the period. While licensee efforts to improve operator staffing and career paths continued, progress was slow.

During the current SALP period, the quality of plant operations and licensed operator performance remained consistent with that noted in the previous SALP period. The licensee made substantial progress in strengthening operator staffing and shift supervisor career paths. But the licensee was only marginally effective in addressing several weak areas noted during the last SALP period such as procedure use and adherence, review of work activities, and event followup effectiveness.

During the current period, licensee management continued efforts to meet operator staffing goals and to establish operator career paths, and made substantial progress. Each of the six operating shifts exceeded the number of operators required by the plant Technical Specifications. During this period, the licensee attained the goal of increasing Unit Reactor Operator (RO) staffing from three to four ROs per crew. Also as a result of the increased staffing, licensee management was able to assign three Shift Supervisors (SSV) to positions in training, emergency preparedness and permit and blocking preparation. Two Chief Operators were also assigned to develop a new equipment clearance program. The licensee developed and is supporting a college degree program for operations personnel. Nineteen personnel began the five-year program in September 1990. These efforts had a positive impact on operations staff morale and professionalism, and provided a broader mix of experienced licensed operators and licensed degreed engineers on-shift.

Mid-way through the SALP period two former Shift Managers (SM) were promoted to Operations Superintendent and Assistant Superintendent. Both of these individuals have strong operations backgrounds. Operations management continued to be visibly involved in daily plant activities and in monitoring shift performance.

The SMs and SSVs maintained generally good oversight of activities, and displayed a questioning, safety conscious approach to operation of the plant. The SMs effectively raised operating concerns to plant management and other work groups for resolution. During plant transients, the SM provided effective leadership. SSV knowledge and use of the emergency

operating procedures and direction of the operating crew were commendable. However, the NRC noted several instances of less than adequate review by shift management of the impact of surveillance and maintenance activities before release was given to start work, and in aggressively questioning and resolving deficient plant conditions. For example, a high pressure coolant injection (HPCI) system isolation resulted when a surveillance test was released for performance while an isolation signal was already in on another channel. Also, shift management released a battery charger for maintenance without adequately understanding that the evolution would impact the operability of other systems. Some weakness was also noted in the licensee's process for making operability determinations for non-routine equipment problems. When the standby liquid control (SLC) solution storage tank was overheated, shift management did not recognize the potential impact on SLC operability for several shifts. The operability impact of a leaking primary containment isolation valve back-up gas supply was not promptly assessed. In another case the SM declared HPCI operable without completing an adequate review, or involving the appropriate members of the technical staff. HPCI was later found to be inoperable due to the mechanical failure of several valves. Less than adequate procedures, training and communications contributed to these incidents.

Control room ROs and non-licensed operators continued to perform professionally and to exhibit good safety perspective. ROs were knowledgeable of plant conditions and promptly and effectively responded to annunciators and plant transients. Operator response to several plant challenges during the period was commendable. For example, operator response and corrective actions following a reactor recirculation MG set speed transient precluded the need for a scram on Unit 2. Non-licensed operators implementing daily plant tours and surveillances were very knowledgeable of their duties, procedures and equipment. Although operator errors did not cause any significant plant transients, the NRC noted several lapses in proper operator use of and adherence to procedures. Examples included improper reset of a control room high radiation isolation, improper lineup of the mechanical vacuum pump and failure to log reactor recirculation loop temperatures during plant heat-up and cool-down. In one case an operator failed to review the procedure before initiating heat-up of the SLC solution. The SLC solution was overheated, potentially impacting the operability of both trains. There were also a number of valve alignment errors attributable to operator performance.

Toward the end of the assessment period, both the NRC and the licensee identified that the event investigation program exhibited weakness. Although the licensee improved the program substantially during the last SALP period, the quality of the root cause analyses for operational events remained inconsistent. This contributed to performance weaknesses such as those described above. The licensee took steps near the end of the period to strengthen this area, including assignment of an experienced operations engineer to oversee the program. In addition, the licensee initiated a self-assessment of the event investigation and corrective action program.

The licensee's equipment permit and blocking program functioned adequately during the period to ensure personnel and equipment safety. However, several events occurred during the period that suggested the level of care and review in preparing the permits needed improvement. For example, permit weaknesses resulted in an inadvertent Unit 2 reactor scram and isolations of

shutdown cooling during a unit outage. The licensee recognized this weakness and took action to assess and correct the personnel performance problem. In addition, near the end of the period, the licensee implemented a new clearance and tagging system. The new system has not been in place long enough to determine its effectiveness.

The licensee conducted a Unit 3 mid-cycle outage and a Unit 2 refueling outage during this period. Licensee management was actively involved and the NRC saw good communications and coordination between operations and other work groups. The licensee maintained a positive overall control room environment despite implementation of significant Unit 2 control panel modifications. Following the outages, the licensee planned and properly conducted plant evolutions and testing. Shift turnovers were generally thorough and communications between operations personnel were effective.

The licensee's program for requalifying licensed operators was very good. In addition to the requalification exams conducted, the NRC administered three initial licensed operator exams. The pass rate for all exams was excellent. Even though a few weaknesses in the operator training program were identified, the licensee's overall performance was good in its preparation of individuals for examinations and for plant operations.

The licensee developed and implemented a dual-license Limited Senior Reactor Operator (LSRO) Fuel Handling program. The program focused on developing and licensing SROs limited to fuel handling at both Limerick and Peach Bottom. The licensee's training program was effective, with all nine candidates passing the initial fuel handling examination. Although the pass rate for the initial examination was good, the licensee and the NRC noted performance problems during refueling activities. The licensee made several fuel bundle placement errors during core reload, reflecting weaknesses in personnel attention, procedures and fuel pool physical conditions. Also, the LSRO's did not demonstrate supervisory initiative to insist upon quality environment and support for the job. The licensee strengthened procedures and added additional training in this area in preparation for the September 1991 Unit 3 refuel

In summary, the quality of plant operations remained at about the same level as in the previous SALP period. Licensed operators continued to respond well to challenging plant transients, and showed a sound knowledge of plant design. During the period, the licensee attained the goal of increasing Unit RO staffing from three to four ROs per crew, and began to broaden the shift supervisor career path. However, the licensee was not completely effective in resolving weaknesses regarding procedure use and adherence, review and monitoring of work activities and permit development. Late in the SALP period, the licensee and the NRC identified weaknesses in the licensee's root cause analysis program. In some cases effective corrective actions were not implemented to resolve the performance weaknesses noted, in part because the basic root causes for events were not consistently identified. Licensee management initiated actions to address this weakness near the end of the period.

III.A.2 Performance Rating: Category 2

III.B Radiological Controls

III.B.1 Analysis

The previous SALP Report rated Radiological Controls as Category 2. Program strengths included good ALARA performance, effective implementation of the in-field health physics program and a good incident reporting system. Improvements in job planning and coordination, and relations with other site sections were also noted. In addition, a decreased reliance on contractors was observed. Weaknesses were found in management oversight, training, self-assessment, root cause analysis and corrective actions. In addition, an excessive number of poor radiation work practices occurred.

III.B.1.1 Radiological Protection

During the SALP period, the health physics (HP) organization experienced significant changes in personnel. These changes have been accompanied by changes in program administration and management philosophy. Program improvement resulted in some areas while other areas were adversely affected. Technical issues were generally well managed and areas such as the instrument control program were much improved. In contrast, radiological protection department field operations were negatively impacted during the Unit 2 outage as a result of poorly defined supervisor responsibilities. Some problems identified during the last two SALP periods continued during this period. A comprehensive self-assessment audit was completed at the end of the period. All aspects of the radiation protection program were evaluated, and the audit was effective in identifying several areas for improvement.

Management assurance of quality was adequate during the assessment period. However, incidents involving poor radiation worker practices were numerous and corrective actions were sometimes too limited in scope. While corrective actions were taken when incidents occurred, they were not always effective in addressing the root causes for problems, and similar problems sometimes recurred after corrections had been implemented. For example, poor radiological work practices and failure to achieve compliance with procedures were documented on numerous occasions in the Radiological Occurrence Report system. Corrective actions often included worker counseling and restoration of radiological controls to the level that existed prior to the incident (replace boundaries, postings, etc.). Broad methods, applicable to all station personnel, to prevent recurrence, such as formal communication from upper management, training, improved procedures, or enhanced supervision, were absent or ineffective in some cases.

In general, technical issues were rapidly and effectively resolved during the period. Some accomplishments included implementation and enhancement of a new computerized HP database system, preparation for hydrogen water chemistry and analysis of contamination detection techniques. Other technical issues were sometimes met with a less expeditious approach. For example, station and corporate personnel had not reached technical resolution and agreement on the appropriateness of using thermoluminescent dosimeter data for noble gas exposures. Despite these occasional problems, overall resolution of technical issues was good.

Health physics technicians were observed to provide adequate pre-briefs to personnel prior to entry into contaminated and high radiation areas. HP technicians were very knowledgeable of plant radiological conditions and assured minimal exposure to personnel. Toward the end of the SALP period, the Plant Information Management System was installed at the station. The licensee expects this system to streamline information gathering and verification at the entry and exit points for the power block, and to eliminate the need for individual dose cards.

HP management personnel attended the Shift Manager's morning meetings and provided information to other departments on HP issues. The interface between HP and other plant departments was good and cooperation was evident at those meetings. In general, HP support for routine operation, maintenance and testing activities was well controlled and preplanning was good. One noted exception is the continued occurrence of spills involving the reactor water clean-up system. Major modifications, including replacement of the Unit 2 main condenser, emergency service water piping, and emergency core cooling system injection check valves; re-racking of the Unit 3 spent fuel pool; and torus diving activities were well planned and controlled with only minor problems encountered. Good ALARA practices were utilized to minimize employee exposure. ALARA goals were aggressive and generally met by the licensee. Good licensee initiatives included the establishment of HP access control points for jobs such as the main condenser modification and the rebuilding of control rod drives, and the assignment of a group of HP technicians specifically to support the Unit 2 main condenser modification.

During the last assessment period the licensee implemented reductions in HP staffing. During the current period the loss of personnel did not adversely impact the overall quality of the radiological control program. Although attrition resulted in the turnover of several individuals from key positions within the organization, replacement of these individuals with qualified personnel has resulted in adequate staffing levels.

Training facilities were significantly improved during the period. A new building was constructed which houses HP training classrooms and laboratories. The facilities were spacious and generally well equipped. The licensee's General Employee Training program has been strengthened and appeared to be comprehensive.

The training needs for supervisors and support staff professionals were more clearly defined during the period. A program was initiated to train HP supervisors to become more proficient and uniform in their approach to management of the technician work force. Training requirements for professional support staff personnel were evaluated by corporate personnel. Overall, training efforts were improving. However, these improvements are still underway and their full effect has not yet been realized.

III.B.1.2 Radwaste, Radiological Environmental Monitoring, Effluent Control and Chemistry Programs

NRC review of QA audits and surveillances of the solid radioactive waste and transportation program found them to be of excellent scope and quality. The licensee also has an excellent

training program for radwaste personnel. Team work and professionalism contributed to effective resolution of technical issues in the radwaste area.

Review of the licensee's Radiological Environmental Monitoring Program (REMP) indicated that the licensee was conducting an excellent program for routine operations. The licensee implemented an effective quality control program to ensure the validity of the analytical measurements for the REMP samples. The scope and technical depth of Nuclear Quality Assurance (NQA) audits assessing REMP were excellent. The meteorological monitoring systems were properly calibrated and maintained.

The licensee also conducted an excellent effluent control program and effectively implemented the Offsite Dose Calculation Manual. The scope and technical depth of NQA audits in these areas were excellent. Air cleaning systems were properly tested and maintained. A weakness was identified involving failure to establish a procedure, as required by the Technical Specifications, for the calibration of the liquid effluent radiation monitors. The licensee took action to correct the problem. The reliability of the radiological monitoring system (RMS) was identified as a weakness early in the SALP period. The licensee took action to improve the performance, assigning a system engineer overall responsibility for the RMS. Since this assignment, the engineer has demonstrated proficiency relative to the operability, maintenance and calibration of the RMS. This indicates good management support for the effluent control program.

The licensee continued to implement a strong chemistry control program. Administrative limitations on primary water chemistry parameters have been established and are routinely monitored and enforced by licensee management. The licensee made significant progress on several major modifications related to plant chemistry during this assessment period. These included zinc injection, hydrogen water chemistry and replacement of the Unit 2 main condenser. This investment of resources is evidence of the licensee's commitment to maintaining and improving water chemistry.

III.B.1.3 Summary

In summary, significant personnel changes in the HP organization occurred resulting in some program improvement. However, weaknesses identified during the previous two SALP periods still existed. The licensee's analysis of root causes for these weaknesses and the corrective actions taken were not always effective. Management assurance of quality was evident for technical issues and somewhat less effective in assuring the quality of performance for the in-field program. ALARA performance was good and overall the training program showed improvement. Performance in the areas of radwaste, transportation, effluents, chemistry, and the REMP continued to be very good.

III.B.2 Performance Rating: Category 2

III.B.3 SALP Board Comment

Despite a substantial commitment of resources and training by the licensee, the long-standing problems with radiation work practices have not been fully resolved. The SALP Board viewed this as an organization wide problem, and not one affected only by the HP organization.

III.C Maintenance and Surveillance

III.C.1 Analysis

The NRC assigned a rating of Category 2 for the Maintenance and Surveillance functional area during the last period. The licensee's planning and oversight of maintenance and instrument & controls (I&C) activities were good. The licensee established the use of several predictive maintenance techniques. The licensee completed major surveillance testing activities adequately. The NRC noted problems with procedural adherence and attention-to-detail during performance of routine testing. The licensee's surveillance test (ST) scheduling and test results review program exhibited significant weaknesses.

During this SALP period maintenance staffing remained adequate. Although there was significant turnover in first and second line maintenance supervision as a result of the licensee's early retirement program, no degradation in performance was observed. Management's commitment to the use of the Supervisory Development Academy as a tool for identifying and training supervisors enabled them to develop suitable replacement personnel, who performed reasonably well.

Licensee maintenance management clearly stressed the need for self-assessment of organization activities. A broad assessment of maintenance and I&C performance was completed early in the period, an action plan to address the identified issues was implemented, and these actions resulted in improved performance. In response to an adverse performance trend in the I&C area, the licensee performed a detailed assessment of this portion of the organization. Corrective action plans were established, and implementation of these plans was begun. Both assessments provided valuable insights and reflected management's desire to continue to improve performance.

The physical condition and reliability of plant equipment was generally good. The operational impact of plant scrams and forced shutdowns experienced during this period was less than the previous period. However, several plant power reductions, forced outages or trips occurred due to equipment failures. For example, power reductions or shutdowns resulted from recurring electro-hydraulic control system leaks, and from a loss of main transformer cooling. Safety system forced outage rates for some systems, such as high pressure coolant injection increased during the period. Licensee management was clearly attentive to this, and assigned experienced technical staff and supervisory resources to monitor these systems. This action was effective in reversing the trend.

Housekeeping performance continued to be strong throughout the period. The licensee maintained the plant uncluttered and area contamination levels remained low. This allowed operators, system engineers and plant managers to more closely monitor equipment performance.

In general, the maintenance planning and documentation process functioned well. Coordination between various working groups was good. The licensee continued to use daily meetings with the Shift Manager, and working meetings with participation from each supporting group, to assign priorities and to facilitate completion of tasks. The licensee implemented the Plant Information Management System (PIMS) late in the SALP period. PIMS is a computer-based system that integrates the task identification, planning and authorization processes. PIMS represents a significant commitment of resources to improving the efficiency and effectiveness of the work planning and control system. Mid-way through the period the licensee revised the guidelines used for planning and scheduling elective maintenance. The revised guidance provides for more comprehensive assessment of plant condition, the status of off site power supplies and the potential risk associated when planning system outages. The NRC noted some problems with the process for review and disposition of maintenance requests forms (MRF). The licensee canceled or deferred several MRFs documenting abnormal reactor water level instrument performance that were later determined to affect instrument operability. In these cases, the licensee did not perform an adequate review or include the appropriate staff in the evaluation. The equipment trouble tag (ETT) program was also weak. The licensee did not always remove ETTs following completion of maintenance tasks, and not all applied ETTs resulted in generation of a MRF. This could mask equipment deficiencies.

The licensee conducted most routine corrective and preventive maintenance activities in a controlled manner. For example, the licensee developed and effectively performed the procedures and training needed for conducting the emergency diesel generator (EDG) 18-month maintenance using in-house personnel. The licensee's approach to inspection and repair of torus shell corrosion, and to testing and replacement of degraded electrical cable associated with the off site power supplies was also noteworthy. However, the NRC identified several examples of poor procedure adherence during performance of maintenance tasks. Maintenance personnel did not follow procedures for performance of an EDG electrical splice, reassembly of scram pilot solenoid valves and replacement of a standby liquid control spool piece. Poor attention to detail and inadequate independent verification during the reinstallation of EDG electrical brushes resulted in the brushes not meeting specified criteria.

The licensee is developing an excellent predictive maintenance program. Particularly noteworthy are the scope and quality of the vibration monitoring and motor operated valve diagnostic test programs. The licensee has expanded the use of these techniques for characterizing component performance, and has identified improvements that have directly contributed to improved component reliability and plant safety. Early during this period, the licensee's measuring & test equipment (M&TE) control and issuance program was identified as a weakness. While the M&TE program was strengthened significantly, some implementation problems for equipment issued for use by the operations organization continued until late in the period.

The programs for Inservice Inspection and for assessing erosion and corrosion in plant components are effective. For example, inspections conducted in early 1991 identified one piping area which displayed significant wall thinning and required replacement. The licensee clearly defined the scope, responsibilities and acceptance criteria for the pump and valve Inservice Testing Program (IST). The system for IST data evaluation and trending is generally effective. However, the NRC identified deficiencies related to cold shutdown testing of valves, relief valve testing, and the technical adequacy of some check valve testing that the licensee should have identified and resolved. The licensee implemented actions to address these specific weaknesses, and began a review to assess overall IST program adequacy.

Most ST procedures were well written and technically sound. One exception, however, was that some STs for routine monitoring of safety system operability were weak. For example, procedures for daily verification of primary containment isolation valve back-up gas supplies and reactor vessel water level instruments did not contain adequate acceptance criteria, resulting in delays in detecting equipment inoperabilities. In response to these weaknesses the licensee reviewed and upgraded these routine tests. Licensee management committed resources to resolution of this problem on a broader scale by continuing the ST procedure re-write program. Although progress in completing this program was somewhat slower than expected, procedures produced are of consistent format, with clear acceptance criteria and well organized from a human factors perspective.

The licensee planned and conducted major test evolutions effectively. For example, conduct of the Unit 2 loss of off site power test, reactor vessel hydrostatic test and containment integrated leak rate test following the refueling outage was excellent. One exception was the licensee's control and conduct of test and troubleshooting activities associated with the emergency service water (ESW) system. As a result of deficiencies in control of this evolution, the operability of several safety systems was impacted. The licensee experienced a significant number of unplanned engineered safety feature actuations due to poor performance of routine STs. Instances of incorrect jumper placement, fuse removal or switch operation occurred. In several cases, the procedure steps directing the actions included a second verification that was not properly performed. The underlying root causes for these recurring personnel errors were unclear. The licensee analyzed each event and implemented corrective actions. In most cases this reduced the frequency of occurrence in the short-term. However, over the SALP period these problems continued to surface, pointing out the need for additional licensee corrective measures, based on evaluation of root causes and contributing institutional influences.

Licensee management made little progress in implementing actions to correct the deficiencies in the ST scheduling and results review program that were identified during the last SALP period. During the current period the licensee continued to identify examples of failure to complete tests within the Technical Specification required frequencies, and when required due to mode or power changes. The percentage of tests completed beyond the due date, but within the grace period, remained high. The licensee failed to track, and did not meet, a commitment to strengthen the ST results review and disposition process by developing guidelines for operations personnel review of completed tests. The licensee completed two evaluations of the

ST program during the period, identified weaknesses and characterized their root causes. However, the licensee did not take adequate steps during most of the period to resolve them. Near the end of the SALP period the licensee developed a broad, long-term plan to revise the ST program. This plan focused on the identified root causes and appeared to be comprehensive. Implementation of the plan began near the close of the period, so its effectiveness could not be assessed.

In summary, the licensee planned and performed maintenance tasks effectively. The licensee's commitment to supervisory development, maintenance self-assessment and predictive maintenance programs were strengths. The need for improvement in maintenance personnel use of procedures, the use of ETTs and control of M&TE was identified. The licensee planned and conducted major testing evolutions in an excellent manner. However, ESW test control deficiencies and the number of unplanned equipment actuations during the period indicated weakness in work standards and personnel knowledge and use of ST procedures. These problems recurred during the period. The licensee did not take strong action to address ST scheduling program problems until late in the period. As a result the number of missed tests remained high.

III.C.2 Performance Rating: Category 2

III.C.3 SALP Board Comments

The persistence of performance problems, such as those observed during conduct of surveillance and maintenance activities, despite implementation of corrective actions appears to indicate an insufficient acceptance of quality work practices and standards.

Licensee management has been ineffective in establishing and implementing corrective actions to resolve the long-standing weaknesses in the ST scheduling program. The progress made near the end of the assessment period in correcting this problem should be continued.

III.D Emergency Preparedness

III.D.1 Analysis

The previous SALP report rated Emergency Preparedness as Category 1. This rating was based on good performance during the exercise, management involvement, staff experience and an effective emergency preparedness training program. The licensee maintained a good interface with the Commonwealth of Pennsylvania, State and County governments. The licensee maintained an effective emergency preparedness (EP) program.

Site and Nuclear Group Headquarters staff continued their strong involvement in maintaining the quality of the EP program. Policies are well stated and disseminated. Meetings of various types, report follow-up, and an effective tracking system were used to track EP activities. The

tracking system (Plant Information Management System) was placed in operation during this assessment period. Managers maintained Emergency Response Organization (ERO) position qualifications and participated in several drills and an exercise. Management has also continued to use selection managers to select staff members for ERO positions, as well as to be responsible for the staff's initial and continuing training. Managers reviewed and approved modifications to the Emergency Plan and Implementing Procedures.

Management involvement in assuring quality resulted in a generally good level of performance. However, one concern was noted by the Quality Assurance organization regarding selection manager performance, in that the number of trained members of the ERO was allowed to fall well below that specified in the emergency plan. This problem was corrected by the licensee during the period. The NRC also noted that PECo conducted informal drills of ERO managers. This was a good initiative, however, this training was not appropriately coordinated with the Training Division. This could result in the training content not being validated and the trainees not receiving credit for the training.

The site EP Section, a unit of the Site Support Division, was amply staffed by four well-qualified persons, including a former senior reactor operator. The section supervisor maintained a strong liaison with the Nuclear Group Headquarters EP program. The site program is well supported by Nuclear Group Headquarters EP staff which was also stable and well-qualified. Overall, the group was effective in carrying out its planning and implementation responsibilities and was reflective of the strong management support for the EP program.

The site training department was responsible for training the site ERO and the Nuclear Group Headquarters Training Department was responsible for training it's personnel for ERO positions. The site EP training group is adequately staffed by two persons. Lesson plans were recently rewritten to be task specific, a good initiative. Qualification cards for each ERO member listed each function for which qualification was required, and trainees qualified by demonstrating that they met performance norms for their assigned emergency response position. Ample hands-on experience was provided through four station drills and bi-weekly practical training in dose projection for Health Physics Technicians. Except for one period during which the ERO fell below the levels specified in the Emergency Plan, EP training was provided throughout the year, ensuring current knowledge by ERO personnel. Three managers were qualified for each key ERO position.

The effectiveness of training was evaluated during a drill and the annual exercise. During the drill, the ERO responded well with one exception. Emergency medical technicians (EMTs) were also fire brigade qualified, but their primary function was emergency medical response and not fire fighting. A conflict arose between these needs, and contrary to policy, the fire brigade leader did not release the EMTs to treat the medical emergency. The licensee identified this weakness and attributed the cause to lack of proceduralization and absence of training in approved procedures. Additionally, the effectiveness of training was demonstrated by the correct classification of three Unusual Events and the subsequent proper implementation of the Emergency Plan.

During the annual exercise the ERO responded very well, with the exception of the exercise weakness described below regarding information flow. The demonstration of the ability to conduct an actual site evacuation of 950 people was outstanding; accountability was completed in 30 minutes. This response was the result of stressing this area in drills. The Operations Support Center (OSC) has been relocated, to a facility that provides additional space, more communications capability, and better information displays. However, during the exercise, the OSC response ranged from satisfactory to excellent. For example, command and control were good, status of operational and health physics conditions (both on and off site) were clearly indicated, and damage repair teams were handled effectively. However, there were problems of congestion, lack of access to PC terminals to access PIMS, use of two conflicting dose control procedures, and use of unapproved procedures. An exercise weakness was identified regarding content, flow and control of information. Specifically, conflicting or incorrect data were available many times during the exercise, including: several different times for release duration; different stack release rates; unresolved calculations regarding fuel damage, and problems with the state/licensee interface due to these data conflicts.

Quality Assurance audits were thorough and critical. Auditors identified a training issue as a deficiency. Shift training did not adequately cover classification of General Emergencies and development of PARs. Another area which concerned the auditors involved the lack of a challenging EP section in the Licensed Operator Requalification Examination. PECo management acknowledged the problem. Since the problem was identified at the end of the assessment period, corrective action had not yet been initiated.

PECo was effective in its ongoing day-to-day offsite emergency planning activities. Public information was developed and disseminated to residents living within the Emergency Planning Zone (EPZ) in a timely manner. Training and Letters of Agreement were current. Evacuation Time Estimates had been updated. PECo initiated installation of 21 additional sirens and a feedback mechanism to permit remote monitoring and testing. Interface with the Commonwealth of Pennsylvania, the States of Maryland, Delaware and New Jersey, and local counties remained strong.

In summary, the licensee maintained a well defined EP training program with an extensive drill and practice schedule. Some issues were identified in audits regarding insufficient training for reactor operators. During the NRC annual exercise, one exercise weakness was identified. The routine off site EP interface with affected local and state governments was strong. Corporate management is involved with site and Nuclear Group Headquarters activities. These activities resulted in a good level of performance.

III.D.2 Performance Rating Category 1

III.E Security and Safeguards

III.E.1 Analysis

During the previous assessment period, the licensee's performance was rated as Category 1, based on the licensee's implementation of a very effective, performance-oriented program.

The licensee sustained their previous level of performance throughout this assessment period. Upgrades and enhancements of the security systems and equipment, including the replacement of portions of the perimeter intrusion detection system and several assessment aids with improved equipment were completed. The licensee also completed renovation of the security access control facility, including the installation of new explosive detectors, new metal detectors and x-ray equipment upgrades for plant entry searches, new rotogates, new control circuitry and a redesigned badge issuance area. Plant and corporate security management personnel remained active in organizations involved in nuclear plant security matters. This significant commitment of capital improvements and involvement is indicative of management's interest and support to maintain an effective security program.

During this assessment period, the security organization was assigned a full-time Security Engineering Coordinator and a full-time I&C Video Technician. The additional staffing enhanced the licensee's ability to ensure that the security systems and equipment performed in an effective manner. The licensee also incorporated security-related preventive maintenance (PM) items into the station's maintenance planning system in order to improve PM management. The effective PM program and prompt corrective maintenance work performed by I&C and the Security Engineering Coordinator significantly reduced the need for manning compensatory posts and for unscheduled overtime.

The licensee's training program was administered by the security force contractor. The licensee's new training facility contained a classroom dedicated for security training. The training program was well-structured, current and effective, as evidenced by minimal personnel errors.

Staffing of the security force is consistent with program needs, as evidenced by the minimal use of overtime. Members of the security force exhibited a professional demeanor, high morale, and were very knowledgeable of their duties. The security force and other plant employees appeared to have a good working relationship. The turnover rate for the contract security force is less than five percent.

Audits of the security program conducted by the licensee's Quality Assurance Group were comprehensive in scope and depth. In addition, internal audits were also effectively used by management to improve and enhance the program. Management's corrective actions in response to the audit findings were prompt and effective.

The licensee's Fitness-for-Duty (FFD) program was reviewed during the assessment period. Although some problems were encountered during initial implementation of the program, these were rectified. The licensee has implemented an effective FFD program.

The licensee submitted one one-hour event report during the assessment period. The licensee took prompt and appropriate corrective action for this event. A review of the licensee's loggable security event reports found the events to be tracked, analyzed and corrected as necessary. The reporting procedures were well understood by security supervisors and consistent with NRC regulations.

The licensee submitted one revision to the Contingency Plan, two revisions to the Guard Training and Qualification Plan and one revision to the Physical Security Plan under the provisions of 10 CFR 50.54(p). The revisions were well written, technically sound and reflected a well-developed review process. Security personnel involved in maintaining program plans were knowledgeable of NRC requirements and objectives.

In summary, the licensee continued to maintain a very effective and performance-oriented program. The continuing efforts to upgrade security systems and equipment demonstrated the licensee's commitment to an effective security program. Management support was clearly evident in all aspects of day-to-day security operations, and in the planning and execution of upgrades and enhancements.

III.E.2 Performance Rating Category 1

III.F Engineering and Technical Support

III.F.1 Analysis

This area was rated Category 2 in the last assessment period. PECo exhibited strength in its engineering support of site activities. The last SALP report identified delays in completing engineering evaluations of operability issues, and continued weakness in environmental qualification (EQ) of safety-related equipment.

During the current assessment period, the Nuclear Engineering Division (NED) management team underwent significant changes, including the appointment of a new NED manager with extensive industry experience. The NED organization remained largely unchanged. Sections are organized by discipline, with Section Managers reporting to the Manager, NED, who reports to the Vice President, Nuclear Engineering and Services Department. A branch of NED at Peach Bottom whose staff provides daily contact with the station staff is a significant factor in the improving communications between NED and the station. Implementation of regular NED/plant staff interface meetings provides an effective forum for the discussion of engineering topics and the dissemination of information.

The NED staff is composed of PECo and contractor engineers reporting to PECo management, although the department is in the process of replacing the contractor personnel with PECo employees. Staff experiences range from one year to more than thirty years and includes MS, BS, and Associate degrees in the various disciplines. An organized training program has been implemented so that members of the engineering staff can maintain and enhance their skills. The licensee has initiated a personnel rotation program between the corporate office and the site, which provides an excellent opportunity for improved cooperation and communication between the site and NED.

Support to the site by NED was strong and well focused regarding emerging issues. Engineering participation was effective in the resolution of DC fuse rating concerns, the evaluation of off site power electric cable failures, and follow-up at Peach Bottom to concerns raised at Limerick regarding flood and high energy line break barriers. These examples illustrate the improvement in timeliness of NED plant operability evaluations performed during the current assessment period.

While NED response to emerging issues was generally good, on several occasions the technical quality of engineering products or support was less than adequate. An example of this was a failure to identify an error in the calculation of the standby liquid control (SLC) pump net positive suction head, a parameter which was used to support pump operability. This calculation was prepared, reviewed, and approved by NED staff without identifying the deficiency. Engineering support for development and maintenance of station operating and test procedures evidenced some weakness. For example, design information concerning the impact of high SLC solution storage tank temperature on pump operability, and performance requirements for the containment isolation valve seismic gas supply system were not adequately transferred from corporate engineering to the site. As a result this information was not translated into procedures.

The NRC Safety System Functional Inspection (SSFI) follow-up inspection identified that several engineering program areas were functioning well, including the control of design analyses, calculations, and performance of 50.59 evaluations. The revised modification process implemented by the licensee during the last assessment period has resulted in improved modification quality. The use of modification teams to plan and oversee modification development and implementation was a strength. The technical content, safety evaluations, implementing instructions, and field installation activities of modifications associated with the Unit 3 mid-cycle and Unit 2 refueling outages were generally of high quality. However, several problems were identified with the process for the testing and turnover of completed modifications. The conditions that required the development of a post-modification acceptance test and the minimum document updates required prior to turnover were not clearly defined.

Program implementation deficiencies were noted throughout the SALP period that indicate a continued need for management attention. Inadequacies were noted in the drawing update program which affected the incorporation of drawing changes associated with some modifications, and with maintenance of the controlled drawing files. Some nonconformance reports

(NCRs) were noted to lack proper revision or interfacing review, and some safety evaluations of NCRs were noted to lack required Plant Operations Review Committee (PORC) approval. Deficiencies were identified in the licensee's process for development and maintenance of the Q-List. In some cases safety-related equipment was omitted from the Q-List. The licensee initiated comprehensive corrective actions to address each of these weaknesses.

During the SALP period, a number of license amendments for Units 2 and 3 were issued. The technical submittals in support of these amendment requests generally showed a good understanding of the engineering issues involved and reflected a safety conscious approach. A change to the Technical Specifications (TS) on an exigent basis, approved in July 1991, to allow operation of Unit 3 with an uncoupled rod, demonstrated a clear understanding of the safety issues involved and incorporated a logical and technically sound plan to monitor rod operation in this configuration. Similar thoroughness in engineering review was evident in the licensee's proposed change to the TS for incorporation of revised pressure-temperature limits.

The licensee showed some weakness in effectively resolving several long-standing technical issues. Although the licensee completed significant modification and testing activities, the emergency service water (ESW) system design and performance deficiencies identified in a February 1990 SSFI have not been resolved. These technical issues continued after the SALP period, and late in the period impacted the operability of the emergency diesel generators and various emergency core cooling system equipment. In a related matter, the licensee has failed to meet several commitment dates for a proposed change to the TS dealing with the ESW system. NED did not perform adequate evaluations and corrective action in response to identification of an emergency diesel generator area carbon dioxide fire suppression system design deficiency. And, although comprehensive actions were later initiated to correct Q-List deficiencies, the initial analysis performed by NED failed to identify the root cause of the deficiencies and to prevent recurrence.

The licensee's maintenance, operations, and systems engineering staffs performed reasonably well. Maintenance engineering involvement in evaluation of equipment failures was evident. In response to an increasing number of I&C-related maintenance and test problems, the licensee realigned maintenance engineering staff responsibilities and assigned additional resources to ensure adequate involvement. The system engineering group was in a state of transition during much of the period. The role and responsibilities of the system engineers and their ability to effectively monitor system performance were not demonstrated or clearly defined during much of the period. Loss of experienced system engineers and supervisory turnover hindered efforts to improve performance. The licensee has taken action to strengthen this area. Significant staff resources were dedicated to implement the system engineer training program, the initial phase of which was completed for a majority of the staff. Late in the period PECo approved the addition of senior system engineer and supervisory positions, but the new positions were not filled prior to the close of the SALP period.

In summary, the Nuclear Engineering Department's approach to the resolution of technical issues was good. The on site engineering staff performed effectively. Company efforts to improve

performance are demonstrated by the initiation of training programs, the implementation of regular NED/plant interface meetings, and the initiation of a personnel rotation program. However, engineering program weaknesses remain, such as those associated with the Q-List, the adequacy of engineering corrective actions and some problems with the quality of engineering support.

III.F.2 Performance Rating Category 2

III.G Safety Assessment/Quality Verification

III.G.1 Analysis

During the previous assessment period, licensee performance in this area was rated as Category 2. Licensee strength was noted in the high degree of involvement by corporate and station management in station activities. Management was aggressive in resolving problems and was closely involved in assuring nuclear safety. The performance of the licensee's QA organization was noted to have improved and on site and off site review committees were effective in their review of plant operations. The licensee's management generally took a technically sound and conservative approach to operations and maintenance. Several continuing weaknesses were noted, specifically in the areas of surveillance testing, radiation worker practices and operational equipment status control.

Over the current assessment period, the licensee's corporate and senior station management maintained strong involvement in plant activities. Management continued to initiate review and assessment programs, such as the Annual Summary Assessment described below, to evaluate different facets of station performance. Management also took steps to ensure the effectiveness of existing programs. Despite the licensee's extensive review and assessment efforts, success in achieving sustained program and performance improvement remained limited.

Late in the SALP period the licensee conducted their first Annual Summary Assessment of nuclear safety performance at Peach Bottom. This assessment evaluated plant safety challenges and transients, and the effectiveness of station design and program controls and procedures in mitigating unplanned occurrences. The licensee found that the station was operated in a safe manner, and that performance continues to improve. Several areas requiring management attention, including the timeliness and completeness of corrective actions were identified. This initiative appeared to be an effective tool in monitoring overall plant and organization performance.

Other programs initiated during this period include the Plant Manager's Attention to Detail Task Force, conducted in response to continuing problems with personnel performance in areas such as surveillance testing and fuel handling operations. The Task Force evaluated the contributors to the problems and identified a number of areas for improvement. However, the cyclical recurrence of personnel errors over the remainder of the SALP period indicated that additional

effort is needed in this area. Near the close of the SALP period, the licensee initiated a Quality Management program which encompasses the use of quality teams and includes an extensive program of training and reinforcement in performance management techniques. This program will involve all levels of nuclear group management and supervision.

For review and assessment programs initiated prior to this SALP period, the licensee has demonstrated a commitment to ensure the effectiveness and viability of those efforts. The licensee's ongoing program of system audits, modelled after the NRC's Safety System Functional Inspection (SSFI) program, is led by a senior QA engineer and staffed with a mix of licensee and contractor personnel. To date, the licensee has completed its own SSFIs on four safety systems. The efforts were detailed and identified some significant issues; as a result, a number of corrective actions have been implemented. The licensee plans to perform two SSFI-type audits per year at Peach Bottom.

In contrast to the licensee's good performance in the identification of problems, mixed results were seen in the implementation of the corresponding corrective actions to improve performance. Several longstanding weaknesses, such as licensed operator staffing and career development and the EQ program, have seen significant improvement. However, the licensee's corrective action process did not consistently ensure that the root causes for performance deficiencies were identified, and effective and lasting corrective actions developed and implemented. For example, several problem areas discussed in the last SALP such as the surveillance test scheduling program, radiation work practices, and significant performance deficiencies with the ESW system were not resolved. Program weaknesses recognized by licensee personnel involving processing of temporary plant alterations and temporary procedure changes were not corrected until concern was raised by the NRC. The NRC also noted deficiencies in the areas of procedure control, drawing control and equipment classification. While these weaknesses were addressed promptly by the licensee, routine licensee program oversight should have identified and corrected them without NRC involvement.

The Independent Safety Engineering Group (ISEG) continued to be effective in providing independent reviews of plant staff performance. On several occasions, ISEG completed specific event or issue-related reviews at the request of the Plant Manager, demonstrating the development of a good working relationship. During the previous period, the licensee initiated a Design Basis Documentation (DBD) program. During this period, the licensee has continued with implementation of the program, completing the initial phase of the DBD effort for several systems.

Licensee management continued to devote significant resources to training and development of first line supervisors. Supervisory candidates from all parts of the organization attend the Supervisory Development Academy. Improved communications and supervisory skills of program graduates were evident.

Daily involvement and monitoring of plant activities by the Vice President - Peach Bottom and the Plant Manager have been evident throughout the SALP period. Senior management

consistently encouraged the plant staff to proceed in a safety conscious and cautious manner, and with a questioning attitude. Licensee management has also stressed the need for improved communication and teamwork. Some improved teamwork and communication was evident in the excellent performance observed during the Unit 3 mid-cycle and the Unit 2 refueling outages. These activities involved implementation of significant modifications, and were completed in a well controlled manner. However, the periodic lapses in personnel attention-to-detail indicate that the approach encouraged by management is not always practiced.

Personnel performance problems resulting in a high number of inadvertent safety equipment actuations and reportable events, such as the series of fuel loading errors in February 1991 at Unit 2, were addressed with aggressive short-term actions. However, the recurrence of this trend several times during the SALP period indicates that deeper evaluation and more lasting corrective actions are needed. The response of licensee management to QA and ISEG findings was not consistently of good quality. In some cases, analyses in response to Corrective Action Requests (CARs) were narrowly focussed and failed to address the problem's root cause. In general, it appears that performance expectations and standards related to conduct of routine activities and problem resolution have not been accepted at all levels of the organization. Late in the SALP period the licensee recognized the general weakness in development and implementation of corrective action, and elevated the issue for senior management review and action. One example of effective and timely action initiated by the licensee was the resolution of issues associated with Emergency Operating Procedures (EOPs). The licensee established short and long-term actions and appropriately applied the findings of a Limerick EOP inspection to Peach Bottom.

Licensee performance in the licensing area was generally strong, although some improvement is needed in the quality of licensing activities. In most applications the licensee demonstrated a clear understanding of the safety issues involved and proposed technically sound solutions. Technical work on the Second 10-Year Inservice Testing program submittal was strong. Licensee submittals for incorporating revised pressure - temperature limits and revised core and containment cooling system surveillance requirements were well documented, detailed and thorough. However, problems were noted in the technical completeness of several licensing submittals. A Technical Specification (TS) Change Request, handled on an exigent basis, for operation with an uncoupled rod and a TS Change Request involving minimum critical power ratio safety limits, required additional technical documentation. Some weakness was also noted in the licensee's ability to fulfill licensing action commitments. Specifically, several commitment dates in the submittal of a license amendment for the ESW system were slipped. This weakness was discussed by the licensee and the NRC staff mid-way through the SALP period.

In summary, the licensee initiatives discussed above, as well as those addressed in the individual SALP functional areas, have resulted in strengthening overall performance. The licensee's corporate and station management demonstrated a commitment to identify areas for performance improvement. The resources applied to the Annual Summary Assessment, SSFIs and some more narrowly focussed review programs illustrate the licensee's commitment to improvement.

Licensee senior management clearly advocates a safety conscious, well controlled approach to plant operation. However, weaknesses in determining root causes and tracking problem discovery into performance improvement, and in establishing and reinforcing quality control standards at all levels in the organization, has hampered progress.

III.G.2 Performance Rating: Category 2

III.G.3 SALP Board Comment

The Board observed that, across a spectrum of programs and operations, the licensee expended considerable resources in assessing performance weaknesses. It was also observed that the licensee has displayed a weakness in devising and successfully implementing corrective actions and program improvements that address the findings of the various review and assessment efforts. Although the licensee has apparently recognized the disparity between assessment and improvement, the Board felt the weakness to be of fundamental importance in Peach Bottom's progress to overall performance improvement, and thus worthy of attention.

It appeared to the Board that although corporate and senior management promote high standards of quality and performance, the acceptance of poor work practices and standards by the plant staff and supervision contributed to the licensee's inability to achieve sustained overall program improvement. An additional impediment to progress appeared to be the inconsistent quality of root cause analyses. While some root cause analyses were thorough, others were noted to be cursory and narrowly focused. Improvement in these broad institutional areas appeared to be critical in supporting future licensee progress.

IV SUPPORTING DATA AND SUMMARIES

IV.A Licensee Activities

During the previous SALP period the licensee operated Unit 2 and completed the restart program for Unit 3. The current period began with both units operating and included one refueling outage and one mid-cycle maintenance outage. The licensee made several important management changes just prior to or during the period. The Vice President-Peach Bottom assumed his responsibilities immediately prior to the start of the period. The Nuclear Engineering Division Manager, Plant Manager and Project Manager elected to take early retirement and were replaced. The Quality Assurance Manager and Operations Manager positions were vacated due to promotions and were refilled.

Unit 2 began the period at full power. The plant experienced five forced shutdowns due to 1) inoperable reactor water level instruments; 2) an electro-hydraulic control system fluid leak; 3) a 4 KV safety bus undervoltage relay design inadequacy; 4) failure of electric cable associated with one of the off site power sources, and 5) failure of a recirculation pump seal. In addition,

one rapid power reduction and manual scram were initiated during the period in response to a loss of condenser air removal and degrading vacuum during troubleshooting. The licensee also completed a unit refueling outage in April 1991. This outage included replacement of the Unit 2 condenser and several other major modifications. At the close of the period the unit was operating at near full power.

Unit 3 began the period at 85% of full power. Power was limited due to poor condenser performance. The licensee completed one rapid power reduction and manual scram following isolation of the off gas system due to failure of a cooling water valve. Two automatic reactor scrams from power occurred as a result of 1) a loss of main transformer cooling due to failure of the power supply breaker, and 2) a main generator trip caused by a lightning strike. The licensee completed a unit mid-cycle outage in November 1990. At the close of the period the unit was in coast-down, preparing for a September 1991 refueling outage.

IV.B NRC Inspection and Review Activities

Three NRC Resident Inspectors were assigned to the site during the assessment period. The total NRC direct inspection effort expended during the 14-month assessment period was 5621 hours, or 4818 hours on an annualized basis. NRC team inspections and reviews were conducted as follows:

- A team of five inspectors evaluated the licensee's short-term corrective actions and long-term action plan in response to a NRC safety system functional inspection (SSFI) of the emergency service water system. In addition, the team evaluated portions of the licensee's corrective action program, 10 CFR 50.59 evaluation process and the design calculation control program.

- A team of four inspectors observed and evaluated the licensee's annual emergency preparedness exercise.

- The NRC conducted a licensed operator requalification program evaluation.

- The NRC administered examinations to the licensee's first dual-license Limited Senior Reactor Operator Fuel Handling program candidates.

- Three NRC operator license initial examinations were conducted during the period.

IV.C Significant Enforcement Actions

The NRC issued no escalated enforcement action during this SALP period.

ATTACHMENT 1

SALP EVALUATION CRITERIA

Licensee performance is assessed in selected functional areas, depending on whether the facility is in a construction or operational phase. Functional areas normally represent areas significant to nuclear safety and the environment. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations in that area. Special areas may be added to highlight significant observations.

The following evaluation criteria were used, as applicable, to assess each functional area:

- assurance of quality, including management involvement and control
- approach to the resolution of technical issues from a safety standpoint
- enforcement history
- operational and construction events, including response to, analyses of, reporting of, and corrective actions for
- staffing, including management
- effectiveness of training and qualification program

On the basis of the SALP Board assessment, each functional area evaluated is rated according to three performance categories. The definitions of these performance categories are given below.

Category 1 Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in a superior level of performance. NRC will reduce levels of inspection effort.

Category 2 Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in a good level of performance. NRC will consider maintaining normal levels of inspection effort.

Category 3 Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in an acceptable level of performance. NRC will consider increased levels of inspection effort.

Category N Insufficient information exists to support an assessment of licensee performance. These cases would include instances in which a rating could not be developed because of insufficient licensee activity or insufficient NRC inspection.

The SALP Board may assess a functional area and compare the licensee's performance during a portion of the assessment period to that during an entire period in order to determine a performance trend. Generally, performance in the latter part of a SALP period is compared to the performance of the entire period. Trends in performance from one period to the next may also be noted. The trend categories used by the SALP Board are as follows:

Improving: Licensee performance was determined to be improving during the assessment period.

Declining: Licensee performance was determined to be declining during the assessment period and the licensee had not taken meaningful steps to address this pattern.

A trend is assigned only when, in the opinion of the SALP Board, the trend is significant enough to be considered indicative of a likely change in the performance category in the near future. For example, a classification of "Category 2, Improving" indicates the clear potential for "Category 1" performance in the next SALP period.

It should be noted that Category 3 performance, the lowest category, represents acceptable safety performance. If at any time the NRC concluded that a licensee was not achieving an adequate level of safety performance, it would then be incumbent upon NRC to take prompt appropriate action in the interest of public health and safety. Such matters would be dealt with independently from, and on a more urgent schedule than, the SALP process.

ENCLOSURE 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

OCT 16 1991

Docket Nos. 50-277
50-278

Philadelphia Electric Company
Correspondence Control Desk
ATTN: Mr. Dickinson M. Smith
Senior Vice President-Nuclear
P. O. Box 195
Wayne, PA 19087-0195

Dear Mr. Smith:

Subject: Initial Systematic Assessment of Licensee Performance (SALP) Report Number 50-277/90-99; 278/90-99

A NRC SALP Board, conducted on September 23, 1991, reviewed and evaluated the performance of activities at the Peach Bottom Atomic Power Station for the period of June 1, 1990, through August 3, 1991. The enclosed Initial SALP Report documents the results of this assessment. We will contact you soon to schedule a meeting to discuss the SALP evaluation.

At the SALP meeting you should be prepared to discuss our assessment, and your plans to continue to improve performance. The meeting is intended to be a candid dialogue wherein any comments you may have regarding our report are discussed. Additionally, you may provide written comments within 20 days after the meeting.

Your cooperation with us is appreciated.

Sincerely,

Thomas T. Martin
Regional Administrator

Enclosure: Initial SALP Report No. 50-277/90-99; 50-278/90-99

9110280063

cc w/encl:Enclosures:
D. B. Miller, Vice President, Peach Bottom Atomic Power Station
D. R. Helwig, Vice President, Nuclear Engineering and Services
K. P. Powers, Plant Manager, Peach Bottom Atomic Power Station
J. W. Austin, Project Manager, Peach Bottom Atomic Power Station
E. J. Cullen, Esquire, Assistant General Counsel (Without Report)
G. J. Beck, Jr., Manager, Licensing Section
R. J. Lees, Chairman, Nuclear Review Board
A. A. Fulvio, Regulatory Engineer, Peach Bottom Atomic Power Station
J. Urban, General Manager, Fuels Department, Delmarva Power
S. B. Ungerer, Director, Joint Generation Projects Department, Atlantic Electric
B. Gorman, Manager-External Affairs
J. W. Durham, Sr., Senior Vice President and General Counsel
R. L. Hovis, Esquire (Without Report)
R. McLean, Power Plant Siting, Nuclear Evaluations
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Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
Commonwealth of Pennsylvania
TMI - Alert
The Chairman
Commissioner Curtiss
Commissioner Rogers
Commissioner Remick

ENCLOSURE 3

PHILADELPHIA ELECTRIC COMPANY

NUCLEAR GROUP HEADQUARTERS

955-65 CHESTERBROOK BLVD.

WAYNE, PA 19087-5691

(215) 640-6000

D. M. SMITH
SENIOR VICE PRESIDENT - NUCLEAR

November 21, 1991

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Peach Bottom Atomic Power Station, Units 2 and 3
Response to Initial Systematic Assessment of
License Performance Report Number 50-277/90-99 and
50-278/90-99

Dear Sir:

Philadelphia Electric Company appreciated the opportunity to discuss the above referenced initial Systematic Assessment of Licensee Performance (SALP) Report with the NRC at the meeting held on November 20, 1991.

We concur with the SALP Board's assessment of activities at Peach Bottom. We are particularly concerned with the weaknesses identified in the area of root cause determination and resultant ineffective corrective actions. We have identified the following five areas where action is required to improve performance at Peach Bottom: employee communications, root cause analysis/corrective action, radworker/safety performance, surveillance testing, personnel error/attention to detail. In addition, we will continue to convey senior management's commitment to a safety culture.

If you have any questions or wish to discuss any areas further, please do not hesitate to call.

Sincerely,

cc: T. T. Martin, Administrator, Region I, USNRC
J. J. Lyash, USNRC Senior Resident Inspector, PBAPS

9112020142