

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET
P.O. BOX 8699
PHILADELPHIA, PA. 19101

(215) 841-4221

C. A. McNEILL, JR.
EXECUTIVE VICE PRESIDENT - NUCLEAR

July 22, 1988

Docket Nos. 50-277
50-278
License Nos. DPR-44
DPR-56

Mr. William T. Russell, Administrator
Region I
US Nuclear Regulatory Commission
Washington, DC 20555
ATTENTION: Document Control Desk

SUBJECT: Response to the NRC Request For Additional
Information regarding the Plan for Restart of
Peach Bottom Atomic Power Station, Revision 1.

Dear Mr. Russell:

Enclosed with this letter are fifteen copies of Philadelphia Electric Company's response to your June 1, 1988, request for additional information on the Plan for Restart of Peach Bottom Atomic Power Station, Revision 1.

Our submittal includes responses to the specific comments provided by the State of Maryland in the letter from Governor William D. Schaefer to you, dated May 26, 1988.

In our letter to you dated July 1, 1988, we stated our intention of providing an overall response in one package to the NRC's request for additional information and the issues raised by the State of Maryland and the Commonwealth of Pennsylvania. We are holding a series of discussions with representatives of the Governor of Pennsylvania in an attempt to clarify and resolve Pennsylvania's concerns. We expect to submit our responses to Pennsylvania's remaining questions by August 31, 1988.

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Mr. William T. Russell

July 22, 1988
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We look forward to a meeting with your staff in early August to discuss this response.

If you have any questions or require further information, please do not hesitate to contact me or my staff.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Caw', followed by a long horizontal flourish.

cc: Addressee
T. P. Johnson, Resident Site Inspector
Robert Martin, Licensing Project Manager, NRC

**PHILADELPHIA ELECTRIC COMPANY
RESPONSE TO REQUEST FOR
ADDITIONAL INFORMATION ON PLAN
FOR RESTART OF PEACH BOTTOM ATOMIC
POWER STATION, REVISION 1**

SECTION I
CORPORATE ACTION

QUESTION I-1 (ES-6)

Explain why the commitment to have senior management, plant management, et. al., meet with the NRB has been deleted in Revision 1.

RESPONSE

The referenced meeting process was deleted as it was deemed to be redundant (see also the response to Question I-17). Philadelphia Electric Company (PE) has established a close interface and frequent interactive communications between independent assessment groups and line management. Line management has primary responsibility to ensure that executive management receives timely information about nuclear operations and is appropriately involved in corrective action. The Nuclear Group executives and plant management do meet frequently with the Executive Vice President-Nuclear for in-depth assessment of Nuclear performance, as indicated in Major Activities CA4-1.2.4, CA4-2.8.5 and CA4-2.9.1. To provide independent avenues of timely oversight information to executive management, PE has elevated the reporting relationship of the Nuclear Review Board (NRB) and Nuclear Quality Assurance (NQA) to report directly to the Executive Vice President-Nuclear. Furthermore, the appropriate line managers are and will continue to be made available at NRB meetings. A more thorough discussion of the NRB is contained in Section I on pages 53 to 55.

QUESTION I-2 (Page 5)

Describe the accountability of other employees and workers addressed in the last topic under item (1) which talks about "...employees assigned to site work locations on a permanent bases are accountable..."

RESPONSE

Employees assigned to site work locations on a permanent basis are accountable, through their respective site managers, to the site Vice President. One exception is noted below.

A number of Nuclear Quality Assurance (NQA) employees are assigned to site work locations on a permanent basis. They are engaged in independent assessment and oversight activities. These personnel report to and are accountable to the General Manager, NQA. The NQA organization is further described in Section I, pages 38 to 42, and Section II, pages 15, 16 and 77 to 82.

Also see the response to Question I-23.

QUESTION I-3 (Page 5)

Item 2 discusses self assessment and problem resolution; however, the action items concentrate on problem resolution and third party problem identifications. Explain what line management will do themselves to identify problems and self assess their own organization (aside from measuring progress against performance goals).

RESPONSE

Line management's self-assessment and problem resolution capabilities will be strengthened to include:

1. The implementation of the management philosophy for assurance of quality (pages 36 and 37). This philosophy provides for:
 - o A nuclear performance management program that will allow line managers to track performance against established goals and will require line management and senior management assessment of the timeliness and effectiveness of corrective actions. Measurement of performance will be reported frequently to management and will be emphasized in the performance appraisal process to assure continued diligence and problem resolution by line management.
 - o Effective feedback information systems that will allow line managers to identify and assess their organization's performance, thus permitting timely development of corrective actions and problem resolution.
 - o Improved processes for reporting work-related quality problems that will result in improved identification and assessment of problems and will permit timely development of corrective actions and problem resolution. For example, work-related quality problems and their resolutions are reviewed with the Executive Vice President-Nuclear at his monthly meetings with the site staff at each site.
2. Improvements in the Operating Experience Assessment Program (pages 42 and 43). This program has been

specifically developed to reinforce line management responsibility for comprehensive and effective self-assessment with regard to the applicability of operating experience to their operations. The OEAP provides for line management evaluation of operating experience items (both industry-wide and PE plant-specific), including the development of corrective actions and problem resolution.

3. An improved Commitment Tracking Program (pages 43 to 45). This program has been designed to reinforce effective and timely line management self-assessment by the development and completion of commitments. The program provides for line management and senior management reporting of the status of implementation, which will allow timely identification of the potential need for problem resolution. (See response to Question I-16.)

Each of these improvements is covered by a major activity addressed in Section 5.2 of Section I of the Restart Plan, pages 65 to 69. Overdue item reports for OEAP and the Commitment Tracking Program with trending information are to be provided to line management monthly.

Line managers will spend time on the jobsite in direct observation of activities. Additionally, as described in Section I, page 49, and Section II, page 77, line managers

will be afforded the opportunity to visit other utilities and participate in other industry programs in order to increase their awareness of developing issues and improved practices and to provide additional opportunities to develop collaborative working relationships within the industry.

QUESTION I-4 (Page 6)

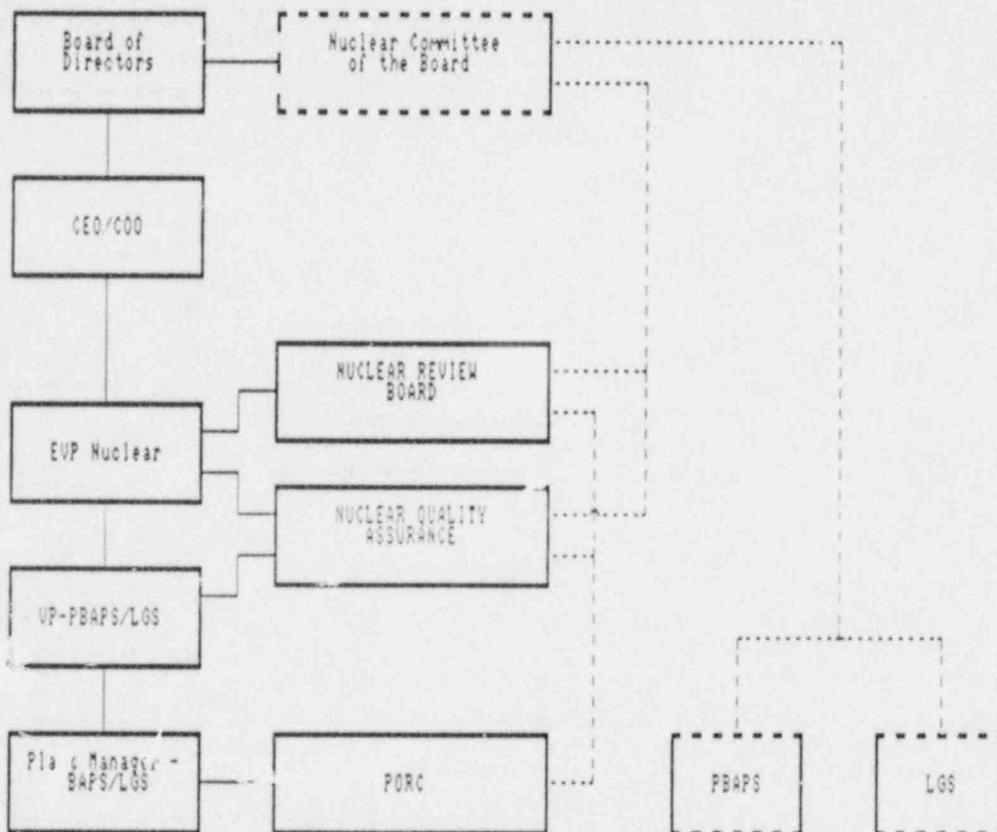
NRB review of organizational and personnel performance issues has been deleted from the plan. Explain who will address these issues.

RESPONSE

PE's line management has the primary responsibility to address all organizational and personnel performance issues. The Nuclear Committee of the Board (NCB), in accordance with its oversight mission, has the responsibility to review on a continuing basis and report to the full Board on the management of nuclear operations, including but not limited to organizational issues and the performance and overall effectiveness of the senior nuclear management team. The role of the Nuclear Review Board (NRB) is further elaborated upon in the responses to questions I-30 and I-31.

The charge of the NCB, its specific duties, membership, resources and organizational relationships are discussed in Section 4.4 through 4.7 and in the attached revised Figure 8 of Section 1 of the Plan for Restart of Peach Bottom.

INDEPENDENT ASSESSMENT FUNCTION INFORMATION FLOW AND FEEDBACK LOOP (AFTER)



Legend:

- = Providing independent assessment feedback to line and senior management
- = Information flow and line assessment
- - - = Information flow and monitoring of the independent assessment functions

Figure 8. Independent Assessment Function Information Flow and Feedback Loop (After)

QUESTION I-5 (Page 9)

Identify the changes to figure 1.

RESPONSE

The changes represented by Revision 1 to Section I, Figure 1, "Chain of Command and Control for Operations", included revision to the title of the most senior nuclear officer to Executive Vice President-Nuclear and added the position of Senior Vice President-Nuclear (subsequently, this title was expanded to Senior Vice President-Nuclear Construction for improved specificity). This position was added to provide a more focused corporate overview of the Limerick Unit 2 construction program. John S. Kemper, who successfully managed the construction and startup activities for Limerick Unit 1 was selected to fill this position. As stated in Section I, page 10, of the Restart Plan, the Senior Vice President-Nuclear will be accountable to the Executive Vice President-Nuclear for the Limerick Unit 2 project up to fuel load, at which time the Vice President-Limerick will assume responsibility for the start-up and power ascension program. Revision 1 also included in Figure 1 the position of Construction Manager-Limerick Unit 2 to indicate his direct reporting relationship to the new position of Senior Vice President-Nuclear Construction.

QUESTION I-6 (Page 11)

Identify the changes to figure 2.

RESPONSE

The changes represented by Revision 1 to Section I, Figure 2, "Reporting Structure for the Top Level of the Nuclear Organization," included a revision to the title of the most senior nuclear officer to Executive Vice President-Nuclear; replaced the Management Assistance Staff with a permanent Organization and Management Development Division; added the Senior Vice President-Nuclear position to oversee the construction of Limerick Unit 2; and removed the dotted line reporting chain from the Nuclear Review Board (NRB) to the Chairman of the Board and President to more clearly show the NRB reporting relationship as described in Amendments 132 and 135 for the Unit 2 and Unit 3 Technical Specifications, respectively, which were issued on June 22, 1988.

Question I-7 (Page 12)

Describe key accountabilities and responsibilities for the Senior Vice President-Nuclear as all of the other Executive Vice President direct reports are given in this section.

Response

The Senior Vice President-Nuclear (title expanded to Senior Vice President-Nuclear Construction for improved specificity) has the overall management responsibility and accountability for the design, construction and pre-operational testing of Limerick Unit 2. The Senior Vice President-Nuclear Construction will ensure that procedures and processes necessary to meet construction and licensing requirements for Limerick Unit 2 will be accomplished to meet construction and start-up schedules.

QUESTION I-8 (Page 17)

Describe the process used by the Manager, Organization and Management Development Division, to monitor progress toward meeting objectives for culture changes and how it differs from other assessments of work management processes.

RESPONSE

Changing an organization's culture is different from changing a work management process. Culture is the very essence of an organization, permeating every aspect. It is the set of shared norms, assumptions and beliefs which can be articulated by organization members, but usually are not specified in written documents. Therefore, measuring progress towards meeting objectives for cultural change cannot be thought of in the same way as measuring work management processes.

The PE Nuclear Group has taken a number of steps to change its culture. First, a vision, mission, and set of values have been specified for the Nuclear Group. These overt statements are a clear message from management to employees about the desired shared norms. They implicitly state a set of assumptions and beliefs which underpin the developing culture of the Nuclear Group.

The Manager, Organization and Management Development Division, has developed a process to: a) develop an action plan to ensure the vision, mission, and values are assimilated by employees of the Nuclear Group, and

b) determine how well the vision, mission, and values have been assimilated throughout the organization.

In addition, a number of programs have been implemented. They include "Managing Organizational Change" (MOC) which was designed to assist the top 150 managers of the Nuclear Group in developing implementation plans for critical changes necessary for moving the organization towards its desired culture. A strategic planning process also has been introduced. This process will impact culture in two ways. First, the overall strategic direction of the Nuclear Group for the years 1989-1993 was developed in a collaborative manner at an off-site meeting attended by 50 senior managers of the Nuclear Group. This process emphasized the espoused Nuclear Group values of "Teamwork" and "Dynamic Business Focus" (see attachment). Second, the Nuclear Group will be managed per the strategic plan. Therefore, Nuclear Group employees will have a tangible document which specifies expected accomplishments on an annual basis. The concept of "plan the work, then work the plan" will become part of the fabric of the Nuclear Group. The annual process of developing a strategic plan to guide the business over the following 12 months will become a ritual that supports the desired culture of the PE Nuclear Group.

The Manager, Organization and Management Development Division, has been actively involved in

assisting in the implementation of the programs described above. He will evaluate the effectiveness of each. The main criteria for the evaluation will be behavior associated with each of the Nuclear Group values. Behaviors indicative of each value were developed by the Executive Vice President-Nuclear and his staff. The Manager, Organization and Management Development Division, with assistance from Organization Development consultants, will work with organization units to evaluate how well their day-to-day operations reflect the behavior identified as appropriate by the senior management staff. Once this has been determined, action plans to bring actual and desired behaviors into line will be developed and implemented by the line organizations.

NUCLEAR GROUP VALUES

PHILADELPHIA ELECTRIC COMPANY

SAFETY

Safety is our number one concern. We will conduct our operations in a manner which demonstrates our commitment to the health and well being of the public and our employees. We encourage each employee to identify and surface issues which will enhance the safety of our operations.

QUALITY

Quality is everyone's responsibility. All Nuclear Group employees are expected to do the job right the first time, stay abreast of technical developments in their area of expertise, and apply new knowledge and expertise in a manner which enhances the quality of our operations. Nuclear Group Management will support high levels of technical and managerial competence through appropriate training and development.

DYNAMIC BUSINESS FOCUS

We exist in a constantly changing environment which requires a Dynamic Business Focus. We will operate in a cost effective, productive, and efficient manner. We will provide a challenging work environment which supports openness to change, a questioning attitude, and continual striving for improvement. We will conduct our business to benefit customers, shareholders, and employees alike.

TEAMWORK

We recognize the importance of Teamwork and the interdependence of all individuals and departments in the Nuclear Group. In addition to focusing on our individual and department goals and objectives, we will consider Corporate and Nuclear Group strategies and goals in our decision making. We will encourage, listen and respond to employee ideas and suggestions in support of more effective operations.

PEOPLE

People are the key to our success. We respect the dignity of the individual. We will treat one another in a fair and respectful manner. Individual differences will be explored and dealt with constructively. Employees and the Company will operate as partners with a mutual commitment to excellence. Employees are expected to work in a manner which enhances Company profitability. In turn, the Company will provide a safe, dynamic, challenging, and mutually supportive work environment, where rewards are directly related to performance.

INTEGRITY

We will not compromise our Integrity. The company has been granted a position of public trust. We will continually earn this trust by ethical dealings with employees and groups outside the Company. Our behavior, both individual and corporate, will be above reproach. We will conduct ourselves in a candid, honest, and forthright manner in our interactions with one another, and with the business, regulatory, and political communities.

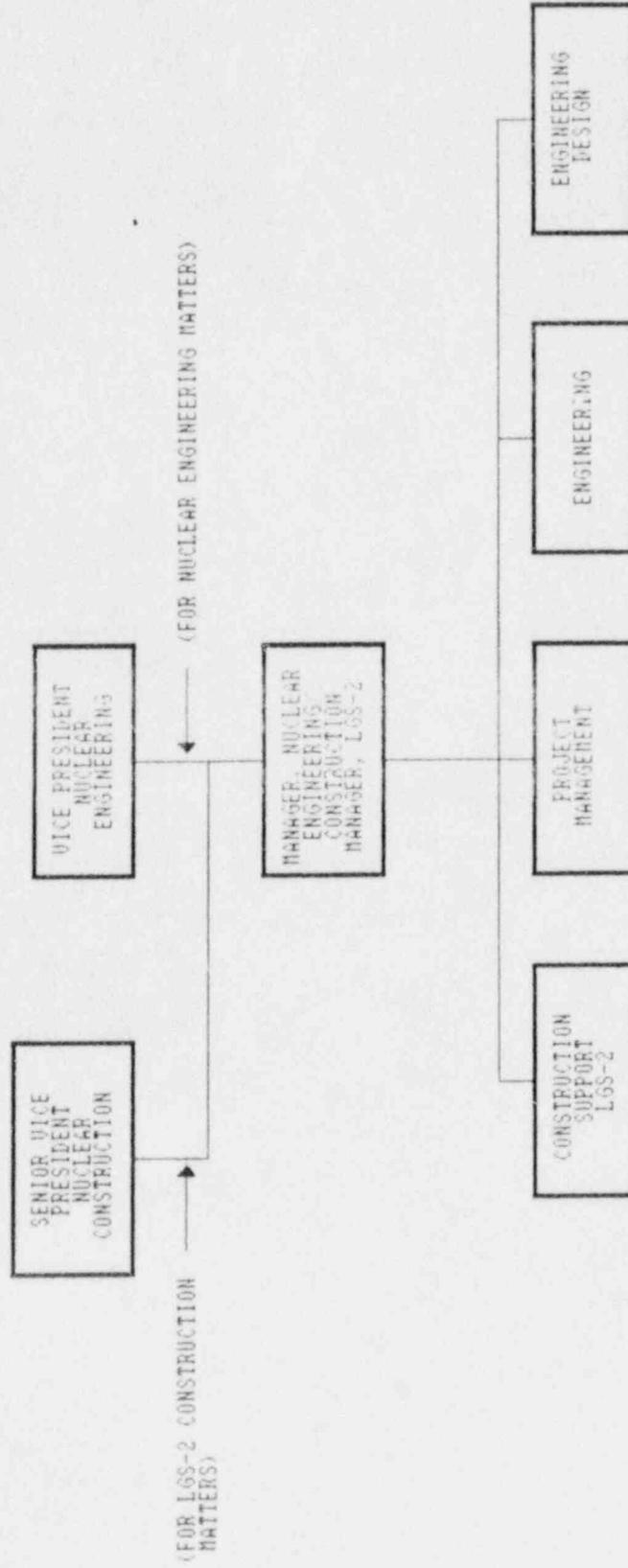
QUESTION I-9 (Page 24)

Correct the inconsistency between figure 4 which shows LGS-2 construction management reporting to a Manager under the Vice President Nuclear Engineering and figure 1 which shows LGS-2 construction management report to the Senior Vice President Nuclear.

RESPONSE

What might appear to be an inconsistency between Section I, Figure 1 on page 9, and Figure 4 on page 24 of Section I of the Restart Plan is explained on Page 26. The Manager, Nuclear Engineering, has two major roles. In one role he reports directly to the Vice President-Nuclear Engineering in a one-over-one relationship. In the other role he serves as the Construction Manager-LGS-2 and reports directly to the Senior Vice President-Nuclear Construction as indicated in Figure 1. In the role of Construction Manager-LGS-2, the Manager, Nuclear Engineering, has as his direct report, the Construction Superintendent-LGS-2, as indicated in Figure 4. A figure showing the dual reporting relationship of the Manager, Nuclear Engineering/Construction Manager-LGS-2 is attached.

Reporting Relationships Manager, Nuclear Engineering/Construction Managers-LGS-2



QUESTION I-10 (Page 27)

Explain whether Nuclear Maintenance in Nuclear Services is really limited to nuclear activities.

RESPONSE

The Nuclear Maintenance Division, a part of the Nuclear Services Department, is a centralized organization that provides specialty maintenance services and supplemental resources to nuclear generating facilities, as well as to fossil and hydro plants and substation equipment.

The mission of the Nuclear Maintenance Division is to provide quality preventive, corrective and emergency maintenance in a timely manner to equipment used in the generation and transmission of electrical energy. This Division has the capability to concentrate its resources at the stations during unit outages and major equipment overhauls.

Each nuclear generating station organization contains sufficient maintenance personnel, who report to station management, to routinely maintain the power plant equipment. The Nuclear Maintenance Division is structured to supplement the station maintenance forces to reduce the station work load during peak maintenance work and to provide necessary special maintenance services.

In addition, the broad base of "customers" of the Nuclear Maintenance Division allows the Division to

have the flexibility to specialize in specific maintenance work, use its personnel effectively, and to move the personnel to various locations on an as-needed basis to work in nuclear plants under the same program as those assigned to the nuclear plants.

The flexibility provided by this arrangement permits PE to have more highly qualified maintenance personnel available on a priority basis for nuclear work than it otherwise would.

QUESTION I-11 (Page 29)

Identify the changes to Figure 5.

RESPONSE

The change to Figure 5, "Functional Organization Chart for Nuclear Services," deleted the managerial/professional development functions from Nuclear Training. Responsibility for these functions was assumed by the newly established Manager, Organization and Management Development Division. This responsibility was appropriately added to Section I of the Restart Plan, Section 2.3, Organizational Accountabilities, page 17. The Manager, Organization and Management Development Division, is also responsible for:

- 1) evaluating effectiveness of management and professional training programs, and
- 2) interfacing with department management to monitor individual development plans for each nuclear manager.

These functions were omitted from Figure 5 and omitted from Section 2.3. The transfer of the managerial/professional development functions to the Manager, Organization and Management Development Division, provides more direct involvement by the highest level of nuclear management during this very active re-organizational period.

QUESTION I-12 (Page 27)

Explain how the long standing weaknesses in this area are expected to improve with the limited experience and talent in the Health Physics Group.

RESPONSE

Weaknesses in the radiation protection/health physics organizations were recognized by PE before the March 31, 1987 shutdown order. In response to its own self-assessment in this area, PE initiated an effort to strengthen its health physics programs. As part of this effort, PE has increased both the experience and talent of its health physics groups at corporate and the Peach Bottom site. The enhanced health physics organizations have undertaken numerous initiatives in support of program improvements. A discussion of the staff's experience level and programmatic improvements follows.

At the corporate level, PE sought to provide effective overview and support of the stations' health physics programs. To this end, PE reorganized the responsibilities and resources of the Radiation Protection Section into three branches in June 1987: the Radiological Health Branch, the Radiological Engineering Branch, and the Radiological Assessment Branch. Before the reorganization this Section consisted of six professionals. Currently, the Section contains 11 professionals. The Section has instituted improvements in programs based on NRC Regulatory Guides and

Institute of Nuclear Power Operations (INPO) standards. The Radiation Protection Manual is being updated, for issuance in July 1988, to incorporate the guidelines from INPO, NRC, and ANSI. These activities have been implemented to ensure that employees and their supervisors are more aware of their radiation protection responsibilities. Supervisors are now being held accountable for ensuring that their employees follow radiation protection procedures.

An important function of the Radiation Protection Section is to maintain knowledge of new practices and equipment proven effective in the industry and to coordinate evaluations of the potential for application at PE. In carrying out this function, the PE Radiation Protection Section has been represented at Edison Electric Institute Health Physics Committee meetings and at the Institute of Nuclear Power Operations Radiation Protection Manager meetings. Besides corporate representation, site personnel attended these meetings. Within the last year, members of the corporate staff, as well as station staff, have visited Hope Creek, Susquehanna, TMI, Oyster Creek, and Salem to observe various aspects of their radiological protection programs. In addition, a group of personnel including a Health Physics representative visited Sweden to obtain information about Swedish maintenance and radiological practices.

Besides the update of the Radiation Protection Manual, the Section has formalized the company ALARA program through the ALARA Manual which was issued in May 1988. It provides the organizational structure and standard for the company's ALARA program. The Manual incorporates industry guidelines and emphasizes management's role and industry-accepted practices in reducing doses. Key oversight features of the program include an Executive ALARA Council, chaired by the Executive Vice President-Nuclear, and Station ALARA Councils, chaired by the station Vice Presidents. This structure will provide a high level of pro-active management involvement in company goals for dose reduction. Each Council evaluates issues related to ALARA dose reduction and provides individuals in the line organization with goals and direction. These individuals are then expected to report to the Councils on progress made on ALARA goals. The first Executive ALARA Council meeting was held on June 3, 1988, with station ALARA Council meetings held subsequently in June.

The corporate Radiological Health Branch has been headed since September 1987 by a Certified Health Physicist with a Ph.D. and over 15 years of related experience. This Branch will operate a TLD processing facility accredited by the National Voluntary Laboratory Accreditation Program. This facility, which should be operational in November 1988,

will service both stations and provide a significant improvement to the station dosimetry programs. This improvement will be achieved through better quality service, better exposure control, and better turnaround time for the TLD processing. This Branch also provides technical assistance and oversight to the station internal and external dosimetry programs.

The Radiological Engineering Branch has been led since April 1988 by a Professional Nuclear Engineer who is also a Certified Health Physicist with over seven years of supervisory experience in the areas of BWR radiation engineering and ALARA programs. His experience includes assignments with Stone & Webster Engineering Corporation as a Principal Engineer, followed by a nuclear utility assignment as an ALARA engineer at a BWR, and then as the Radiological Engineer responsible for the BWR facility ALARA program in the corporate offices. This Branch will provide strong radiological engineering knowledge and experience to deliver technical support, coordination and oversight of the company ALARA program. The Branch is actively involved in assisting the stations and Nuclear Engineering with the planning and review of modifications and tasks involving high radiation doses. Their involvement provides the stations with additional knowledge and greater industry experience. This Branch has also been active in promoting

the inclusion of man-rem bonus/penalty clauses in bid specifications for major contract task bids. In this way, bids are evaluated on the basis of both cost and man-rem, and a bonus or penalty is awarded if the man-rem goal is improved upon or not achieved. Significant man-rem savings are anticipated with this approach. A contract was recently awarded on this basis for repair to a reactor vessel steam dryer.

The Radiological Assessment Branch has been headed since March 1987 by a physicist with regulatory experience in auditing health physics programs. This Branch initiated a formal quarterly performance assessment at each station on a cyclic schedule to assess each functional area of health physics over a two-year period. Each assessment results in recommendations which the Branch tracks to ensure proper resolution. Every three months, a list of open items is provided to the Plant Manager. Through these assessments, commonality of programs between the sites will be improved. In addition, professionally experienced members of the Radiological Health and Radiological Engineering Branches are currently, and will continue, promoting improvements to the station programs by performing reviews and informal assessments. Current emphasis is on evaluating the effectiveness of specific site procedures and performance in meeting objectives for sustained performance and improvement

as detailed in corporate manuals and procedures. These reviews have been of a programmatic nature and have included the areas of contamination and radioactive material control, response to radiological occurrences, and internal/external exposure documentation and reports.

Since the reorganization of the Radiation Protection Section, certain other improvements have been initiated. For instance, total access control into Radiological Control Areas (RCAs) has been instituted at Peach Bottom. This program requires that every individual who enters an RCA must sign a Radiation Work Permit, allowing much better programmatic control. In addition, the Radiological Occurrence Report System has been upgraded to require a higher level of site management review with monitoring by the Radiation Protection Section. The revised system has improved the average closeout time of corrective actions from several weeks to less than a week.

Besides changes in the health physics organization in the PE corporate offices, organizational improvements have also been made at the Peach Bottom site. In February 1988, a new Superintendent, Services (health physics, radwaste, and chemistry) with 15 years of experience was assigned. In March 1987, a new Radiation Protection Manager was assigned who has nine years of professional experience, and in November 1987 an Applied Health Physics Supervisor with six

years of professional experience was assigned to Peach Bottom. Subsequent to the shutdown, the positions of Health Physics Supervisor were created to supervise the technicians and report to the Applied Health Physics Supervisor. The Health Physics Supervisor assigned to each shift has the authority to ensure that health physics procedures are correctly carried out.

Improved performance in dose reduction has been evident. For example, the Peach Bottom recirculation pipe replacement project, which is nearing completion, is projected to be significantly under the man-rem budgeted (approximately 1350 man-rem vs. 1725 man-rem budgeted). This outcome is largely the result of aggressive health physics involvement in this project, which has also been conducted without any significant health physics deficiencies.

Peach Bottom has also initiated an accelerated decontamination effort. This effort includes a program for reducing the number of contaminated areas in the plant and establishing goals for the total amount of contaminated space.

PE has been committed to improving its health physics/radiation protection organization. The corporate staff has doubled, and experienced individuals have been brought into the PE organization both at corporate and Peach

Bottom. PE has developed a stronger organization and has improved programs as discussed above to address weaknesses in the health physics area. We feel that we now have the experience and talent to ensure continued improvement and high standards of performance in the PE health physics program. We are committed to this end.

QUESTION I-13 (Page 31)

Explain why the Manager, Nuclear Training should not be held accountable for the effectiveness of training conducted.

RESPONSE

The Manager, Nuclear Training, is accountable to the Vice President-Nuclear Services for the effectiveness of training conducted. Specifically, he is accountable for the overall PE nuclear training programs including developing training program curriculum, qualifying instructors, providing training for new instructors, evaluating programs and instructors, and assuring that INPO accreditation standards are maintained. The Manager, Nuclear Training, also ensures that the stations are adequately implementing the nuclear training programs. At the sites, the Superintendents, Training, are accountable to the site Vice Presidents for ensuring that the training programs are effectively conducted consistent with corporate direction.

QUESTION I-14 (Page 36)

Explain why the ideas of direct observation and involvement in ongoing activities as a way of monitoring performance should not be added.

RESPONSE

These concepts are important parts of the company's self-assessment processes. Line management personnel monitor the performance of their organizations through direct observation and involvement in ongoing activities. This concept is embodied in the fourth point under Section I, 3.1, which states, "Line management monitors the performance of their organization." This includes direct observation and involvement by Senior Management in ongoing activities as ways to monitor performance, identify variances where they exist, and assure appropriate corrective action occurs. Additional reinforcement in this area is also contained in Section 2.2 of Section I which discusses the assignment of a Vice President-level organization at each site to assure close involvement in day-to-day activities.

QUESTION I-15 (Page 40)

QA audits appear to be expanded in scope to include comprehensive technical and performance based factors. Section II, Executive Summary, page 12, states that staffing of the new site Quality organization has resulted in the recruitment and selection of a significant number of new experienced personnel. These statements indicate there has been an increase in QA/QC personnel on site. Provide more information to describe the increase in personnel and scope of audits.

RESPONSE

The formation and staffing of the PBAPS Quality Division is further discussed in Section II on pages 15, 16 and 77 to 82. As indicated therein, the organizational structure includes the establishment of eight additional site supervisory positions that have been filled by new personnel with significant relevant experience and proven records of performance in technical, management, and QA/QC areas.

The site audit program is further described in Section II on page 78. Considerable effort has been made during the past 18 months to develop a technically based audit program within Nuclear Operations QA. Eleven such audits were performed at PBAPS in 1987. The site operations staff has advised that the program has contributed to self-assessment efforts and has identified important areas for improvement. The 1988 Nuclear QA Goals call for the completion of at least 24 such audits.

A considerable number of the audits and surveillances are performance based (i.e., they include the in-process observation of the task being reviewed). The 1988 Nuclear QA Goals set standards to ensure that this occurs in at least 50 percent of audits and surveillances. In addition, site audits and surveillance activities will be focused on areas of concern to plant management, the senior nuclear management team, the NRB, or as warranted by operating experience.

QUESTION I-16 (Pages 43-45; Section 3.5 and 3.6)

Describe whether the Commitment Tracking program is included in the Information Management and Reporting Systems Program and how these two program activities differ. The function of commitment management/tracking is also included in the functional organization description for the site Support Manager, the site Superintendent-Technical and the corporate Nuclear Services division. Provide a description of the Commitment Tracking program including the inputs to the program, how the progress of a commitment's various elements will be followed, including how the three groups named above will coordinate their efforts, and how completion of all of a commitment's elements will be verified and documented.

RESPONSE

The Information Management and Reporting System (IMRS) program encompasses various individual programs, for example, the Commitment Tracking Program (CTP). The IMRS is not a structured program in itself but relies on its structured elements. As such, the CTP will provide management with a mechanism to measure the effectiveness of commitment identification, tracking, adherence to schedule, and close out.

The CTP has been developed by a PE interdepartmental steering committee. The program requires a high level of involvement by line management and staff at the corporate office and at both nuclear stations. The CTP was fully implemented July 1, 1988.

The program is described in an Interface Agreement approved by the Executive Vice President-Nuclear and has been implemented through a Nuclear Group Administrative

Procedure. The CTP includes commitments made in correspondence to and from PE with external organizations, including NRC, INPO, Joint Utility Management Audit (JUMA), ANI and other federal, state and local agencies, as well as commitments established by the Nuclear Review Board, Independent Safety Engineering Group, Nuclear QA and OEAP organizations. The program will ensure that an accurate status of the commitments is maintained. The commitments currently being tracked by various organizations within PE using different sources are being verified and consolidated into a single database on a phased priority basis.

The responsibility for implementing the CTP, maintaining the database, and tracking the status of implementation of commitment-related activities is assigned to the Commitment Coordinator and his staff in the Licensing Section under the Manager, Nuclear Support, in the Nuclear Services Department. Commitment Engineers review designated incoming and outgoing correspondence to identify commitments and enter the information into the database.

The commitment action is assigned via a Document Control Form to one of the following five PE departments: Peach Bottom Station, Limerick Station, Nuclear Engineering, Nuclear Services or Quality Assurance. In the case of Peach Bottom and Limerick, the Superintendent-Technical assigns the necessary action to a responsible organization

and is responsible for site implementation through line management. Commitments that are programmatic in nature, for example, revisions of procedures and Technical Specification amendments, are specifically identified in the database and will be maintained for consideration in future changes to such procedures.

Verification of a completed commitment action is provided by management in the Responsible Organization who must certify the completion by signature. Subsequently, the completion status is entered by the Commitment Engineer into the CTP database, including reference to the appropriate closeout documentation.

The Site Support Manager does not have a specifically assigned line management function in the CTP for the site. The administration of the CTP at the site is the responsibility of the Superintendent-Technical as stated in the Restart Plan (Section II, page 168). The earlier statement (Section I, page 21) represented PE's plans at the time the Restart Plan was issued; however, the Commitment Tracking Program was subsequently revised and the site responsibility for CTP changed to the Superintendent-Technical.

QUESTION I-17 (Page 53)

Discuss how the wide range of independent assessment methods including the monitoring of the independent assessment functions will work without undermining accountabilities in the line organization and without undermining the confidence that upper management places in line management.

RESPONSE

PE's line management has the primary responsibility for assuring the safety and quality of its nuclear operations. The many facets of this responsibility are expressed in the PE Nuclear management team's management philosophy for assurance of quality found on pages 36 and 37 of Section I of the Plan for Restart of Peach Bottom. Accountability in the line organization is achieved and maintained by clearly assigning individual responsibility, delegating appropriate authority to exercise those responsibilities, holding each individual accountable to carry out his responsibilities and evaluating individual and team performance.

INPO, in its review of the original Plan for Restart of Peach Bottom, concluded that the lack of accountability in the corporate organization and at Peach Bottom had been pervasive for several years. INPO further concluded that, while the recent PE reorganization should be helpful in strengthening accountability, success would ultimately depend upon the individual managers in key line positions. All of the key managers responsible for PE's nuclear operations have been replaced. It is PE's belief that these

changes, in conjunction with the recent reorganization, the acquisition of experienced outside talent and the numerous corrective actions outlined in the Plan for Restart, will be effective in assuring accountability for excellence of nuclear operations.

A principal thrust of the Plan for Restart of Peach Bottom is to strengthen self-assessment and problem resolution capabilities within the Nuclear organization. To complement and monitor this self-assessment effort, PE's independent assessment structure has been expanded and strengthened, with particular attention to assuring that the independent assessment does not undermine accountabilities in the line organization.

The NCB has full and complete responsibility for all aspects of oversight of corporate nuclear operations. The Nuclear Review Board (NRB) and Nuclear Quality Assurance (NQA) are internal oversight organizations with direct responsibility to line management and an informational reporting responsibility to the NCB.

QUESTION I-18 (Page 54)

Compare NRB technical expertise with technical specification requirements.

RESPONSE

Peach Bottom Atomic Power Station Technical Specifications state in Sections 6.5.2.1 and 6.5.2.2 that the Chairman, members and alternate members shall have an academic degree in an engineering or physical science field and shall have a minimum of five years of technical experience, of which a minimum of three years shall be in one or more of the following areas: nuclear power plant operations, nuclear engineering, chemistry and radiochemistry, metallurgy, instrumentation and control, radiological safety, mechanical and electrical engineering, or quality assurance practices.

Further, the members and alternate members will be competent in the areas of Quality Assurance practice and cognizant of the Quality Assurance requirements of 10CFR50, Appendix B. They will be cognizant of the corporate Quality Assurance Program and will have the corporate Quality Assurance organization available to them.

The present NRB Chairman, members and alternate members each have at least one academic degree in an engineering or physical science field and a minimum of 15 years of technical experience. The areas of

expertise of each member and alternate member are given in the attached chart. All are competent in the areas of quality assurance practice and cognizant of the quality assurance requirements of 10CFR50, Appendix B, and the corporate Quality Assurance Program.

The NRB Chairman, members, and alternate members utilize the services of the Nuclear Quality Assurance Department for the following: review of plant and industry concerns; performance of special studies and investigations; scheduling, conduct and reporting of audits required by Section 6.5.2.8 of the Technical Specifications; and review of safety evaluations as required by Section 6.5.2.7 of the Technical Specifications.

AREAS OF EXPERTISE OF IHB MEMBERS AND ALTERNATES

MEMBERS

	NUCLEAR POWER PLANT OPERATIONS	NUCLEAR ENGINEERING	CHEMISTRY AND RADIOCHEMISTRY	METALLURGY	INSTRUMENTATION AND CONTROL	RADIOLOGICAL SAFETY	MECHANICAL ENGINEERING	ELECTRICAL ENGINEERING	QUALITY ASSURANCE	ADMINISTRATIVE CONTROLS	EMERGENCY PLANS	NON-DESTRUCTIVE TESTING	MAINTENANCE
E. C. Kistner		•		•			•			•		•	
L. B. Pyrih		•		•			•			•		•	
D. M. Smith	•		•			•				•	•		
G. M. Leitch	•		•			•				•	•		
D. H. Helwig				•			•		•	•		•	
E. P. Fogarty					•			•		•	•		
J. R. Calhoun	•		•			•				•	•		•
W. R. Corcoran	•	•			•		•	•		•			
R. J. Mattson		•					•		•	•	•		

ALTERNATES

G. A. Hunger		•		•		•	•			•		•	
R. H. Moore				•			•		•	•		•	•
H. J. McCormick	•				•	•		•		•	•		•
J. F. Franz	•				•	•	•			•	•		
P. J. D'Angelo			•		•					•			

Areas of Expertise are those in which the individual has had experience so that the individual: 1) can recognize and evaluate Nuclear Safety problems and their effects and 2) can verify the adequacy of corrective actions.

QUESTION I-19 (Page 55)

Describe the NCB members qualifications to be able to perform the duties described in the charter and the time they will have to devote to this activity. Explain the extent of the NCB responsibilities relative to review of the inspection reports.

RESPONSE:

The Nuclear Committee of the Board (NCB) is a diverse group of individuals with business management, engineering, medical, and naval nuclear backgrounds. Collectively, they are extremely well qualified to oversee the Company's nuclear operations. The NCB accomplishes its oversight through periodic meetings with nuclear group management; review of internal and external reports, including but not limited to the following:

- Monthly Senior Management Reports
- Quarterly Nuclear Quality Assurance (NQA) Summary Letters and NQA Trending Reports
- NRB Summary Reports
- SALP Evaluations and PE Responses
- INPO Evaluations and PE Responses
- NRC Inspection Reports with Violations and PE Responses
- NQA Audits with Significant Safety Findings.

In discharging its responsibilities, the NCB draws on the talents of two outside nuclear advisors whose backgrounds are described herein. In addition to attending

all NCB meetings, the nuclear advisors meet periodically with nuclear management personnel to discuss and address a variety of safety and technical issues. Furthermore, these advisors review all of the above reports, in addition to the following:

- Weekly Items of Interest - Peach Bottom and Limerick
- Monthly Progress Reports - Limerick Unit #2
- Monthly Progress Report on Plan for Restart
- Special NRC Bulletins Identifying Significant Deficiencies or Problems
- NRB Minutes
- NQA Audit Summaries and Highlights
- Independent Safety Engineering Reports
- Licensee Event Reports
- Proposed Changes to Procedures, Equipment or Systems and Tests which Involve an Unreviewed Safety Question
- All NRC Inspection Reports
- Reports of the Operating Experience Assessment Program

On April 6, 1987, the Board of Directors, at a special meeting, took action to establish a Special Committee comprised of non-employee directors, to conduct an independent examination of events leading to the NRC shutdown order of March 31, 1987, and to report on a regular basis to the full Board regarding its activities. On October 26, 1987, the Board took formal action to establish

a standing Nuclear Committee of the Board (NCB) and to appoint the members of the Special Committee to serve on the NCB. As of July 22, 1988, the NCB, and its predecessor the Special Committee, has met 44 times since the Board's action of April 6, 1987.

A number of these meetings have been held at nuclear plant sites, both Peach Bottom and Limerick, at which time the NCB and its technical advisors have received briefings on various aspects of nuclear operations and have had the opportunity to interact with key nuclear managers and to tour the plants. In the course of the committee's own meetings at corporate headquarters, the NCB has also met on a regular basis with the joint owners of Peach Bottom (Atlantic City Electric Company, Delmarva Power & Light Company, and Public Service Electric and Gas Company).

The NCB is meeting at least one or more times each month during the Peach Bottom restart effort. Subsequent to restart, in accordance with its charter, it is expected that the NCB and its advisors will meet at least quarterly.

With a single exception, all of the members of the NCB live and work in proximity to the Company's corporate headquarters and its nuclear facilities. Each member has committed to active participation in the affairs of the Company.

NCB BIOGRAPHIES

ROBERT D. HARRISON

Director, Philadelphia Electric Company
Chairman, Nuclear Committee of the Board

Mr. Harrison graduated from Harvard University with a degree in mechanical engineering. He also graduated from Officer Candidate School at the U. S. Naval Academy. His three years of active naval service included a tour of duty as Chief Engineer aboard a destroyer escort. He also holds a master's degree in Business Administration from Harvard University.

Mr. Harrison possesses broad-based managerial experience. In 1949, he joined John Wanamaker, Inc., an internationally known retail merchandising chain, where he progressed through various levels of management to the position of President and Chief Executive officer, which he held for over ten years. In 1987, he elected early retirement from Wanamaker's to serve as a management consultant to business and industry. He has served on this Company's Board of Directors for 18 years, and has been instrumental in guiding the Company's growth as a nuclear utility.

WILLIAM S. GAITHER, Ph.D

Director, Philadelphia Electric Company
Member, Nuclear Committee of the Board

Dr. Gaither is Vice Chairman of the Board of Directors and Manager of Information and Decision Systems for Roy F. Weston, Inc., a West Chester, Pennsylvania-based environmental consulting and engineering firm. Before joining Weston, Dr. Gaither served as President of Drexel University for three years. Previously, he founded the College of Marine Studies, of the University of Delaware, and served as the College's Dean for 14 years.

Dr. Gaither's engineering and business experience includes project engineering and management in marine transportation systems with the Pipeline Division of Bechtel Corporation (San Francisco); engineering experience with Dravo Corporation (Pittsburgh); and with Myer Corporation (Neenah, Wisconsin).

Dr. Gaither is a graduate civil engineer from Rose Polytech (now Rose-Hulman Institute of Technology) with the degrees of

Master of Science in Engineering, Master of Arts, and Doctor of Philosophy from Princeton University. He maintains registrations as a professional engineer in six states, including Pennsylvania. He has served as a PE director for three years.

EDITHE J. LEVIT, M.D.

Director, Philadelphia Electric Company
Member, Nuclear Committee of the Board

Following graduation from medical school and post-graduate study at Philadelphia General Hospital (PGH), Dr. Levit served as Clinical Instructor and Associate in Endocrinology at PGH and for four years as that institution's Director of Medical Education.

Early in her medical career, Dr. Levit became associated with the National Board of Medical Examiners (NBME), an independent testing agency with the primary mission of evaluating the professional competence of physicians as the basis for licensure to practice medicine in the United States. In her 25 years with NBME, she advanced through various levels of responsibility to the position of President and Chief Executive officer, which she held for eleven years. In 1986, Dr. Levit elected early retirement as President and Chief Executive Officer of NBME and continues to serve the organization as President Emeritus and a Director.

Dr. Levit is a Master of the American College of Physicians, and a member of the Institute of Medicine of the National Academy of Sciences. In February 1988, she was appointed to the Advisory Council of the Institute of Nuclear Power Operations (INPO), in Atlanta, Georgia, for a three-year term. The Advisory Council is comprised of professionals who are not salaried by a nuclear utility. Their function is to advise INPO's President and Board of Directors on the programs and activities of the Institute. Dr. Levit has served as a director of PECO for 8 years.

JOSEPH J. McLAUGHLIN

Director, Philadelphia Electric Company
Member, Nuclear Committee of the Board

Mr. McLaughlin is President and Chief Executive Officer of Beneficial Mutual Savings Bank, in Philadelphia, Pennsylvania. He is a graduate of the American Institute of Banking, Brown University Graduate School of Savings Banking, and the Philadelphia Board of Realtors School of Real Estate Law and Finance.

Mr. McLaughlin has served as a Director of Philadelphia Electric Company since 1974, and has a deep and thorough

understanding of the Company's mission and responsibilities as a nuclear utility.

ADMIRAL JAMES D. WATKINS, USN (Retired)
 Director, Philadelphia Electric Company
Member, Nuclear Committee of the Board

Admiral Watkins was elected a Director of Philadelphia Electric Company on June 27, 1988, and was appointed to the Nuclear Committee of the Board. He is a graduate of the U. S. Naval Academy, whose tours as a flag officer include Commander, Sixth Fleet; Vice Chief of Naval Operations; and Commander-in-Chief, Pacific Fleet. In 1982, he was selected by President Reagan to be the 22nd Chief of Naval Operations and served in that post until he retired from the Navy in June 1986.

Admiral Watkins holds a master's degree in mechanical engineering and is a graduate of the reactor engineering course at Oak Ridge National Laboratory. In 1959 he entered the Navy's nuclear-powered submarine program, where he acquired many years of experience in nuclear propulsion, including all aspects of bringing a new reactor plant on line. He has also served ashore in various assignments associated directly with selection, education, and training of personnel, as well as maintenance and operation of naval nuclear propulsion plants.

SALOMON LEVY, Ph.D
Advisor to the Nuclear Committee of the Board

Dr. Levy is President of S. Levy Incorporated, an independent engineering consulting firm which he founded in September 1977. Previously, Dr. Levy was employed by General Electric Company for 24 years, where he was involved in overall nuclear power plant design. In April 1975, he was named General Manager, Boiling Water Reactor Operations, with responsibility for all engineering and manufacturing of General Electric nuclear power reactors.

Dr. Levy holds the degrees of Bachelor of Science, Master of Science, and Doctor of Philosophy in Mechanical Engineering from the University of California at Berkeley. He serves as a consultant to electric utilities, national laboratories, power equipment manufacturers, the Electric Power Research Institute, and the Research Division of the U. S. Nuclear Regulatory Commission.

Dr. Levy is a member of the National Academy of Engineering, a fellow of the American Society of Mechanical Engineers, a

member of the NRC Research Advisory Committee, and a Director of IE Industries and Iowa Electric Company. He has been or is a member of oversight committees for seven nuclear power plants. He has authored over 40 published technical papers.

VICE ADMIRAL EUGENE P. WILKINSON, USN (Retired)
Advisor to the Nuclear Committee of the Board

Vice Admiral Wilkinson graduated from San Diego State College with a degree in chemistry. He devoted a major portion of his naval career to the Navy's nuclear propulsion program, serving as initial commanding officer of the USS Nautilus, the world's first nuclear-powered submarine; and as initial commanding officer of the USS Long Beach, this nation's first nuclear-powered surface ship. He retired from the Navy in 1974 as a Vice Admiral and Deputy Chief of Naval Operations for Submarine Warfare.

Following his naval career, Vice Admiral Wilkinson was employed as Executive Vice President of Data Design Laboratories, a high-technology company in Cucamonga, California. In 1980, he became the first President of the Institute of Nuclear Power Operations (INPO) and served in that post until 1984, when he was elected President Emeritus upon his retirement as President.

Vice Admiral Wilkinson serves as a Director of Commonwealth Edison Company; Data Design Laboratories, Inc.; Advanced Resource Development Corporation; and Management Analysis Company.

QUESTION I-20 (Page 57)

Explain what is intended by private NCB meetings with the Administrator NRC Region I.

RESPONSE

The specific duties of the Nuclear Committee of the Board (NCB) are contained in the charter and include meetings, as appropriate, that include key PE officers and managers and key individuals involved in oversight roles, both internal and external. The use of "private" in conjunction with NCB meetings with the Region I Administrator was inadvertent and should be deleted.

QUESTION I-21 (Page 63)

Activity Number CA4-1.1.3. Explain why it is acceptable to limit staffing assignment completion to the senior engineer level.

RESPONSE

To implement Corrective Action Objective 1, a nuclear-dedicated organization has been established within the corporate structure. Activity CA4-1.1.3 was developed to facilitate staffing of all management positions in this organization prior to restart. The Senior Engineer, which is essentially the lowest level management position in the corporate organization, was specified not to limit but to clarify that all management positions were included.

Long-term staffing requirements, however, remain fluid and are not yet certain. A study regarding long-term staffing requirements was completed in July 1988. An action plan to achieve these staffing levels will be developed by the end of 1988.

QUESTION I-22 (Page 64)

Activity Number CA4-1.3.2. Explain why each position description should not state what the incumbent will be accountable for, and why the position descriptions are limited to senior engineer level. In addition, explain how incumbents indicate their acceptance of their responsibilities and accountabilities.

RESPONSE

Each PE position description does, in fact, include a description of responsibilities/activities for which the incumbent will be accountable.

Activity CA4-1.3.2 addresses specific revisions necessary as a result of the reorganization to accurately reflect certain changes in organizational interface. These changes only affected position descriptions for Senior Engineer level and above (see Activity CA4-1.3.1). Therefore, revisions were limited to those position descriptions.

There is no formal acceptance by incumbents of responsibilities and accountabilities described in the position description; however, each incumbent is provided a copy of the appropriate position description. Further, incumbents have been and continue to be actively involved in necessary revisions of their respective position descriptions. Finally, the conduct of performance evaluations based upon the description of responsibilities ensures that each incumbent understands his responsibilities.

QUESTION I-23 (Page 65)

Activity Number CA4-1.4.1. Describe to whom employees not assigned permanently to site work will be accountable. It is not clear how this activity accomplished the goal stated at the top of the page (for all those assigned to both sites permanently).

RESPONSE

Those employees not assigned permanently to the site, for example, Nuclear Maintenance Division personnel, who are brought in temporarily for specific work, will report directly to and be accountable to the site Vice President through the site managers who contract for their services. This action achieves the stated goal by assigning site accountability for personnel performing site work.

Also see the response to Question I-2.

QUESTION I-24 (Page 65)

Explain how the assurance of quality philosophy will be implemented.

RESPONSE

As stated commencing on the bottom of Page 36 of Section I, the management philosophy for assurance of quality will be implemented in a number of ways including a statement of philosophy and expectations which has been published in company newspapers and prominently displayed throughout the corporate office and at the sites. This statement is published in Section II of the Restart Plan on pages 47 and 48 and is indicative of the approach and tone which is being used in management communications with employees to underscore the cultural values that Nuclear management has committed to supporting.

A Nuclear Performance Management Program is being established to achieve and maintain excellence and will be fully operational within one year. The program will establish performance goals that include organizational as well as technical and operational standards. Performance indicators will be identified for use in tracking and reporting on performance against established goals. Goal development will be cascaded down in the organization and will support the overall nuclear goals and standards. In this regard, the effectiveness of each management level will

be measured and emphasized in the performance appraisal process. The overall assessment of the program will be provided by NQA and the results reported to line management and the Executive Vice President-Nuclear.

QUESTION I-25 (Page 65)

Describe the caliber of individual who will be selected to fill the QA positions in terms of experience, technical ability and QA professional experience.

RESPONSE

QA positions have been, and will continue to be, filled by personnel with significant relevant experience and proven records of performance in operations, technical, management, and QA/QC areas. The caliber of individuals who make up the QA management team is evidenced by their backgrounds which are described in Section I on pages 94-96. In addition, staffing of the new Peach Bottom site Quality organization has further reinforced these high caliber manning objectives, as exemplified in the QA management experience summaries provided in Section II on pages 146-148. In summary, all QA individuals, both managers and supporting personnel, will be selected based on a breadth of nuclear experience in line and oversight functions.

QUESTION I-26 (Page 68)

Activity Number CA4-2.7.5. Explain why performance evaluation training for supervisors should not be conducted before restart.

RESPONSE

Performance evaluation training for supervisors will be complete prior to August 1, 1988. The Management and Professional Development Section, working with outside consultants, has designed and is conducting courses for all personnel at the first-line supervisor level and above.

QUESTION I-27 (Page 68)

Activity Number CA4-2.8.1. Explain why written guidelines with respect to meetings, timely communications, problem identification and analysis and followup corrective action activities are limited to Nuclear Service and Nuclear Engineering personnel.

RESPONSE

Major Activities CA4-2.8.1 and CA4-2.8.3 are directed toward establishing interactive communication and problem-solving processes between the plant site personnel and those organizations responsible for providing corporate direction and oversight of plant programs. Nuclear Services and Nuclear Engineering primarily serve in this role. Several additional related activities have been developed that address reporting and interface relationships with other organizational entities and are directed toward their particular relationship needs. These activities include CA3-4.5.1 (Section II) for On-site Quality Assurance, CA4-1.3.1 and CA4-1.3.2 for the various on-site organizations, and CA4-2.9.1 for Nuclear Quality Assurance.

QUESTION I-28 (Page 69)

Activity Number CA4-2.9.1. Explain how this item addresses the corrective action of "Establish interactive communications and problem solving between line management and independent assessment organizations..."

RESPONSE

The establishment of Nuclear Quality Assurance's (NQA's) reporting as a routine agenda item at Executive Vice President-Nuclear staff meetings affords a regular opportunity for interactive communications and problem-solving regarding quality and performance issues requiring executive management attention. These meetings are attended by the Executive Vice President-Nuclear, all Nuclear Group Vice Presidents, and the General Manager-NQA. Therefore, through NQA status and exception reporting at these weekly meetings, line management is able to communicate interactively with the individual responsible for representing independent assessment organizations, integrated analysis and problem solving is permitted, and action items may be assigned and reported, as necessary (also see response to Question I-1).

QUESTION I-29 (Page 69)

Activity Number CA4-2.9.2. Justify deleting the shift inspectors job description and reporting.

RESPONSE

Activity CA4-2.9.2, which was deleted as a result of Revision I to the Restart Plan, Section I, addressed the subject of an offsite meeting structure for senior and line management review of nuclear operations with independent assessment groups, and was not related to the subject of shift inspectors. Activity CA4-2.9.2 was deleted since Activity CA4-2.9.1, Quality Assurance reporting at Executive Vice President-Nuclear staff meetings, satisfies the need for interactive communications and problem-solving regarding quality between line management and independent assessment (see the response to Question I-28). The response to Question II-44 discusses deletion of the shift inspectors.

QUESTION I-30 (Page 70)

Activity Number CA4-3.2.3. Explain why revision 1 changes the NRB chairman from a full time back to a part time position. Describe the changes to the NRB charter.

RESPONSE

There was no intention to convey that the chairmanship of the NRB would be other than a full-time position. It is PE's intention to maintain a full-time Chairman of the Nuclear Review Board.

The following changes were made to the NRB charter:

- Reduction in the number of members from 12 to 9
- Deletion of the responsibility to assess personnel performance issues.

A further revision to the NRB charter will be made to formalize the intended reporting of the NRB chairman to the NCB and the Chief Executive Officer.

QUESTION I-31 (Page 71)

Activity Numbers CA4-3.4.1-3. Explain why these items regarding independent assessment of review and feedback processes used by independent assessment groups were deleted. In addition, describe what aspects of the restart plan will be assessed in the scheduled Self Assessment. Who will perform the Self-Assessment? Will written audit procedures or plans be used in this Self Assessment? How will these procedures or plans be prepared, reviewed and approved? How will these documents be used in the assessment. What other inputs will be used in reaching conclusions or recommendations in the Self Assessment?

RESPONSE

As a result of INPO comments raising questions regarding the nature and scope of independent assessment originally proposed, PE reevaluated its original plan in order to assure that excessive independent assessment did not diminish or interfere with authority and responsibility of line management. This reevaluation involved a careful consideration of the mission of the newly established Nuclear Committee of the Board and the NRB, together with the reorganization and strengthening of the QA function.

It was against this background that the charter of the Nuclear Review Board was revised to provide for a role and responsibility more consistent with its composition and expertise, namely, to focus primarily upon safety and technical issues, and to bring the NRB in line with the Technical Specification requirements.

As shown in the attached revision to Figure 8 of Section I of the Plan for Restart of Peach Bottom, the NRB and NQA report directly to the Executive Vice President-

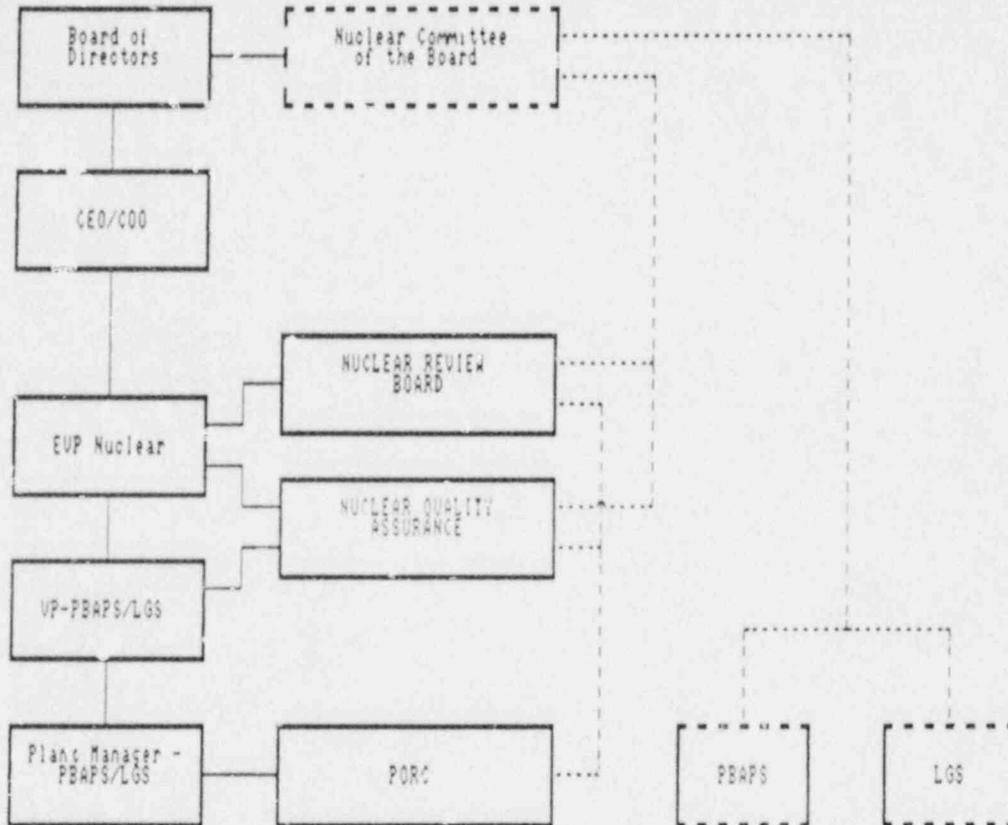
Nuclear. Both the NRB and NQA provide information to the NCB on a continuing basis, to assist the NCB in fulfilling its oversight mission regarding the effectiveness of management of nuclear operations, including but not limited to nuclear organizational issues and senior nuclear management effectiveness. Programmatic assessments by NQA provide information regarding the effectiveness of Nuclear Operations Management directly to Executive Vice President - Nuclear, NCB, and NRB.

Line management's self-assessment of readiness for restart will be reviewed by a Restart Review Panel. This panel will be comprised of:

- C. A. McNeill, Executive Vice President-Nuclear
- J. S. Kemper, Senior Vice President-Nuclear
(Construction)
- G. M. Leitch, Vice President, Limerick Generating
Station
- D. R. Helwig, General Manager, Nuclear Quality
Assurance
- E. C. Kisler, Chairman, NRB
- S. Levy, Advisor, NCB
- E. P. Wilkinson, Advisor, NCB
- L. Burkhardt, Consultant

A Self-Assessment Program is under development and will be provided separately.

INDEPENDENT ASSESSMENT FUNCTION INFORMATION FLOW AND FEEDBACK LOOP (AFTER)



Legend:

- = Providing independent assessment feedback to line and senior management
- = Information flow and line assessment
- - - = Information flow and monitoring of the independent assessment functions

Figure 8. Independent Assessment Function Information Flow and Feedback Loop (After)

SECTION II
PBAPS ACTION

QUESTION II-1 (Page 18)

Explain how PECO will "capture" the knowledge and experience that was lost by the personnel changes at Peach Bottom.

RESPONSE

The personnel changes at PBAPS have resulted in a net increase in knowledge and experience of nuclear operations. This has been achieved by retaining personnel with plant-specific knowledge and experience and by adding personnel with substantial knowledge and experience from successful nuclear power programs outside PBAPS to provide additional industry-wide expertise.

To ensure a continuation of PBAPS knowledge and experience, personnel at the senior engineer level who have had extensive knowledge and experience were retained in their positions at PBAPS. The new PBAPS management structure has placed several personnel at the site who have PBAPS experience from their previous positions in nuclear support organizations where their work was directly related to PBAPS activities. Two individuals with previous PBAPS operations experience were transferred back to PBAPS as members of the senior management team. Additionally, many of the personnel transferred from PBAPS remain in other PE organizations and are available for consultation when needed. Therefore, sufficient plant-specific knowledge and

experience is available at PBAPS to ensure successful operation.

PE is also strengthening management systems at PBAPS in the areas of configuration management, document control, operating experience assessment, commitment tracking and procedure revision. Among other benefits these improved systems will provide systematic retention of PBAPS information, ensuring long-term retention and more widespread accessibility.

QUESTION II-2 (Page 20)

The chain of command has been shortened in going from the operators to the Vice President. Explain how the command chain has been shortened for other workers such as HP, ISEG, QA, QC, and Maintenance.

RESPONSE

The re-organization emphasized shortening the Operations organization's chain of command by deleting the Operations Engineer position and allowing the Shift Managers to report to the office of the Superintendent of Operations.

Additionally, the entire site command chain was shortened between the Plant Manager and senior executives by placing a Vice President at the site.

These changes also apply to Maintenance, in that the Maintenance organization now reports through the Plant Manager to the site Vice President, as opposed to the previous structure whereby Maintenance was corporately controlled and reported to a Vice President of another part of the company organization.

For Health Physics the command chain up to the Vice President has been shortened as a result of aligning the position of Superintendent-Services to report through the Plant Manager to the Vice President. Previously, the Superintendent reported to the Plant Manager who reported to a corporate nuclear manager who in turn reported to a corporate Vice President.

With regard to Nuclear Quality Assurance (NQA) personnel (i.e., ISEG, QA, QC, etc.), the chain of command has been shortened through the establishment of higher departmental-level reporting and revised management structures. Each NQA division reports directly to the General Manager, NQA, who reports to the Executive Vice President-Nuclear as discussed in Section I on pages 11, 38 to 42, and 59.

QUESTION II-3 (Page 23)

Project manager, third item - Define "minor modification" and explain what coordination/review/ approval will be required from the engineering group.

RESPONSE

Minor modifications are non-safety-related modifications which are designed and installed by site engineering and craft personnel. Minor modifications do not meet the following criteria for classification as a major modification as delineated in Procedure A-14, Rev. 13:

1. Changes to the reactor coolant system boundary, as defined in the ASME Boiler and Pressure Vessel Code, Section XI and 10CFR50.2.
2. Changes in electrical circuitry and equipment of any system or component listed on the Q-list, except the addition of alarms, indicating lights, or other changes that do not change or electrically interface with the safety function.
3. Changes requiring significant formal stress or seismic analyses.
4. Mechanical changes to structures, systems and components as listed in the Q-list, except the addition of vents, drains, sample points and similar minor piping changes on other than the reactor coolant boundary.
5. Changes that involve an unreviewed safety question as defined in 10CFR50.59a.
6. Changes in the facility that affect fire protection which: (a) result in a permanent significant increase in fire loading of a room or fire zone that has a finite fire resistance design, or (b) involve rerouting of existing power or control cable, or (c) involve changes in electrical circuitry for equipment designated for safe shutdown of the plant.

The Nuclear Engineering Department has no routine delineated responsibilities for minor modification work. Peach Bottom's Superintendent-Modifications may request engineering assistance in the design or implementation phase as necessary. Documentation packages on minor modifications are included in the Nuclear Records Management System, allowing availability to all groups needing access. All modification requests are processed in accordance with Administrative Procedure A-14 through a central point in the Modifications Section at PBAPS to ensure proper coordination in design, evaluation, implementation, update of affected documents, and closure.

QUESTION II-4 (Page 31)

Discuss how planned job rotation of shift operators will impact a knowledge or awareness of plant and industry history.

RESPONSE

PE has conducted a comprehensive review of its operator career path program at PBAPS. Planned off-shift rotation for operators (both licensed and non-licensed) was addressed as part of this review. As a result of the review, PE reached a consensus that six months would be an appropriate length of time for a temporary off-shift rotation.

During the six month off-shift assignment, licensed personnel maintain their license currency by meeting existing regulatory requirements and by continued involvement in the requalification program. Outgoing operations personnel will be rotated to positions where their operations experience will add to the organization's capabilities.

The job rotation aspect of operations personnel will positively impact the experience level of the entire PE Nuclear Group. Outgoing shift managers will rotate approximately every four years to positions where their control room experience and supervisory training will enhance an organization. Moving out of the shift structure will allow them to come into contact with a larger number of individuals to whom they can transmit knowledge and

information. This will have a positive impact on the understanding of operations requirements by other work groups and thereby enhance their ability to interface with and support operations.

To ensure an orderly transition for shift managers, replacement candidates have been selected based upon their present experience levels. They will enter training programs over the next year ensuring that they are fully prepared to replace the existing shift managers.

QUESTION II-5 (Page 32)

Describe the goal regarding nominal and maximum overtime to be worked by the SROs and ROs.

RESPONSE

The goal for the operations of Peach Bottom is to minimize the use of overtime to be worked by the SROs and ROs. This goal will be achieved as a result of a number of initiatives currently in process:

1. PE plans to staff Peach Bottom operations with six licensed operators on a six-shift rotation basis. This exceeds the shift staffing required by the Technical Specifications, two SROs and three ROs, without resorting to overtime.

2. PE has made a strong, long-term commitment to enhance the licensed operator staffing levels for Peach Bottom. As indicated in Section II of Revision I to the Restart Plan, the goal is a station complement of 85 licensed staff members.

3. Staffing and work assignments for plant personnel will be such that adequate coverage will be maintained without routine heavy use of overtime. The objective will be to have Shift Operations personnel work a normal 8-hour day, 40-hour week while the plant is operating. However, in the event that unforeseen problems occur, during periods of extended shutdown for refueling or during major maintenance/modification periods, overtime work may be required on a temporary basis.

4. PE will propose a revision to the PBAPS Technical Specifications, by August 31, 1988, to assure control of the overtime worked by ROs and SROs. This proposed revision will utilize the guidance in the NRC's current recommendations on the overtime issue as contained in its proposed policy statement.

The increase in operations staff available to work over the next several years, as well as some basic changes in work distribution philosophies, improves our ability to minimize overtime. Work such as surveillance tests and maintenance will be handled as appropriate over the entire daily shift schedule as opposed to on day shift only. Additionally, work such as routine maintenance will be scheduled throughout the year rather than keeping most maintenance until outages which, in the past, caused excessive need for operations personnel beyond normal shift operations. The Blocking Work Group will also work to reduce overtime demand on operators.

QUESTION II-6 (Page 38)

Describe the PECO schedule for staffing licensed positions listed.

RESPONSE

The various categories of RO and SRO personnel (see page 38 of Section II) are listed below followed by the current schedule/status. Operator staffing plans will be updated regularly to reflect our continuing efforts to achieve and maintain the 85 licensed staff members.

SRO Licensed Personnel:

- o 1 Operations Support Superintendent
 - Current Schedule: In place
- o 6 Shift Managers
 - Current Schedule: In place
- o 2 Backup Shift Managers
 - Current Schedule: 1 with an inactive license is in place. 1 began training in June 1988; expect restricted (to shutdown) SRO license i September 1988 and approval of unrestricted SRO license subsequent to restart
- o 12 Shift Supervisors
 - Current Schedule: In place
- o 2 Off-shift Positions (serving as Blocking Coordinator and Electrical Supervisor)
 - Current Schedule: Later as staffing permits (probably late 1989)

- o 12 Plant Staff and/or Licensed Engineers
 - Current Schedule: 10 inactive plant staff SROs are in place. 1 additional plant staff member completing control room hours. 5 plant staff personnel previously licensed as SROs are in place
- o 8 Extra SROs to ensure flexibility for rotational assignments
 - Current Schedule: Later as staffing permits (probably 1991)
- o 4 SROs in training
 - Current Schedule: 7 personnel (all currently staff engineers) will enter SRO training July 25, 1988. These personnel include future backup Shift Managers.

RO Licensed Personnel:

- o 24 Operators
 - Current Schedule: 18 in place; 9 RO candidates were examined July 19, 1988. Next class will begin fall 1988.
- o 8 Blocking Permit Writers
 - Current Schedule: Later as staffing permits (expect 1990-1991 time frame)
- o 6 Extra ROs to ensure flexibility for rotational assignments
 - Current Schedule: Later as staffing permits (expect mid-1992)

QUESTION II-7 (Page 47)

Explain whether this definition means to a) emphasize or b) limit assurance of quality to the workers doing a task.

RESPONSE

The definition of assurance of quality referred to on page 47 of Section II is meant to emphasize the assurance of quality to all persons, both management and employees, involved in nuclear activities. The definition is further explained in conjunction with the statement that emphasizes a) Nuclear Group management's commitment to provide leadership and support, and b) management's expectations for the Nuclear Employee Team in achieving assurance of quality. The specific commitments and expectations are included on pages 47 and 48. Furthermore, on pages 36 and 37 of Section I, the nuclear management team has stated its philosophy for assurance of quality, clearly establishing line management's responsibility for assuring the quality of operations and services which they provide.

QUESTION II-8 (Pages 53-54)

Explain why the activities in the omitted paragraphs, such as meetings in small groups with development of recommendations and feedback were deleted.

RESPONSE

As you are aware, a change in PE management occurred in March 1988. J. F. Paquette, Jr., assumed the role of President and Chief Operating Officer (and subsequently assumed the position as Chairman of the Board and Chief Executive Officer in April 1988) and C. A. McNeill, Jr., became the Executive Vice President-Nuclear, PE's top nuclear officer. The new management team made a decision to conduct a review of PE's Plan for Restart of Peach Bottom to satisfy itself that the plan reflected their philosophy and management goals. Several changes were made, among them the deletion of the subject paragraph which reflected the previous management's efforts and methods for improving management practices. The goals for improving management practices remain the same; however, the new nuclear management's methods for achieving them are different. As stated in the revisions to the previous paragraph, similar meetings are being held and are designed to achieve the same purpose.

QUESTION II-9 (Page 59)

Describe the "underlying attitudes" that promoted unacceptable behavior in the control room. Explain why the MAC problem root cause assessment should not be included as an appendix or by reference for completeness of response to the Order as it was in the earlier CTE plan.

RFSPONSE

The underlying attitudes identified in the consultant's report as promoting unacceptable behavior in the control room included: "complacency, over-confidence, arrogance, disrespect, resistance and indifference to regulation, isolationism, and an us-versus-them mentality." The People-The Foundation of Excellence (PFE) training was successful in changing these attitudes. The post-course report states:

- o Participants acknowledged much of their previous behavior as inadequate and inappropriate.
- o Participants were aware of and described operator performance that was of the quality desired and required for current nuclear operation requirements, and reported their acceptance of these requirements.
- o Participants reported, and the staff observed, that they acquired/improved the knowledge and skills to modify their own behavior, identify the impact of their behavior on others, and recognize the effects of others behavior on them.

With regard to including the MAC Problem Root Cause Assessment as an appendix or by reference for completeness of response, PE believes that the MAC Problem Root Cause

Assessment should be included by reference for completeness and accordingly submits it herewith as an attachment.

PROBLEM ROOT CAUSE
ASSESSMENT OF
PEACH BOTTOM SHUTDOWN

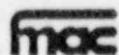
Prepared For

Philadelphia Electric Company
2301 Market Street
Philadelphia, PA 19101

June 17, 1987

Management Analysis Company
12671 High Bluff Drive
San Diego, CA 92130
(619) 481-3100

Project Number: MAC-87-1247
P.O. Number GN 271338



Copy No. 21

EXECUTIVE SUMMARY

Philadelphia Electric Company (PECo) is licensed by the U.S. Nuclear Regulatory Commission (NRC) to operate two nuclear power reactors (Units 2 and 3) at the Peach Bottom Atomic Power Station (Peach Bottom) located near Delta, Pennsylvania. On March 31, 1987 the NRC issued an order suspending power operation relating to issues of operator sleeping, inattention to duties, failure to adhere to procedures, and management inaction or inadequate action. The NRC directed PECo to bring Peach Bottom Unit 3 to a cold shutdown condition. Unit 2 was already shut down for refueling. Neither unit may be restarted without NRC approval until the issues of the shutdown order have been addressed.

On March 31, 1987, PECo requested the assistance of Management Analysis Company (MAC) in addressing the shutdown order issued by the NRC. MAC met with PECo management during the afternoon of April 1, 1987. MAC was asked to assist an in-house Management Review Team and was tasked with conducting a root cause analysis of the situation which led to the shutdown order.

This report to PECo presents the results of the analysis of the information obtained from interviews, observations and documents reviewed by the MAC team. The root causes identified, conclusions reached, and recommendations made represent the collective judgment of the experienced team members assigned to the project; they are solely the work of MAC.

Because the scope of the task is to identify problem areas, the report does not address the positive areas with respect to Peach Bottom operations for which PECo can be justifiably proud. The root causes and recommendations discussed in the report should be read with an understanding of this context.

There are four primary root causes identified as the major contributors to issues and events at Peach Bottom which led to the shutdown order. They are:

- Poor leadership by management at Peach Bottom.
- Failure to initiate an aggressive operator training program to provide a sufficient number of licensed operators in a timely manner.

- A transplanted PECO fossil station organization, concept of shift operation, shift structure, and the PECO fossil way of doing business. Peach Bottom management did not perceive the need, or take sufficient action, to adapt these to the current nuclear operating environment.
- The slowness of corporate management, above the plant level, to recognize the severity of the root causes described above and to insist on stronger, more timely and appropriate corrective actions.

These root causes, which have a combined and interrelated effect, are embedded in and nurtured by the traditional PECO culture. Some of the same cultural characteristics which produced operational excellence in the early years at Peach Bottom became contributing influences to the primary root causes, resulting in its shutdown. Examples of the ways in which these cultural characteristics produced both positive and negative effects include:

- Entry level hiring practices which produced loyal, dedicated, well trained employees during the first five years of operation have also contributed to a shortage of licensed operators, minimal shift staffing flexibility, inability to use operations experienced people in other functional areas, and resulted in operators who feel trapped, distrustful, and have negative attitudes.
- An orientation toward hiring and promoting engineers, which produced a highly professional and technical staff for entry into the nuclear power business, also contributed to a reduced awareness of people performance problems and people management solutions.
- Long-term management and staff assignments that created a protective "insulating bubble" around the team during start-up and early years of operation subsequently created an "isolating bubble" around the operations team which obscured from upper management's view the negative influence of fossil/hydro operating practices, poor plant management performance, and provided a shield resistant to regulatory change.
- Personnel policies and practices, which had been carefully constructed over the last half century and which have produced a satisfactory relationship with the PECO Employee Independent Group Association (IGA) and a stable personnel resource environment, contributed to resistance to rapidly changing nuclear operations personnel requirements.
- PECO's pride in pioneering and achievement in nuclear operations produced leadership in the nuclear utility industry and regulatory technical standards development. Later that pride also contributed to protectionism and defensiveness to criticism of their more recent performance and to questioning of the changes to regulatory standards.

Limerick is a newer operation still in its start-up phase, a condition similar to Peach Bottom's "insulating bubble" of the early years. It has had some of the advantages inherent in start-up organizations over steady-state organizations (e.g., more resources supplied, more flexibility with respect to policy implementation) as well as the benefit of an effective plant management team. Over time, however, there is the potential for some of the same Peach Bottom attitudinal problems to develop at Limerick if management does not take an aggressive stance in recognizing the need for substantive change in its management philosophy and approach to nuclear operations.

There are many appropriate and effective short-term actions which PECO should take to address the problems cited by the NRC and get Peach Bottom back on line. However, to ensure that problems do not recur at Peach Bottom and to prevent their occurrence in the future at Limerick, there is a need for in-depth, long-term changes. The recommendations in this report are a combination of short- and long-term actions to produce these changes. Successful implementation is dependent upon:

- Increased management awareness of the root cause influences
- Management's willingness, ability, and leadership to change root cause influence where possible or to address the negative impacts when the influence cannot be changed
- Management's application of resources to correct the current acute problems

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1.0 INTRODUCTION

Philadelphia Electric Company (PECo) is licensed by the U.S. Nuclear Regulatory Commission (NRC) to operate two nuclear power reactors (Units 2 and 3) at the Peach Bottom Atomic Power Station (Peach Bottom) located near Delta, Pennsylvania. On March 31, 1987 the NRC issued an order suspending power operation relating to issues of operator sleeping, inattention to duties, failure to adhere to procedures, and management inaction or inadequate action. The NRC directed PECo to bring Peach Bottom to a cold shutdown condition. Unit 2 was already shut down for refueling. Unit 3 was brought to cold shutdown at 12:10 a.m. on April 1, 1987 under the terms of the NRC order. Neither unit may be restarted without NRC approval until the issues of the shutdown order have been addressed.

On March 31, 1987, PECo requested the assistance of Management Analysis Company (MAC) in addressing the shutdown order issued by the NRC. MAC met with PECo management during the afternoon of April 1, 1987. MAC was asked to assist an In-house Management Review Team and was tasked with conducting a root cause analysis of the situation which led to the shutdown order.

In addition to document review and observations, the MAC information gathering process included two to three hour interviews with those persons knowledgeable of the operation and management of Peach Bottom as listed in Appendix A.

Six sets of interview questions were developed to address the information focus of the various groups. Without exception the interviewees were cooperative and responsive, and contributed positively to assist in the determination of the root causes.

The interviews included the following:

- The General Electric (GE) shift engineers and current and former PECo shift technical advisors (STAs) assigned to Peach Bottom rotating shifts (21 interviews)
- Shift licensed operators from Shift Superintendents through Reactor Operators and a few non-licensed operators (44 interviews)

- Nuclear Operations and key support organization management at Peach Bottom (46 interviews)
- Corporate management from the Chief Executive Officer (CEO) through the operations management chain including key support managers and personnel in other areas such as Engineering and Research, Testing and Laboratories, Maintenance, and Personnel (29 interviews)
- A sampling of the Limerick Generating Station (Limerick) organization including the Plant Manager, shift operators, and selected support managers (9 interviews)

This report to management⁽¹⁾ presents the results of the analysis of the information obtained from interviews, observations and documents reviewed by the MAC team. The root causes identified, conclusions reached, and recommendations made represent the collective judgment of the experienced team members assigned to the project.

2.0 BACKGROUND

PECo has had a long-standing commitment to entry level hiring and employment security for its personnel as they progress through various job classifications. Many technical job classifications require engineering degrees and the vast majority of company managers have an engineering background. Management succession practices emphasize engineering and technical ability; long-term assignments in a position, or series of similar positions, are not uncommon.

The company uses a matrix management approach to nuclear operations and maintenance which involves three different organizations in work performance at its nuclear plants: Engineering and Research, Nuclear Operations and Electric Production (Maintenance).

The nuclear generation organizational structure and management assignments did not change substantially until late 1985 through 1986. The factors influencing these changes were:

(1) Management, as used in this report, designates the management hierarchy as a whole as it relates to the direction and operation of Peach Bottom. Where possible and appropriate, every attempt has been made to identify specific departments and levels for clarity in the text. Recent structural reorganizations must be taken into account for full understanding.

- Limerick Generating Station Unit 1 commercial operation in February 1986
- Apparent concern and response to INPO reviews and NRC SALP reports on Peach Bottom
- Attempts at improved matrix management efficiency at Peach Bottom

In late 1986 upon the early retirement of the Vice President, Electric Production Department, PECO made several significant organizational and management changes. The position of Senior Vice President, Engineering and Production was established with the Vice President, Nuclear Operations, Vice President, Engineering and Research, and Vice President, Electric Production reporting to the Senior Vice President. This reorganization provided an enhanced opportunity for matrix coordination and located responsibility for Peach Bottom and Limerick operations, maintenance, and engineering under one corporate officer. Minimal changes in management personnel were made during this period at the Peach Bottom plant level.

3.0 ROOT CAUSE DETERMINATIONS

Although the root causes of the problems have a combined and interrelated effect, discussed under "Conclusions" Section 4.0, we have found it beneficial in understanding the problems to group them into four categories. The problem statements and amplifying text are presented in the following areas:

- Cultural and additional influences
- Leadership and management issues
- Personnel policies and practices
- External relationships

3.1 CULTURAL AND ATTITUDINAL INFLUENCES

Overview and History

Organizational culture/environment is not an easily describable element, but it is a very powerful determinant of employee actions and management/employee relationships. It is the unique blend of values, beliefs, attitudes, norms, practices, myths, history, self image, etc., that becomes "the way things are

done at PECO." It creates meaning and reference points for organization members. It is also what most differentiates an organization from other organizations.

PECO has developed a closely knit, almost completely homegrown, technically oriented culture. The vast majority of its members are hired at entry levels, and the company makes a strong commitment to employment security. Generally, only engineers progress up the management chain and in the nuclear areas, there appears to be greater emphasis placed on technical management than on people management skills. Management succession practices and long-term management assignments in the same or successive positions result in a self-perpetuating management system.

The positive effects of this culture include:

- Loyal and dedicated employees
- Management and employees who are very knowledgeable about PECO history and the company's way of doing business
- An informal network that does at times work very effectively and efficiently because personal work histories and relationships encourage accessibility among PECO management and personnel
- Pride in company history and performance
- Comparatively low employee turnover

The negative effects of the PECO culture, as they have been identified with respect to Peach Bottom operations, include:

- A lack of new managerial perspectives from outside the PECO and additionally at Peach Bottom, a lack of new perspectives from inside the company
- Limited number of management role models to expand PECO's management effectiveness, especially in Nuclear Operations
- Minimal infusion of professionals with nuclear industry experience into the technical and managerial ranks, resulting in a limited exposure to the critical differences between the established Peach Bottom way of doing business and the constantly evolving requirements of the nuclear business
- A tendency on the part of Nuclear Operations personnel to rest on laurels of past technical accomplishments and competencies and to resist change

- Management which focuses on technical problem solving without sufficient attention or skill applied to organizational and people concerns
- A lack of performance motivation on the part of some employees and an erosion of management control over disciplinary actions because of the widespread perception in Nuclear Operations that no one is ever effectively disciplined or fired at Peach Bottom
- Employees with very long memories about past management practices and personnel concerns who find it difficult to focus on "the way things are now" rather than "the way things were then"

There is a powerful Peach Bottom sub-culture in Nuclear Operations. It has its roots in the operation of Unit 1 under early regulatory conditions that were less prescriptive than today's requirements. Judged by the standards of the time, the early years of Units 2 and 3 operation were regarded as models of professional nuclear operational performance.

Increased post-Three Mile Island (TMI) operator staffing requirements and the resultant scarcity of licensed operators over the past few years have been a negative contributing factor to the Peach Bottom operations sub-culture.

During this period of increasing licensed operator staffing requirements of Units 2 and 3 and, especially, while staffing for the start-up of Limerick, a negative aspect of this sub-culture developed when PECO management made what were considered by the operators to be promises about transfer and career opportunities. When management was unable to carry out these arrangements, Peach Bottom Operations personnel began to resent and distrust both corporate and plant management. Insensitive statements about plant management's lack of intention to follow through on perceived commitments to employees, and a lack of timely responsiveness to employee concerns, contributed further to the growing hostility toward management. The fact that management is unable to reduce demand on a short-term basis has given operators a coercive leverage in their dealings with management. The limited licensed operator staff has contributed to operator perceptions of frustration about their future career options at Peach Bottom and to perceptions of lack of management control.

Manifestations of attitudes have impacted negatively on Peach Bottom operations and extend well beyond selected operator personnel to include personnel at many levels throughout the Peach Bottom organization.

During our interviews and observations, we identified many symptoms of attitudinal problems. The predominant attitudes identified throughout the Peach Bottom organization include: complacency, over-confidence, arrogance, disrespect, resistance and indifference to regulation, isolationism, and an us-versus-them mentality. These attitudes include those previously expressed as concerns of the NRC in the shutdown order, meetings, and letters to PECO.

Effective resolution of these and additional attitudinal concerns that may be identified is one of the most difficult and important tasks facing PECO. Comprehensive attitudinal change of all involved personnel, including management, can provide the motivation for sustained behavioral changes which will lead to improved nuclear operations at Peach Bottom.

3.2 LEADERSHIP AND MANAGEMENT ISSUES

PECO leadership and management issues cannot easily be separated from cultural and attitudinal concerns since they are so highly interdependent (i.e., management is usually a product of the organizational culture as well as the major influence on the culture). However, this section identifies specific leadership and management practices which have contributed to the events leading to the NRC shutdown.

Electric Production Department (EPD) management had not adequately monitored management performance at Peach Bottom or taken timely action in the past to address ineffective management performance by making personnel changes, regularly assessing management performance and development needs, and ensuring that such needs were met in an appropriate and timely manner.

Less than optimal performance by Peach Bottom plant management has been reported in the past by both regulatory and industry observers. There has been recognition by PECO management and non-management personnel of declining plant performance at all levels. Although Electric Production Department level organizational and management changes were recently initiated to improve the

control of nuclear operations and to address Peach Bottom management problems, they did not result in sufficient managerial and attitudinal improvements at Peach Bottom to prevent the incidents which led to the shutdown of operations.

Some Peach Bottom managers reported a lack of confidence in their own management skills in areas other than technical management. Many in the plant organization complained about the lack of people management skills demonstrated by most plant management personnel. Many Peach Bottom managers stated they have not had regular face-to-face performance appraisals which would help to address these skill development needs during their tenure with the company. With the exception of a few individual managers, it appears that almost all managerial levels in the Nuclear Operations chain have not conducted or received regular performance reviews focused on assessing and developing their managerial abilities. Coaching and feedback about performance have been mainly technical in content and is reported to be infrequent and a highly informal process.

No evidence was found at Peach Bottom to indicate that any regular formalized system exists to survey or analyze management development needs and to ensure that all management personnel participate, on a timely basis, in training programs to address those needs. Whereas other departments within PECO appear to take more advantage through the Central Training Committee of available company management training programs, Nuclear Operations and Peach Bottom managers are likely to defer such training because of the time required for licensing, requalification, technical training, and the impact of personnel shortages and critical operational events on their workload.

The Nuclear Operations/EPD and Peach Bottom management process used in developing and implementing plant performance and improvement programs, such as the Peach Bottom Enhancement Program (PBEP) and the upgrading of procedures, have not ensured:

- sufficient attention to analysis of root causes and development of programs which will prevent recurrence of the symptomatic problems .

- adequate involvement of all levels of line management in analyzing, developing, integrating, coordinating and monitoring program implementation.
- effective communication of the rationale and purposes of such programs to ensure employee understanding and commitment to successful outcomes.

Many of the Peach Bottom employees interviewed were not aware of the PBEP and could not describe its purposes or explain its origin. Those who were aware of it described it as the product of one individual and its content as some kind of beautification or clean-up effort. From these observations, we conclude that Nuclear Operations and Peach Bottom management have not done an adequate job of involving employees in the program or communicating the program goals to the employees.

The procedures upgrade effort, which focuses on a one time improvement of the content of specific procedures, will not have a lasting corrective effect on procedural problems unless more attention is paid to the root cause of the problem itself. The Peach Bottom administrative management systems are not sufficient to ensure accuracy, comprehensiveness, timely review, and updating of procedures on an ongoing basis by those responsible for executing the procedure.

There has been a lack of understanding and clarity about delegated authority and accountability for plant operations at different levels of the Nuclear Operations management chain down to the Shift Superintendent.

In the past, management authority roles have often been blurred by EPD and Peach Bottom management. Operational decisions regarding equipment repair, day-to-day work priorities, etc., have often been made by EPD management. Peach Bottom personnel reported that they were unable to get firm decisions from plant management on day-to-day work until approved by EPD management. Past requests for resources by Peach Bottom management appear to have been denied by EPD management without adequate rationale. Examples were given of Expense Authorizations (EAs) making multiple round trips between Peach Bottom and Philadelphia offices with increasing justification required, and then being denied without an explanation. Senior Peach Bottom management has also used the ambiguity to deny their accountability for certain operational and personnel decisions telling lower levels of plant management/supervision that

"23rd Street" made or must make the decision. Most interviewees acknowledged that the new Nuclear Operations organization has improved this situation by being less involved in such day-to-day decisions.

Key decisions about responses to regulatory and industry reports have continued to be made by Nuclear Operations and other department management without adequate Peach Bottom plant management involvement or concurrence. Commitments are made, and plant management is then expected to carry them out, often without sufficient consideration of the impact on plant resources or other work priorities.

Nuclear Operations/EPD and Peach Bottom management have not used effective two-way communication processes to keep employees informed or to obtain and respond in a timely manner to employee input about organizational and operational concerns.

Although formal written substantiation is often required in the nuclear power industry, plant management appears to have relied heavily on written communications, such as memos and notes, with subordinates. Examples of such memos reviewed were perfunctory, failed to cover important points or provide helpful rationale, and were ineffective as a means of communications to implement substantive organizational and policy changes.

Operations shift personnel reported that when Nuclear Operations or Peach Bottom management attended shift meetings it was usually to read a letter from upper management or give a pro forma pep talk, without much attempt at genuine interaction or interest in employee response. Nuclear Operations and senior Peach Bottom management rarely attend back shift meetings.

Peach Bottom plant management has not maintained control over organizational performance by communicating performance standards and providing adequate performance feedback to employees.

Following the management performance evaluation precedent established in Nuclear Operations, Peach Bottom management/supervision also has not effectively implemented PECO's performance evaluation program by conducting

regular face-to-face performance reviews with employees and communicating performance expectations directly and explicitly. Many Peach Bottom personnel knew that reviews were done on an annual basis, but they had never seen one of their reviews or received performance feedback in any formal manner from their supervisor. Some did not know if performance evaluations had been completed. A few could recall only one or two performance review meetings during their 5- to 10-year histories with the company. These meetings appear to have been conducted by the same shift superintendent.

In day-to-day performance feedback, plant management did not respond in an appropriate and timely manner to serious breakdowns in respect for management authority on the part of many Operations personnel. This disrespect was demonstrated by operator personnel who refused to allow authorized personnel with legitimate business into the control room, and failed to follow appropriate operational orders from their supervisors.

There is a serious lack of adequate first line supervision for Peach Bottom personnel which results in problems with work control and a lack of direction and monitoring of employee job performance.

There are not enough supervisory positions designated for adequate span of control in some areas at Peach Bottom, particularly in the Health Physics area. Other supervisory positions in Operations are not fully staffed (e.g., Outside Supervisor), or are being held in abeyance pending determination of job classification (e.g., Floor Coordinator).

In addition to not having sufficient numbers of supervisory positions in some areas, there is an overall concern about the supervisory skills of first line supervision. At Peach Bottom inadequate attention has been paid to establishing supervisory skills qualifications. Peach Bottom managers have not used performance evaluations or temporary assignments effectively to assess the supervisory capabilities of personnel in the upgraded position. Promotions to Operations shift supervisory positions are based almost exclusively on candidates' seniority status and technical ability. There is no evidence of a systematic

approach to early assessment of supervisory potential or provision of pre-supervisory training to identified candidates prior to their being moved to upgraded positions.

Personnel are scheduled to participate in the company supervisory training program after being placed in upgraded or supervisory positions. However, nuclear supervisors interviewed stated that work demands have frequently prohibited their timely participation in this core training program. Training records confirmed that the backlog for management and supervisory training is larger for Nuclear Operations than for other departments.

Another factor contributing to the supervisory problems at Peach Bottom is that current personnel practices act as disincentives to pursuing the licensed operator progression to the supervisor level. Employees are concerned that there is no alternative to shift work throughout their careers as licensed operators; there are no lateral transfer opportunities and few promotional opportunities; and there is less nuclear differential pay for supervisors because differential compensation is computed on the basis of percentage of fixed monthly salary rather than on the basis of percentage of actual hours worked, as in the case of non-exempt personnel.

The Quality Assurance/Quality Control (QA/QC) Program, which is managed by separate organizational groups at Peach Bottom, has not been fully integrated into the plant operations and does not address personnel performance parameters.

The role of quality assurance in day-to-day operations was examined within the context of the statement in the NRC order which said, "The Peach Bottom quality assurance program has failed to identify this condition which is adverse to safety." Management systems have not adequately incorporated the quality program into plant operations so that it would be in a position to assist in identifying and resolving problems.

Nuclear Operations management has not assured that an appropriate level of operations expertise has been established in the QA/QC organization or fully supported this separate QA function as a credible entity in the control room.

Surveillance and monitoring are used by QA at Peach Bottom, but the implementors do not appear to be sufficiently experienced or trained in various nuclear operations functions to use surveillance effectively as one of the tools for assuring quality operations. The function's integration into plant operations has been improving but QA/QC personnel are still not fully accepted as a part of the team, particularly by Operations which tolerates QA/QC because it was mandated to do so. The plant started operation when QA/QC was almost nonexistent as a separate function designed to provide additional assurance of a quality operation. It was therefore considered an unnecessary intrusion into the Operations routine. QA, from the operators perspective, was already being provided by technically competent operators and supervisors.

With the two separate charters now in existence, gaps and overlaps in responsibilities are a potential problem. Several examples of overlap were stated.

Adequate management systems are not in place to ensure accuracy, comprehensiveness, timely review and updating of administrative and work procedures.

At the Peach Bottom plant, many concerns were expressed regarding accuracy and updating of procedures. These problems were quoted as a major reason or excuse for inadequate support of procedural compliance historically. Although there have been improvements in the content of some work procedure areas and in the temporary procedure change process, there still are not adequate mechanisms in place to integrate and control temporary procedure changes into the permanent procedure program. There are no administrative controls on the life of a temporary change. They do not expire if not made into a permanent change.

Approximately 15 percent of all procedures are on a centralized computer, but most appear to be manually typewritten for changes and rewrites. The periodic review requirement for Peach Bottom procedures is five years, compared to a nominal industry norm of two years. No systematic method of flagging needed procedure changes was found. There also appears to be no requirement to

annotate or track prior commitments incorporated into a procedure during subsequent updates or changes.

The matrix management structure does work within PECO, but it has not been working well at Peach Bottom. Many Peach Bottom employees and management personnel appear to use the matrix system as an excuse for lack of performance.

The project-type team, necessary for effectiveness in a matrix system, has not been developed at Peach Bottom where the matrixed functions appear to work to their own priorities instead of the team's, and relationships are frequently adversarial between Operations and some of the support groups. A Limerick site team led by the plant manager at Limerick has been much more successful in implementing the same structure under similar conditions.

The matrix can be an effective arrangement when similar functional activities are performed at several sites. It provides flexibility and efficient use of resources, but requires careful management of the workplace, effective teamwork and definition of interface responsibilities. Several years ago PECO EPD produced a comprehensive set of vice presidential policy documents. This set of 50 plus documents was intended to establish a single way of doing business for all of EPD (including Peach Bottom and Limerick) and defined EPD's interface responsibilities with other PECO organizations. The documents were distributed for limited trial use, but there did not appear to be a concerted effort to monitor their effectiveness and formalization for permanent use. The procedures were distributed for wider use prior to the last corporate evaluation. Thirty-three of approximately fifty-eight titles were issued for official use between April and October 1986. Seventeen are still in the trial use category, and five are in the deferred category, leaving over one-third of the organizational policy areas still not formalized and thus, open to individual interpretations.

3.3 PERSONNEL POLICIES: NUCLEAR OPERATIONS APPLICATION AND IMPLEMENTATION

The application of some personnel policies in Nuclear Operations and the implementation of personnel policies by Nuclear Operations and Peach Bottom management have had negative impacts on Peach Bottom operations, in terms of:

- limiting the available supply of licensed operator and other technical resources.
- restricting the effective utilization of Nuclear Operations personnel.
- imposing perceived limits to management control over disciplinary concerns.
- reducing line management's involvement with, and responsiveness to, employee personnel concerns.

Past EPD human resource planning practices and strict adherence to the company entry-level hiring policy has contributed to a shortage of licensed operators and shortages of other Nuclear Operations personnel.

All Peach Bottom licensed operators have been hired as entry level helpers and progressed through the non-licensed operator ranks before becoming licensed. A recent exception to this practice was the hiring of 12 Navy nuclear operators who were brought in at a job level above the normal helper entry level in 1986. The progression from entry level helper to the point where an individual can begin licensed training takes approximately five years. As a result of the long pipeline for licensed operators/senior licensed operators development, individual personnel actions (transfers, resignations, and retirements) over the last ten years, and increases in licensed staff requirements, there are insufficient licensed operators to fully staff a six-shift rotation in all positions and simultaneously to provide necessary licensed operator support for other shift activities such as processing permits and Maintenance Request Forms (MRFs). This shortfall in shift coverage has resulted in significant amounts of overtime being worked by licensed operators, including unexpected overtime when the relieving shift operator does not show up. Many reactor operators (ROs) expressed concern about the impact of the unplanned overtime on their personal lives and acknowledged that this overtime work requirement contributed to their negative attitudes. Although the overtime worked appears to be within prescribed safety limits, some ROs stated that the amount of overtime worked at

some points in the past had a negative impact on their ability to sustain high performance levels.

Without full six-shift coverage, there has been minimal monitoring and follow-up for the on-the-job-training qualification process for trainees following their completion of the classroom training phase.

The limited pipeline of licensed operators has also resulted in licensed operators not being allowed to bid out to other jobs. Except under extenuating circumstances, no lateral transfers have been permitted for licensed personnel into Training, Outage Planning, QA, and other functional areas in which operations-experienced personnel are needed. This situation has demotivating impacts on both licensed and non-licensed personnel.

The entry level hiring policy and the base level staffing philosophy of PECO have resulted in other shortages of Nuclear Operations personnel, in addition to licensed operators. Many Peach Bottom supervisory personnel interviewed commented on the need to use outside contractors to meet the increased base workload demands.

Job qualification requirements and the lack of alternative career paths have severely restricted the most effective utilization of Peach Bottom operations personnel. In some instances, they have served as disincentives to pursuing the licensed operator career progression.

Job qualification criteria are not always well matched to job performance requirements, particularly with respect to the requirement that all candidates for employment or promotion in certain job classifications must hold an engineering degree. This prevents operations-experienced personnel without engineering degrees from moving into some positions in operations supervision/management, outage planning, maintenance/construction coordination, ALARA, and other areas where nuclear operations experience and perspectives are needed.

Nuclear Operations practices and Independent Group Association (IGA) resistance have thus far also prevented utilizing licensed engineers on shift in a line role as

supervisors or superintendents. The PECO fossil/hydro philosophy that operators operate and engineer's engineer has created this invisible wall which has restricted the flexibility of using engineers on shift and further restricted opportunities for operators to move into management/individual contributor roles.

The lack of alternative career paths for operator personnel has also resulted in "frozen" senior plant operators (i.e., those who have not passed the licensing exam or have chosen not to pursue licensing qualification). These frozen senior plant operators occupy a large number of plant operator (PO) positions. This makes it difficult for newly qualified POs to become fully experienced in the PO position since they work as an assistant plant operator (APO) except on a daily upgrade basis until a permanent position becomes available. PO qualified APOs therefore can progress to RO positions without the benefit of comprehensive floor operations experience to help them function more effectively in the control room.

Peach Bottom management has not assumed accountability and adequate decision making authority to resolve disciplinary problems and employee concerns. The lack of clearly defined management guidelines with respect to implementation of disciplinary guidelines and the grievance process contribute to this problem.

There is a widespread perception among Peach Bottom management and supervisory personnel that they are powerless to take prompt and appropriate disciplinary action in cases where it is warranted. This perception is based on a number of factors:

- Generalizations have been made by Peach Bottom management about the lack of support for management disciplinary actions by the Personnel and Industrial Relations Department based on exceptional incidents in the past.
- There is a lack of written guidelines for management about how to implement disciplinary policy effectively.
- Fewer nuclear supervisors than other department supervisors have participated in management training programs where these issues are addressed.
- Current applications of the PECO's disciplinary guidelines do not consistently support professional nuclear performance standards (e.g., ignoring the proper directives of a supervisor is defined as a serious infraction, but first-time

occurrence is disciplined by a written reprimand as opposed to a more severe action; refusing to obey a proper directive in a nuclear control room is viewed as a very serious performance issue within the nuclear industry).

- The company's discipline process is not well defined in You and Your Company and is often a very time consuming process extending over months; yet the company's policy is to hold suspensions in abeyance when employees appeal the suspension. (Although there has only been one such case involving Peach Bottom, it is common for management to generalize about the lack of support for discipline from singular incidents.)

Another contributing factor to disciplinary concerns at Peach Bottom is that management has not applied the work rules and disciplinary guidelines in a consistent, equitable manner. Examples from interviews included not disciplining non-compliance with procedures, differences in disciplinary actions related to misuse of the company's sick day policy, inconsistency in applying overtime work rules, and contradictions in management memos attempting to clarify work rules.

The employee complaint (pre-grievance) process is worked informally (i.e., no written documentation required) up through three successive supervisory levels to the employing officer (plant manager). The lack of documentation makes it more difficult to hold managers accountable for the proper execution of their responsibilities in this regard. If an employee still does not feel that the complaint has been adequately addressed by the employing officer, he or she can file a grievance through the IGA with the Vice President, Personnel and Industrial Relations.

The Vice President, Personnel and Industrial Relations forwards a copy of the grievance to the vice president of the involved department who then investigates the grievance and gives input back to the Vice President, Personnel and Industrial Relations. The Vice President, Personnel and Industrial Relations then prepares a response to the grievance, discusses the response with the involved department (usually with the vice president) and, when agreement is reached, sends the grievance response to the President of the IGA. This process relies heavily on communications at the vice president level and does not appear to adequately involve line managers at the plant level when the grievance involves supervisory actions or inactions.

Peach Bottom management tends to rely too heavily on the IGA to identify and resolve employee concerns. This has resulted in a lack of management involvement in and responsiveness to personnel matters.

The process used by the IGA in soliciting and reporting employee input with respect to personnel concerns is impressive. Peach Bottom management has neglected some of its responsibilities for developing and improving employee relations by not playing a more proactive role in this area. Minimal management involvement and responsiveness in identifying and addressing personnel matters contributes significantly to the perception of many Peach Bottom employees that management does not care about their concerns or recommendations.

It has been widely recognized throughout the industry that company personnel policies must sometimes be adapted to meet nuclear safety and regulatory requirements. At Peach Bottom there is no nuclear personnel specialist reporting to the plant manager to assist with interpretations and application of current personnel policies or to represent the special needs of Nuclear Operations to corporate personnel management when policy changes or exceptions are required.

3.4 EXTERNAL RELATIONSHIPS

Repetitive patterns of performance findings since 1981 demonstrate poor performance by management at all levels with respect to adequate root cause analysis and effective corrective actions.

A review of PECO relations with the NRC and other external reviewing organizations over the past several years provides extensive insight into the significance of the growing problems at Peach Bottom. This review indicates that management at all levels was not aware of or did not sufficiently understand how the post-TMI regulatory environment and changing industry standards were affecting Peach Bottom personnel performance. PECO's formal responses to regulatory and industry assessments were not effective in solving long-standing personnel performance problems. Since 1981, NRC/INPO reviews have identified significant findings of a repetitive nature in the following areas:

- ten findings regarding lack of procedure adherence.
- four findings in Radiological Control.
- three findings in Emergency Preparedness.

Since 1983, NRC enforcement actions have been increasingly severe since 1983. Although there were some recent positive indications, deficiencies continued to be identified in NRC and INPO findings. The misperception of the severity of NRC concerns in correspondence and in meetings over the past year, along with the continued display of defensiveness in responses to NRC and INPO findings at Peach Bottom, have contributed to diminished credibility with the regulatory and industry reviewers.

Electric Production management has not ensured adequate involvement of all levels of the organization in developing and carrying out commitments.

Interviews at the corporate and site levels indicate that in some cases appropriate line and staff members are not involved in problem analysis and development of corrective action responses. In other cases, when they are asked to provide input it is not always utilized in the company's response, and the reason for deleting the input is not communicated back to the authors. In either case, Peach Bottom management and other key personnel feel less ownership and responsibility to implement commitments made to regulators. This has also impeded the effectiveness of corrective action programs.

The total and cumulative resource requirements have not been adequately considered when the company commits to new programs and other corrective actions.

The management philosophy often appears to be that the existing resources should just work harder to accomplish corrective action programs, no matter how comprehensive they are. Until the recent establishment of the Quality Assurance Tracking and Trending System (QATTS), there was no single corporate-wide source for commitment listing and tracking, which made it difficult for any management level to understand the full impact of cumulative commitments involved. QATTS is not yet widely implemented or resource loaded

and thus does not yet provide the required management control in this important area. This has caused frustration for all organizations involved in tracking and implementing commitments.

Nuclear Operations and Peach Bottom management were not effective in addressing the increasingly negative attitude of the plant staff toward the changing regulatory environment and the impact of this attitude on Peach Bottom relationships with the NRC, INPO and ANI.

Most senior operations-experienced employees have been working at Peach Bottom since before the TMI-2 accident and have, for the most part, maintained a negative attitude toward post-TMI regulatory requirements and clarifications. There was apparent disregard for NRC Circular 81-02 dated February 9, 1981, which reinforced NRC's position regarding the meaning of 10CFR50.54(k) as it relates to licensed operator conduct in the control room. This was re-emphasized to the Peach Bottom licensed operators on June 20, 1985 in a letter from the Peach Bottom plant manager after the June 10, 1985 incident regarding an inattentive operator. However, this management by memo effort appears to have had little or no effect on operator attitudes regarding control room behavior. Some operators have the wrong opinion that they are there to back up the safety systems. Sitting back in the chair with their feet up in an apparent inattentive mode, therefore, was not considered to be wrong because the plant was on automatic.

4.0 CONCLUSIONS

There are four primary root causes identified as the major contributors to issues and events at Peach Bottom which led to the shutdown order. They are:

- Poor leadership by management at Peach Bottom.
- Failure to initiate an aggressive operator training program to provide a sufficient number of licensed operators in a timely manner.
- A transplanted PECO fossil station organization, concept of shift operation, shift structure, and the PECO fossil way of doing business. Peach Bottom management did not perceive the need, or take sufficient action, to adapt these to the current nuclear operating environment.

- The slowness of corporate management, above the Peach Bottom plant level, to recognize the severity of the root causes described above and to insist on stronger, more timely and appropriate corrective actions.

Indicators of poor leadership at Peach Bottom and the slowness of department management's response include:

- Ineffective implementation of the Company's performance evaluation program, with most Peach Bottom and Nuclear Operations managers not conducting face-to-face annual reviews
- Improvement programs which addressed symptoms rather than root causes did not involve appropriate line management levels, and were not communicated effectively to ensure employee commitment to success
- Poor understanding by Peach Bottom management of their authority and accountability
- Poor two-way communication between Nuclear Operations/Peach Bottom management and employees
- Poor first-line supervision training and inadequate numbers for proper span of control
- QA/QC programs not fully integrated into operations
- Inadequate management systems for proper procedure update and control
- Ineffective implementation of matrix management teamwork
- Inconsistent implementation of disciplinary policy
- Management over-reliance on the IGA to respond to employee concerns

Resolution of these problems depends upon:

- Increased management awareness of the root cause influences
- Management's willingness, ability, and leadership to change root cause influence where possible, or to address the negative impacts when the influence cannot be changed
- Management's application of resources to correct the current acute problems

These root causes, which have a combined and interrelated effect, are embedded in and nurtured by the traditional PECO culture. Some of the same cultural characteristics which produced operational excellence in the early years at Peach Bottom became contributing influences to the primary root causes,

resulting in its shutdown. Examples of the ways in which these cultural characteristics produced both positive and negative effects include:

- Entry level hiring practices which produced loyal, dedicated, well trained employees during the first five years of operation have also contributed to a shortage of licensed operators, minimal shift staffing flexibility, inability to use operations experienced people in other functional areas, and resulted in operators who feel trapped, distrustful, and have negative attitudes.
- An orientation toward hiring and promoting engineers, which produced a highly professional and technical staff for entry into the nuclear power business, also contributed to a reduced awareness of people performance problems and people management solutions.
- Long-term management and staff assignments that created a protective "insulating bubble" around the team during start-up and early years of operation subsequently created an "isolating bubble" around the operations team which obscured from upper management's view the negative influence of fossil/hydro operating practices, poor plant management performance, and provided a shield resistant to regulatory change.
- Personnel policies and practices, which had been carefully constructed over the last half century, and which have produced a satisfactory relationship with the PECO Employee Independent Group Association (IGA) and a stable personnel resource environment, contributed to resistance to rapidly changing nuclear operations personnel requirements.
- PECO's pride in pioneering and achievement in nuclear operations produced leadership in the nuclear utility industry and regulatory technical standards development. Later that pride also contributed to protectionism and defensiveness to criticism of their more recent performance and to questioning of the changes to regulatory standards.

Limerick is a newer plant still in its early operation phase, a condition similar to Peach Bottom's "insulating bubble" of the early years. It has had some of the advantages inherent in start-up organizations over steady-state organizations (e.g., more resources supplied, more flexibility with respect to policy implementation) as well as the benefit of an effective plant management team. Over time, however, there is the potential for some of the same Peach Bottom attitudinal problems to develop at Limerick if management does not take an aggressive stance in recognizing the need for substantive change in its management philosophy and approach to nuclear operations.

There are many appropriate and effective short-term actions which PECO should take to address the problems cited by the NRC and get Peach Bottom back on line. However, to ensure that problems do not recur at Peach Bottom and to

prevent their occurrence in the future at Limerick, there is a need for in-depth, long-term changes. The recommendations in the following section are a combination of short- and long-term actions to produce these changes.

5.0 RECOMMENDATIONS

The recommendations have been grouped in the same manner as the root causes in the areas of:

- Cultural and attitudinal influences
- Leadership and management issues
- Personnel policies: Nuclear Operations applications and implementation
- External relationships

Additionally, a number of recommendations for the action plan process have been made at the end of this section.

It is important to note that at this time no effort has been made to prioritize the recommendations made in this report. It is expected that in preparing the action plan to respond to the NRC shutdown order, PECO will combine these recommendations with the recommendations of others and develop an integrated priority system to ensure that all recommendations are addressed in a coherent and logical manner. It is not intended, nor is it implied, that all of the recommendations in this report must be completed prior to restarting either unit at Peach Bottom.

The recommendations themselves fall into two general categories. First, those that deal with the acute problems that are the result of the pressure of long-term root causes and require direct action. Second, those that deal with the longer term chronic root cause problems to prevent reoccurrence of problems at Peach Bottom and potential manifestation of these problems at Limerick.

The impact and visibility of the shorter term actions appear to overwhelm the more difficult longer term solutions; however, it is essential that PECO make plans now for accomplishing the more broad based changes in organizational attitudes, leadership and management practices, policy implementation, and

external relationships so that Peach Bottom's recovery efforts are sustained over time.

5.1 CULTURE AND ATTITUDINAL INFLUENCES

Attitudinal change is a difficult undertaking since attitudes are a key element of the complex entity known as "organizational culture." If the attitudinal problem resides in only a small group of individuals, it can be addressed through a strategy of attitudinal assessment, counseling and training of each individual. When attitudinal change is needed on a large scale, as is the case with Peach Bottom nuclear operations, this strategy is not sufficient. The change in Peach Bottom plant management which has resulted in the establishment of a new managerial perspective on site will contribute significantly to a broader scale attitudinal change among Peach Bottom management and employees, at least in the short term. However, to ensure long-term attitudinal change, additional steps must be taken.

Psychological research about attitudinal change in organizations indicates that a disciplinary approach (i.e., management enforcement of new behavior) is not as effective or as quick to produce results as a participatory approach (i.e., providing opportunities for employees to identify work-related problems which have negative influence on their attitudes and to recommend appropriate solutions to those problems).

MAC recommends that PECO implement a broad scale attitudinal change effort with one aspect focused specifically at the Peach Bottom site and another aspect focused on corporate/Peach Bottom site transactions.

1. Complete an organizational survey at Peach Bottom using an accepted instrument which identifies employee attitudinal issues, as well as work productivity and quality concerns, followed up by a well-managed employee involvement program which uses the results of the survey in an organized manner. This should be accomplished work group by work group. An example of this kind of program is the Employee Involvement Program instituted at Rancho Seco by the Sacramento Municipal Utility District.
2. Initiate a team development process from the President down to shift management which involves Nuclear Operations, Engineering and Research, Electric Production, and other corporate organizations which support Peach Bottom. Include in this process:

- Commitment to excellence from the President down to and including each level of management
- Clarification of roles, accountabilities and authorities at each management level with respect to nuclear organizational and plant performance
- Improvement of communication processes both vertically and horizontally within management chains and between corporate line management and employees
- Identification of management processes to be used to ensure integrated planning and implementation of operational goals, including how priorities will be established or changed, and how work-related conflicts will be resolved
- Coaching in how to ask for and give honest, effective management performance feedback
- Resolution of inter-departmental conflicts related to work flow management, lack of responsiveness, or support between work groups

The process could be implemented in a phased manner, starting with senior corporate management, progressing to the corporate/senior plant management level, and then to plant management, with appropriate levels of top and middle management involvement in the process as it cascades down through the organization.

Implementation of these recommendations requires careful planning and facilitation, usually with external assistance, to be effective.

3. Establish a comprehensive operator retraining program to address at least the following areas:
 - The impact of the traditional PECO culture and Peach Bottom sub-culture to ensure that all participants understand and are committed to the attitudinal requirements for safe nuclear plant operation
 - Operator behavior which is consistent with the requirements of 10CFR50.54K
 - Emphasis that the operator's responsibility is to proactively operate the plant and that safety systems are in place to back up the operator
 - Strict adherence to all plant and operational procedures
 - Operator responsiveness to, and positive attitude toward, the levels of detail and attention required for safe, professional control room operations, e.g., exception reporting, systems monitoring, etc.

- Effective communications, teamwork, and ability to manage the interpersonal processes involved in control room operations
- Understanding and acceptance of all of the roles in the safe and efficient operation of a nuclear generating station, e.g., Operations, QA/QC, Health Physics, Maintenance, etc.

5.2 LEADERSHIP AND MANAGEMENT ISSUES

PECO's efforts at broad-scale attitudinal change in Nuclear Operations cannot be successful without careful realignment of management philosophy and practices and organizational structures to support the goals of the change effort. The infusion of new managerial perspectives and nuclear talent into the Nuclear Operations organization will also support this effort.

MAC recommends the following:

1. Replacement of Peach Bottom Plant Manager, Operations Superintendent and Operations Engineer is supported. The impact of the loss of cumulative Peach Bottom-specific experience currently represented in these positions must be taken into account in replacing personnel, making any future organizational changes, and retaining these personnel in contributing staff positions.
2. Assess the adequacy and effectiveness of the current Peach Bottom shift organization, supervision, and staffing with consideration given to:
 - Strengthening management presence on shift by establishing the shift manager concept.
 - Implementing a day shift supervisor concept (general supervisor of operators or operator support).
 - Adding another licensed operator (LO) in the control room.
 - Providing back up relief capability for control room supervision.
 - Redefining the outside shift supervisor responsibilities to strengthen and include direct supervision of outside tasks and relief of the control room shift supervisor.
 - Assigning senior licensed operator (SLO) qualified engineers to selected supervisor/superintendent positions for hands on experience, training for future management positions, and removal of the "wall."
 - Completing the ongoing study of shift rotation at Limerick with involvement and participation of Peach Bottom operators and supervision. Give due consideration of alternatives to current Peach Bottom shift rotation schedules based on this study.

3. Increase direct supervision by ensuring sufficient numbers of supervisory positions to effectively supervise and direct activities. Expeditiously fill vacant supervisory positions where clear need exists.
4. Establish a Nuclear Personnel Specialist position at the nuclear plant site, reporting to the plant manager, with adequate experience to: (1) advise all levels of plant management on personnel policy matters and employee relations; and (2) represent the special needs of Nuclear Operations to corporate personnel management when policy changes or exceptions are required.
5. Reduce one management layer, and strengthen the organizational changes made in establishing the Vice President, Nuclear Operations position by having plant managers report directly. Add strong direct support staff for that position.
6. Establish and/or clarify specific accountabilities and authority levels for each management and supervisory level in Nuclear Operations. This should be done as part of the team development process recommended in Section 5.1, Cultural and Attitudinal Influences. Hold managers and supervisors accountable for appropriate exercise of responsibility and authority.
7. Refine the role and authority of QA/QC, particularly as it relates to surveillance and audits for verification of technical and performance based activities. Take into account current NRC and INPO philosophy in this area. Assure that an appropriate level of expertise (Operations, Instrumentation and Controls, Health Physics, etc.) is available in the QA/QC organization.
 - Consider grouping all Operations, Maintenance and Construction QA/QC functions under one manager reporting to the Senior Vice President, Engineering and Production.
 - Communicate and support the further integration of QA's role throughout the organization.
 - Establish a quality deficiency reporting program which addresses each issue reported to it from any source.
 - Require plant management and shift management to include the QA function as an integral part of all operational work planning, decision-making and problem-solving processes. Hold meetings between QA management and personnel and management and personnel from Operations, Maintenance, H.P., Technical Engineering, I&C, Testing & Laboratories, Chemistry, Construction, Rad Waste Management and other relevant functions to discuss QA's role in their work activities and address any related concerns.
8. Establish an administrative management system for procedures to ensure accuracy, comprehensiveness, timely review and updating of corporate, plant, and operational procedures which includes the following:
 - Complete the implementation process for developing, formalizing and distributing Nuclear Operations Requirements and Guidelines.

- Input all plant procedures into a common automated data base to assure efficiency and accuracy when typing plant procedure changes.
 - Establish a two-year review cycle for department procedures as opposed to the current five-year cycle; provide additional resources as needed to complete such reviews.
 - Establish an automatic expiration date for temporary procedure changes to ensure comprehensive review before the change becomes permanent.
 - Consider alternatives to the use of the full PORC committee for review of all procedural changes in order to decrease the backlog on procedure revisions and allow the PORC to focus on additional matters related to plant operations.
 - Establish a written process for flagging needed procedural changes to management's attention.
 - Ensure more effective use of the references section of procedures to keep track of previous commitments during subsequent procedure updates.
9. Assure that the QATTS system is appropriately resource loaded and integrated into all aspects of nuclear operations so that commitments may be tracked effectively.
10. Develop and implement a comprehensive management/supervisory leadership improvement program for Nuclear Operations including:
- Evaluation of supervisory leadership skills needs at all levels from first line (including "lead" or other defacto supervisor levels) up to management.
 - Development and implementation of training programs to address identified needs with careful attention paid to the skills required at each level of management/supervision in the organization so that the skills targeted for development at each level build on those achieved at previous levels. In scheduling training modules, particular attention should be paid to the most effective means of making the training accessible to all Nuclear Operations supervisory personnel (e.g., offering short training modules on-site at a variety of times).
 - Provision of more supervisory training opportunities for non-supervisory personnel who have been identified as having supervisory potential; emphasize the importance of such training in consideration of candidates for supervisory openings.
 - Additional emphasis on a supervisory/leadership curriculum in the SLO training program. Make supervisory capability evaluation a mandatory element in selecting candidates for training and SLO qualification.

- Emphasis in management training programs on how to coach and support subordinate levels of supervisors, including; identification of their training needs, on-the-job coaching, and assessment of training program effectiveness, by observing behavior on the job following such programs. Institute a process to ensure that training program management receives regular input from plant management at different levels about supervisory training needs and the effectiveness of training programs.
 - Inclusion in training programs of the rationale for personnel policies and how to implement them effectively, especially in areas such as employee performance evaluation and discipline.
 - For upper level management, exposure through seminar format to notable management experts and practitioners and successful nuclear utility managers.
11. Consider establishment of a rotational management assignment process so that key Nuclear Operations and Peach Bottom managerial personnel are exposed to the functional realities of different departments within PECO and thus acquire a broader base of experience and do not become isolated at a plant location for extended periods of time.
 12. Require all levels of Peach Bottom management and supervision to conduct formal face-to-face performance reviews with their direct reports on an annual basis as a minimum. To ensure the effectiveness of these performance reviews, participation in performance appraisal training sessions should be required for all management and supervisory personnel. The Nuclear Personnel Specialist should monitor the quality of written performance reviews, and initiate or recommend necessary actions for improvement as required.

5.3 PERSONNEL POLICIES: NUCLEAR OPERATIONS APPLICATION AND IMPLEMENTATION

PECO has always emphasized company-wide uniformity of personnel policies, which is, basically, a sound management philosophy. The task facing corporate management is to become more aware of the special requirements involved in managing its nuclear business. In some cases, personnel policies will require modifications and/or different applications to address Nuclear Operations needs. Nuclear Operations management must also monitor and ensure more effective implementation of personnel policies by Peach Bottom managers and supervisors.

MAC recommends the following:

1. Initiate an aggressive recruiting program to bring in technically qualified personnel, including licensed operator candidates, at other than entry levels (i.e., at levels appropriate to their qualifications and experience and

- comparable to the levels at which they would be hired in at other nuclear plants).
2. Design and implement required training programs for new licensed operator candidates over the next 12-15 months to supplement available licensed operator resources. Consider vendor training personnel for this purpose if required.
 3. Design and implement an immediate training program to prepare SLO licensed engineers for shift positions.
 4. Consider non-degreed licensed operators for promotion to positions in operations management, outage planning, QA training and other functional areas on the basis of merit.
 5. Establish alternative career paths in the immediate future for senior non-licensed operators so that they can be more fully utilized in positions such as floor coordinator and training instructor.
 6. Conduct a survey to identify those personnel practices, e.g., no way off shift; no lateral transfers; amount of nuclear differential pay, which serve as major disincentives for personnel to pursue the nuclear operator job progression up through supervisory levels. Use a task force approach (with representation from licensed and non-licensed operator personnel, the Personnel Department and the IGA) to make recommendations to management about how these disincentives could be addressed.
 7. Ensure that definitions of various levels of infractions and corresponding disciplinary actions in the disciplinary guidelines are congruent with nuclear performance standards; if necessary, identify special applications and/or interpretations of the policy to meet Nuclear Operations needs.
 8. Permit plant managers to suspend employees for reasonable cause at the time of the infraction, even when the suspension is appealed by the employee, rather than holding such suspensions in abeyance until the appeals process has been completed.
 9. When grievances involve individual employee disciplinary action, process these grievances formally up through successive supervisory levels documenting each step. The employing officer and the Vice President, Nuclear Operations should meet together with appropriate Personnel Department and IGA representatives to resolve the grievance, with the Vice President, Nuclear Operations having ultimate line management decision-making authority with respect to disciplinary actions. The role of Personnel and Industrial Relations Department management should be reserved to serve as an appeals source only in those cases where the grievance solution is appealed by the IGA.
 10. Streamline the grievance resubmission/appeals process to ensure timely responsiveness and resolution.
 11. Establish written guidelines for managers and supervisors on management responsibilities and authorities for implementing the company's Disciplinary Guidelines.

12. Mandate special training sessions for all Nuclear Operations management and supervisory personnel to ensure their understanding and consistent implementation of disciplinary policies, the grievance process and work rules.
13. Build into the Peach Bottom employee involvement program an ongoing process for management to solicit and respond to employee concerns and suggestions.

5.4 EXTERNAL RELATIONSHIPS

PECo management must demonstrate to the NRC its awareness of the seriousness of the root cause issues which led to the shutdown of Peach Bottom as well as its sincere dedication to a change in management philosophy and approach at all levels with respect to its nuclear operations. This awareness and dedication forms the keystone for an acceptable action plan. In addition, management must assure that the appropriate processes are in place to maintain open and effective ongoing relationships with its regulators and industry auditors.

MAC recommends the following:

1. Evaluate and correct the management practices which have resulted in ineffective relationships with the NRC regarding the concerns at Peach Bottom. The evaluation should pay close attention to the successful program established at Limerick and at other utilities.
2. Review commitments made since 1983 to the NRC/INPO/ANI, etc. for desired results to ensure that corrective actions taken were appropriate and are achieving the desired results. Include in this review any subsequent actions taken in the recovery plan.
3. Reinforce internal monitoring of nuclear plant performance (NRB, ISEG, PORC) by ensuring that specific responsibility has been assigned to evaluate, analyze, characterize and trend performance indicators from external sources (NRC, INPO, ANI, etc.). Conduct periodic meetings with senior management (corporate and plant) to review results and provide recommendations to address problems, or potential problems.
4. Assure that future commitments/responses are based on:
 - sound, thorough analysis with explicit consideration regarding reactor safety, not just compliance.
 - consideration of current regulatory philosophy, recognized problems at other facilities, and the NRC's viewpoint.
 - emphasis on the role of personnel and personal actions to nuclear safety.

- realistic schedules based on safety significance and available resources with appropriate monitoring of milestones and of ongoing progress to assure desired results are achieved.

5.5 ACTION PLAN PROCESS

It is also critically important that PECO management pay as much attention to the use of effective management processes in developing and implementing the Peach Bottom recovery plan as they do to the content of the plan itself. These processes must be thoughtfully applied if PECO management is to assure itself that the recovery plan will result in operational excellence and will assure the NRC both of the company's awareness of the need to change and its sincere commitment to making the change happen.

MAC recommends the following with respect to developing and implementing an effective Peach Bottom recovery plan:

1. Provide full-time leadership, management, and attention to detail to successfully plan and execute the recovery plan. This will require additional staff dedicated to this project to ensure the least disruptive impact on normal, ongoing operations of Peach Bottom outages and Limerick operations and outages.
2. Integrate ongoing improvement plans into the recovery plan in order to assess the total resource requirements and commitments. These plans should include the significant plant improvement projects, the PBEP, and improvements with respect to administrative management and work control systems (e.g., procedures, Radiation Work Permit (RWP) system automation, exposure records, nuclear records). Assign responsibilities and incorporate a system for measuring results which involves both Peach Bottom and Nuclear Operations management.
3. Provide overview of the recovery plan independent of line management, to monitor and to assess program effectiveness.

APPENDIX A
INTERVIEWED PERSONNEL

PERSONNEL INTERVIEWED

<u>NAME</u>	<u>TITLE OR POSITION</u>
W. Alden	Licensing, Engineer in Charge
M. Alderfer	STA
E. Allwood	Shift Superintendent
C. Anderson	Branch Engineer
J. W. Austin	Construction Superintendent
J. H. Austin, Jr.	President
J. Baldwin	ACO
J. Ballantyne	CO
B. Barnshaw	Shift Superintendent - Limerick
R. Betz	Electrical Supervisor
J. Birney, Director	Nuclear Records
D. Blasy	Shift Superintendent
M. Brown	APO
J. Budzynski	Reactor Engineer (Supervisory)
B. Bulmer	NTS Superintendent - Limerick
T. Cabrey	Former STA
B. Carr	STA
W. Casey	Superintendent, Station Maintenance Division
M. Cassada	Director, Radiation Protection
A. Clark	Shift Supervisor
B. Clark	Director Administration
J. Clupp	I&C Engineer (Supervisory)
E. Collins	GE Shift Eningeer
J. Cooney	Manager, Support Services
R. Costagliola	Superintendent, Nuclear Station Section
J. Cotton	Director Plant Services
P. Cromwell	CO
E. Cromwell	Shift Supervisor
J. Davenport	Supervisor, Engineering Maintenance
P. Davidson	Computer Applications, Engineer in Charge
G. Dawson	Senior Engineer, Maintenance
J. Deni	CO

PERSONNEL INTERVIEWED (Continued)

<u>NAME</u>	<u>TITLE OR POSITION</u>
J. Doering	Operations Manager - Limerick
T. Donnell	QA Supervisor
D. Duane	Shift Supervisor
W. Eagles	CO
J. Everett	Chairman and CEO
D. Falcone	CO
D. Felts	APO
D. Fleischmann	Station Manager
J. Franz	Plant Manager - Limerick
C. Fritz	VP, Personnel and Industrial Relations
A. Fulvio	Technical Engineer
J. Gallagher	VP, Nuclear Operations
N. Gazda	Physicist, ALARA (Supervisory)
G. Gellrich	Test Engineer
T. Geyer	Engineering Maintenance (Former STA)
B. Gleaves	Radwaste Supervisor
M. Gribble	ACO
S. Grosh	Former IGA Committeeman
D. Harrington	Shift Typist
R. Hart	ACO
J. Hesler	Former STA
B. Hinkle	Superintendent, Maintenance Services Section
R. Hoopes	Shift Supervisor
L. Hopkins	Operations Engineer - Limerick
J. Hufnagel	Assistant Outage Engineer
G. Hunger	Nuclear Safety Engineer
K. Iepson	Former STA
J. Jordan	Results Engineer (Supervisory)
R. Kankus	Director, Emergency Preparedness
D. Kauffman	PO
D. Keene	I&C Engineer
D. Kemper	Maintenance Area Supervisor

PERSONNEL INTERVIEWED (Continued)

<u>NAME</u>	<u>TITLE OR POSITION</u>
J. Kemper	Sr. VP, Engineering and Production
C. Kerr	STA
R. Kirkhoff	ACO
W. Knapp	Director, Radiation Protection
C. Koehler	Shift Supervisor
E. Kohler	Staff Engineer
J. Kovalchick	STA
S. Kowalski	VP, Engineering & Research
J. Lange	IGA Chairman
K. Lathrop	GE
G. Leitch	Manager, Nuclear Generation Department
J. Lindinger	STA
R. Logue	Assistant to Manager, Nuclear Support
T. Love	GE Shift Engineer
L. MacEntee	ACO
R. Maldonado	ACO
S. Mannix	Assistant Operations Engineer (Supervisory) (Former STA)
M. Manski	Former STA
F. Mascitelli	Modifications Coordinator
G. McCarty	Physicist, Support HP (Supervisory)
M. McCormick, Jr.	Maintenance Department
J. McElwain	QC Site Supervisor
D. McRoberts	Shift Supervisor
H. Metz	Shift Superintendent
C. Miller	GE Operations Engineer
J. Mitman	Senior Radwaste Engineer
R. Monacho	Shift Operator - Limerick
R. Moore	Superintendent, QA
P. Navim	STA
S. Nelson	Physicist (Supervisory)
T. Niessen	Assistant Operations Engineer (Supervisory)
M. Norman	AO
J. Oddo	Nuclear Security Specialist

PERSONNEL INTERVIEWED (Continued)

<u>NAME</u>	<u>TITLE OR POSITION</u>
D. Oltmans, Sr.	Chemist
A. Parry, Jr.	VP, Purchasing
G. Paton	Shift Supervisor - Limerick
F. Pfender	Shift Superintendent
B. Pieper	Shift Superintendent
W. Pinnel	Engineer (Supervisory), Maintenance
F. Polaski	Operations Engineer
D. Potocik	Senior Health Physicist
M. Restaino	STA
L. Rhodes	PO
S. Roberts	Operations Engineer
J. Rogenmuser	PM Activities Coordinator
M. Ryan	Compliance Engineer
B. Saxman	CO
R. Segeletes	Superintendent, Mobile Section
R. Sheetz	Shift Supervisor
D. Smith	Superintendent Operations
F. Solis	General Superintendent, Testing and Laboratories
J. Spencer	Superintendent of Services - Limerick
B. Stambaugh	CO
T. Stone	IGA Executive Committeeman
S. Sullivan	APO
G. Swayne	ACE
S. Tharpe	Chief Security Coordinator
W. Tharpe	ACO
C. Townsend	GE Shift Engineer
R. Truax	CO
T. Ullrich	Plant Manager, Limerick 2
J. Valinski	STA
L. Vernacchio	Test Engineer
H. Walters	Project Management, Engineer in Charge
D. Warfel	Assistant Maintenance Engineer
A. Wargo	Shift Supervisor

PERSONNEL INTERVIEWED (Continued)

<u>NAME</u>	<u>TITLE OR POSITION</u>
A. Weigand	VP, Electric Production
R. Weindorfer	Director, Security
R. Weingard	I&C Engineer, Susquehanna Branch
B. Widener	Shift Superintendent
H. Wiegel	Testing and Laboratories, Engineer in Charge
P. Wilson	GE Shift Engineer
T. Winters	ACO
J. Winzenried	Staff Engineer
D. Woodrow	Shift Supervisor
S. Wookey	Former STA
N. Yost	Shift Supervisor
J. Zellmer	AO

APPENDIX B

**Cross Reference of
MAC Report Items With
CTE Action Plan Tasks**

Commitment To Excellence Action Plan

APPENDIX B. CROSS REFERENCE OF MAC REPORT ITEMS WITH CTE ACTION PLAN TASKS

<u>MAC ITEM</u>	<u>CTE ACTION PLAN TASK</u>			
CA 1	5.2.8.2			
CA 2	5.2.1.1	5.2.1.7	5.2.3.2	5.2.4.4
	5.2.1.2	5.2.1.9	5.2.3.3	5.2.5.1
	5.2.1.4	5.2.1.10	5.2.4.1	5.2.5.2
	5.2.1.5	5.2.1.11	5.2.4.2	5.2.8.4
	5.2.1.6	5.2.3.1	5.2.4.3	
CA 3	5.1.1.2	5.1.1.9		
	5.1.1.3	5.1.1.10		
	5.1.1.5	5.1.1.11		
LM 1	See Section 3.4.1 <u>Management Changes</u>			
LM 2	5.1.2.1	5.1.2.4		
	5.1.2.2	5.1.2.5		
	5.1.2.3			
LM 3	5.1.3.5			
	5.1.3.6			
LM 4	5.1.3.4			
LM 5	5.1.5.1			
	5.1.5.2			
LM 6	5.2.1.6	5.2.1.8	5.2.1.10	
	5.2.1.7	5.2.1.9	5.2.1.11	
LM 7	5.1.4.3	5.3.9.2	5.3.9.8	5.3.9.12
	5.3.9.1	5.3.9.3	5.3.9.11	5.3.9.13
LM 8	5.3.1.46	5.3.2.3	5.3.2.6	5.3.4.2
	5.3.2.1	5.3.2.4	5.3.3.1	
	5.3.2.2	5.3.2.5	5.3.3.2	
LM 9	5.3.18.1	5.3.18.3		
	5.3.18.2	5.3.18.4		
LM 10	5.2.7.1	5.2.7.4	5.2.7.7	5.2.7.10
	5.2.7.2	5.2.7.5	5.2.7.8	5.2.7.11
	5.2.7.3	5.2.7.6	5.2.7.9	5.2.7.13
LM 11	5.2.7.12			

Commitment To Excellence Action Plan

LM 12	5.2.7.6 5.2.7.7		
PP 1	5.1.1.1 5.2.6.1		
PP 2	5.1.1.1 5.1.1.7		
PP 3	5.1.1.4		
PP 4	5.2.6.2		
PP 5	5.2.6.3		
PP 6	5.2.6.4		
PP 7	5.2.6.5		
PP 8	5.2.6.6		
PP 9	5.2.6.7		
PP 10	5.2.6.8		
PP 11	5.2.6.9		
PP 12	5.2.6.10		
PP 13	5.2.8.2		
ER 1	5.5.3.1 5.5.3.2		
ER 2	5.5.1.1		
ER 3	5.2.2.1 5.2.2.2		
ER 4	5.5.2.1 5.5.2.2	5.5.2.5 5.5.2.6	5.5.2.7 5.5.2.8

APPENDIX C

**People—The Foundation
of Excellence**

COURSE TITLE: People - The Foundation of Excellence

PURPOSE: To identify, develop and practice skills to improve interpersonal and group dynamics to develop excellence on the job. In addition, this course is designed to contribute to professionalism in the control room and Nuclear Operations.

TARGET POPULATION: Senior Reactor Operators, Reactor Operators and other designated Shift personnel.

PRE-REQUISITES: Management selection process

SCOPE AND DESCRIPTION:

This course is designed for improving individual and group process skills. The course consists of four units of instruction beginning with personal insight and interpersonal skills, and concluding with group dynamics and working with differences. Skills and abilities associated with effective communication, positive attitude, and professionalism are practiced and applied to general and specific problem solving and decision making situations. Moreover, the plant manager along with other members of the PBAPS management staff will participate in selected activities.

The training will occur primarily in the classroom/workshop setting. Other training settings may be identified through ongoing course feedback. Emphasis will be placed on providing shift workers with opportunities to function as a team and to build personal relationships that carry over to work situations.

CONTENT:

The course is sequenced into four interconnected and progressive units of study. The topics and skills learned and practiced in earlier units are used to develop more diversified interpersonal processes in later units.

In essence, the content of this course is the processes and skills needed to improve individual

and group interaction. Typical content areas include communication skills, change process models, behavior observation skills, listening skills, organizational behavior, positive reinforcement, coaching, group membership skills, group development and observation processes, task and maintenance roles, team building, contracting, and creating culture. Other topics, such as Kepner-Tregoe, Human Performance Evaluation System, and Work Rule Consistency have been incorporated into the course. These latter topics will be used to facilitate interpersonal and group interactions relevant to control room operations.

DURATION: This course is 27 days.

EVALUATION CRITERIA: Self, peer, management and instructor evaluations and feedback will occur throughout the course. A summary report will be submitted to management for further assessment of trainees and course effectiveness.

ATTACHMENTS:

(A) Unit Goals, Objectives and Activities/Topics

UNIT 1 PERSONAL INSIGHT

GOAL:

Provide methods for individuals to learn more about themselves.

OBJECTIVES:

1. Identify preferred individual approaches.
2. Identify sources of individual behavior.
3. Assess personal relevance of insights gained from analysis of responses to social and psychological measurement instruments for individual behavior.
4. Test levels of effectiveness/appropriateness of individual behavior in different situations.
5. Identify and describe perceptions of self and others in terms of observable behavior.
6. Make decisions about possible changes in interpersonal behavior.

ACTIVITIES AND TOPICS:

The unit on Personal Insight reflects the need for individuals to learn more about themselves. Individuals will identify preferred personal approaches and hence, sources of individual behavior. The assessment of personal relevance to insights gained from the analysis of responses to social and psychological measurement becomes a working tool for personal growth and development. With this personal insight individuals will be able to choose levels of effectiveness and appropriateness for their own behavior in different situations. After identifying personal behaviors individuals are able to make decisions about possible changes in interpersonal behavior to reflect the effectiveness of relations in the work place.

1. Learning Style Inventory (SDI) - Understanding personal strengths and weaknesses as a learner and applying insights to learn more about self.

2. Myers - Briggs Type Indicator (MBTI) - Understanding preferences and strengths of self and others and then relating to interpersonal differences.
3. Social Style Profile - Effective communications and interpersonal relations - enhance productive interpersonal relations in the work place through the use of social style profiles.
4. Keeping journals - Understanding, developing and reiterating personal strengths and weaknesses, insights and growth.

UNIT 2 INTERPERSONAL PROCESSES

GOAL:

Provide methods for individuals to learn more about themselves in relation to others.

OBJECTIVES:

1. Identify individual preferences in interactions with others.
2. Identify potential barriers to effective communication.
3. Develop communication/interpersonal skills.
4. Assess effectiveness of working relationships.

ACTIVITIES AND TOPICS:

Interpersonal relationships reflect the preferences that individuals have for interacting with one another. Once identified, individual preferences can be modified or reinforced to reduce barriers to effective communication. With practice, individuals can learn to select communication techniques that tend to promote mutual understanding and positive working relationships. The overall effectiveness of people working together will be stressed through the use of informal job evaluation which includes coaching, feedback, and self-disclosure.

1. Communication Skill Development

- A series of activities to build confidence and trust in what we and others hear and say.

2. Managing Performance

- Based on the principles of the "One Minute Manager", the trainees will practice ways to help one another achieve better work habits through better communication and interpersonal relations.

3. Fundamental Interpersonal Relations Orientation-Behavior
(FIRO-B)

- The instrument measures the degree to which an individual expresses and wants

- o To include people
- o To lead people
- o To involve people

UNIT 3 GROUP DYNAMICS

GOAL:

Provide methods for individuals and groups to examine group dynamics.

OBJECTIVES:

1. Identify individual roles and sets of role relationships in group activities.
2. Analyze and describe group activity in behavior terms.
3. Devise methods to improve the ways the group works.

ACTIVITIES AND TOPICS:

Activities during this unit of training will focus on identification of group dynamics and effective utilization of group problem solving and decision making processes. An integrated approach is used to accomplish the objectives. Specifically, group dynamics will be related to personal insight and interpersonal processes. Lessons learned in previous activities will provide a format to examine and practice processes that occur within and between groups.

1. Group Characteristics and Group Development

- Leadership/Membership Style: What are the characteristics of a good/effective group? This question will be examined and processed.

- Communications and Motivation: inter-group and intra-group feedback will be practiced and analyzed for its effect on motivation and group effectiveness.

- Stages of Group Development: "forming", "storming", "norming" and "performing" and "adjourning" will be examined, observed and applied towards group effectiveness.

2. Group Process Observations

- The dynamics of group activity are examined and discussed. Specific topics include: Task-Maintenance Behavior, Decision-Making, Leadership, Communications and Membership.

3. Group Task Behavior

- Decision Making and Problem Solving; observe and apply group processes that effect decisions and solutions. Kepner - Tregoe training will be used as a foundation for this portion of training.

UNIT 4 WORKING WITH DIFFERENCES

GOAL:

Provide methods for individuals and groups to use differences in constructive ways.

OBJECTIVES:

1. Select appropriate/effective approaches to interpersonal differences.
2. Manage and resolve group differences.
3. Assess inter/intra group relations.

ACTIVITIES AND TOPICS:

Activities utilized in this unit will focus on managing differences and creating effective group norms for the transition back to the work place. Participants will apply awareness and skills learned in this unit to become a more effective work team. While specific items such as: consistency of shift operations, communications, work rules, policy, work system/procedures meetings will have been addressed throughout the course, attention will be paid to integration of each of these items prior to re-entry on shift.

1. Dynamics of Differences

This topic will focus on the merits of both competitive and collaboration models within the context of intragroup and intergroup relations. The impact of win-lose situation will be examined and processed.

Specific activities which highlight these dynamics include: Win as much as you can, Abilene Paradox and Prisoners Dilemma. They are designed as an experiential approach to the dynamics of win-lose situations.

2. Conflict Resolution/Collaboration

This topic covers (1) the nature of conflict, (2) strategies for managing conflict, and (3) creative fighting. Participants will integrate their Thomas Kilman Conflict Mode scores on the dimensions of

(A) Competing, (B) Collaborating, (C) Compromising, (D) Avoiding, and (E) Accommodating to analyze their behavior in relation to others during conflict situations. Methodologies include here and now settings as well as actual problem solving situations.

3 Team Building

Team Building is the introduction of a systematic, long range plan to improve interpersonal relations among those workers with whom they are functionally interdependent. Approaches to team building at this stage of the team's development include actual agreements between team members, which will assist in diagnosing and changing group norms. Skills developed in decision-making, leadership, communication and membership will provide a basis for examining norms.

4. Building High Performance Work Teams

Building high performance work teams rest on the ability and willingness of team members to work with each other in such a way that they consume resources, i.e. time, money, materials, human energy at a level less than what they contribute back to the organization. This requires awareness, skills and commitment to behavior in the areas of (1) Interacting, (2) Appreciative Understanding, (3) Integrating and (4) Implementing. This topic focuses on integrating the learnings of the other units to produce "synergistic" working relations, where $1 + 1$ is greater than 2. The result is more productive output than might have been expected if the two "1"'s had worked independently.

Participants will survey their work team along the dimensions of (1) Interacting, (2) Appreciative Understanding, (3) Integrating and (4) Implementing for the purpose of creating a more effective work team.

5. Transition/Re-Entry

Activities designed for transitions and re-entry will focus on the integration of learnings and the practice of skills developed in all four units.

APPENDIX D

**Commitment To Excellence
For Nuclear Operations**

APPENDIX D. COMMITMENT TO EXCELLENCE FOR NUCLEAR OPERATIONS

We, as Nuclear Professionals, recognize our continuing responsibility to public and employee health and safety. We, therefore, dedicate ourselves to maintain our highest standards and principles of excellence in the performance of our duties and responsibilities as set forth in the Commitment of Excellence.

- I. Remain diligent in maintaining plant and personnel safety by identifying and actively pursuing resolution of safety concerns.
- II. Constantly remain alert and maintain awareness of plant status, anticipating conditions that could adversely effect plant reliability.
- III. Cooperate with independent organizations, recognizing the need for monitoring and review of nuclear operations.
- IV. Be governed by and adhere to applicable Federal law by complying with Technical Specifications, procedures, and policies.
- V. Recognize the importance of maintaining and expanding professional qualifications and detailed plant knowledge by active participation in all aspects of training.
- VI. Demonstrate an attitude of professionalism through demeanor, personal appearance, and attention to detail. Manifest a sense of pride in all facets of the work environment.
- VII. Foster the concept of teamwork among all groups. Mutual support, courtesy, and flexibility are essential to achieve cooperation and unity.
- VIII. Understand the necessity of effective communications. Ensure all communications, including logs and records, are timely, accurate, and concise.

The achievement of excellence and professionalism is predicated upon mutual respect, support, and trust throughout our organization.

QUESTION II-10 (Page 61)

Provide a schedule for the followup Peach Bottom simulator shift team training.

RESPONSE

Simulator training was conducted for shift teams in the latter part of 1987 and included such topics as emergency procedures and operating procedures. The primary purpose of this effort, however, was team training. The NRC subsequently forwarded to PE an inspection report that indicated shift team performance was satisfactory.

We have just completed six one week sessions (one session for each shift crew) of simulator training on our site-specific simulator. One day of each session was devoted specifically to shift team training.

Prior to actual restart, an additional cycle at the simulator will be conducted during which shift team training will again be emphasized. This is scheduled to begin in late August 1988.

QUESTION II-11 (Page 63)

We understand that approximately 20% of the comments provided to "Tell It To The Manager" have not been responded to. Provide your evaluation of the impact of this on program effectiveness.

RESPONSE:

As of June 14, 1988, 1,217 items have been reviewed by the Vice President-PBAPS. Only thirty-nine (39) items, approximately 3%, have no published response at the present time. These include questions that could be responded to through other avenues such as the Employee Suggestion Program. All other items which required a response have been answered either in publication form or by completion of an activity that can easily be observed by site personnel.

PE strongly believes that the program is effective because a steady stream of significant comments continues to be forwarded for resolution and the quality of the comments received reflects a thoughtful and sincere effort to effect improvement.

QUESTION II-12 (Page 67)

Describe the infractions that were the cause of the personnel terminations made by the Plant Manager. Explain why the action was taken at the Plant Manager level.

RESPONSE:

The personnel terminations were a result of infractions of PE's drug policy. Supervision has authority to remove a person from a job immediately if it appears that a safety problem may develop, if the person appears unfit for duty, or if there are other problems of a serious nature. Review of suspensions and possible terminations is completed at the Employing Officer level to ensure a fair and accurate assessment of the situation. The Employing Officer is responsible for notifying the employee of any action taken against him or her after the Employing Officer's review. The Plant Manager at PBAPS is an Employing Officer.

QUESTION II-13 (Page 68)

Describe the implementation of the performance evaluation system for 1987.

RESPONSE

Subsequent to the March 31, 1987, PBAPS shutdown, each licensed operator (including shift supervisors and shift superintendents) was individually evaluated by the new Plant Manager (at the time), Dickinson M. Smith. Mr. Smith's performance criteria for evaluation were much more comprehensive and critical than the existing criteria previously used in the yearly performance evaluation interviews. In selecting the shift managers to become part of the shift teams, performance evaluations were employed using more comprehensive criteria than had traditionally been used in the PBAPS performance evaluation process.

In addition to operations personnel, PBAPS personnel on station payroll in 1987 received face-to-face evaluations. Since not all present station personnel were identified and assigned to the station until April 1988 due to the reorganization, some personnel will have their first evaluation at PBAPS in 1988.

To ensure continued positive effects in terms of performance, PBAPS has incorporated a 1988 station goal to "conduct face-to-face performance appraisal interviews by December 31, 1988, for all PE employees assigned to PBAPS,

that will address individual investment in and commitment to nuclear excellence." This goal is part of the Nuclear Performance Management Program addressed in NRC Question II-50.

In addition, to ensure that this process is done in a professional and consistent manner, first-line supervisors and above will have received performance review training by July 31, 1988, which is similar to that provided to licensed personnel as part of the Managing for Excellence (MFE) and People-The Foundation of Excellence (PFE) courses. Moreover, ongoing performance evaluation coaching will be provided to PBAPS supervisors by the plant management team and experienced organizational development consultants (who assisted during the latter part of 1987 and continue to assist during 1988). The organizational development presence provides an alternative resource for both licensed and non-licensed PE personnel to receive clarification on performance evaluation issues.

QUESTION II-14 (Page 69)

The criteria listed for procedure revision requirement all use the word "would," "would result in misoperation," "...would compromise ... safety" rather than "could." Explain the use of "would" instead of "could."

RESPONSE

As noted in our response to NRC Question II-43, all existing procedures were reviewed to determine the need for revision or upgrading prior to the commencement of actual procedure rework. In addition, this initial review effort included an evaluation and identification, by the individual review committees, of any new procedure that would be needed.

"Would" as defined in the procedural review process meant that all procedures were reviewed to determine if they had an impact on operations or personnel safety. Those that did were then scheduled for upgrade. The use of the word "would," as opposed to "could," was not intended to, nor did it, preclude identification of and changes to procedures that needed to be changed.

QUESTION II-15 (Page 70)

Explain why the criterion of understandability was not used for procedures upgraded prior to restart.

RESPONSE

The notion of understandability was inherent to the procedure review, revision, upgrading, and new procedure development process for procedures modified prior to restart. In relation to the other criteria, a procedure could not be considered technically adequate if it was not basically understandable.

In the rewrite process, understandability was captured by the inclusion of procedure-specific users as members of the procedure rewrite review teams. For example, for the Systems (S) and General Plant (GP) procedures, the responsible procedure writer secured the assistance of an experienced operator for procedure review, check-out, and understandability.

In deciding which procedures to revise before restart and which could be included in the ongoing general procedure upgrade program, a distinction was thus made between basic understandability and improvements in format, writing style, etc., which would contribute to a procedure's being more easily understood.

QUESTION II-16 (Page 71)

Second Paragraph. Describe what procedures are the "specified procedures".

RESPONSE

Specified procedures fall into the categories of alarm response procedures and all the different types of emergency procedures, including emergency procedures, transient response implementation procedures, special event procedures, pre-fire strategy plan procedures, post-accident sampling, alternative shutdown, emergency shutdown, and T300 Guides. This also includes operating procedures that are general plant operating procedures, system procedures, health physics procedures, and fuel handling procedures. All remaining procedures will be on a five-year review cycle.

QUESTION II-17 (Page 72)

Explain how improvements to support procedural compliance address the subject of ease and mechanisms of making both temporary and permanent changes to procedures.

Describe the temporary procedure change process. Explain when it can be used. Describe how it is intended to be used.

RESPONSE

The ease and mechanisms of making both temporary and permanent changes to procedures have been addressed as follows:

- o A proposed new administrative procedure has been developed to provide site personnel with a straight-forward mechanism for initiating revisions to all categories of site procedures. The mechanism includes tracking of the procedures and feedback to the change initiator. This procedure is scheduled for approval by the end of July 1988.
- o Other administrative procedures have been changed to more clearly describe the process for reviewing, approving, and distributing procedure revisions. These administrative procedure changes prescribe the responsibilities of the preparer, reviewer, and approver.
- o A significant improvement in the procedure change process is the designation of a senior staff member for each category of procedures to be responsible for procedure changes. These individuals are accountable for the quality and accuracy of the changes proposed for their procedure category. This improvement ensures that procedures are reviewed by the appropriate functional area prior to going to the full review committee. Previously, no pre-review was done prior to the review committee obtaining a proposed procedure revision package.

Basically, the Technical Specification and the administrative procedure permit temporary changes to procedures (TPCs) to be made as long as the intent of the

procedure is not changed. Within the scope of this definition, an individual can initiate a TPC by marking up the affected procedure and obtaining the approval of one shift senior licensed operator on the unit affected, and one member of the plant management staff. The TPC process is currently being modified to permit use on a set of specified procedures only. The revised TPC process will not permit TPCs on procedures that are administrative in nature or on procedures that should not be changed without a detailed engineering analysis, such as TRIP procedures.

The mechanism has always existed for making temporary changes to procedures in accordance with the Technical Specification requirement. Previous operations practice, with regard to the initiation of needed procedure revisions, did not always successfully result in the initiation of TPCs when necessary, or the initiation and processing of recommendations for improving clarity, style, format, etc. Current procedure use and practices do, however, show that the proper, timely, and intended use of the TPC is occurring. The TPC procedure will be changed, prior to restart, to include a tracking mechanism to assure improved processing.

QUESTION II-18 (Page 74)

Explain why the four work management processes being assessed for improvement should not be completed prior to restart.

RESPONSE

As discussed in Section II, page 74, work management processes will be assessed for their short-term and long-term improvements. "Short-term" improvements are those items that are required to be done prior to restart to ensure safe operations. "Long-term" are those improvements that primarily enhance efficiency and economics of activities or reliability of operations.

The four work management process assessments have been completed. A summary status for each of the four is presented below:

- o The PBAPS maintenance management process assessment has been completed. The recommendations resulting from this assessment, none of which would impact safe operation, were presented to the Executive Vice President-Nuclear, the Vice President-PBAPS and Plant Management. These recommendations are long-term and a schedule is being developed for their implementation. Some improvements such as work planning and scheduling will be completed prior to restart.
- o The plant performance reporting process assessment has been completed. Major changes to the methods of tracking, trending and monitoring plant performance information have been implemented.
- o An assessment of functional areas which affect configuration management against their essential program elements has been completed. Both short and long term recommendations have been developed and approved. Specific actions to implement the short-term recommendations are in progress. Short-term items are being incorporated into the restart program as they are

identified. Long-term items are being used as input for development of a strategic plan for an enhanced configuration management program. Elements of this plan will include further assessments of functional area processes with respect to industry good practices.

- o The Nuclear Commitment Tracking Program assessment has been completed. Recommendations are now being implemented with an estimated completion of July 31, 1988. See Question I-16 for additional detail regarding the improvements to the commitment tracking program.

Assessment of the effectiveness of these programmatic areas will be included in PE's self-assessment for restart. In addition, we understand that these areas will be evaluated as part of INPO's assessment of PBAPS' readiness for restart. Separately, the NRC Maintenance Tree Inspection which began July 11, 1988, will provide a broad evaluation of the maintenance program.

If PE's own self-assessment (or the industry and regulatory reviews) identifies additional improvements necessary prior to restart, they will be evaluated and scheduled for completion.

QUESTION II-19 (Page 75)

Define what is meant by "key plant systems" and explain why the preventive maintenance system should not be completed prior to restart.

RESPONSE

The "key plant systems" referenced on page 75 of Section II are those systems which were deemed most important to safety or reliability, or both.

A major portion of all plant systems is already covered under Peach Bottom's current Preventive Maintenance (PM) program. Existing PM tasks for Unit 2 and common equipment will be completed, or an assessment to justify deferral will be performed and approved, prior to the restart of Unit 2. The review of remaining plant systems referenced in the Plan for Restart of PBAPS is an enhancement to PE's current PM program which will involve review of the failure history from the 1980-1988 period. For these reasons PE believes no additional changes to the PM program are necessary prior to restart and the enhancements noted can be completed subsequent to restart.

QUESTION II-20 (Page 79)

Provide a clearer description of "The Nuclear QA management team(s)", the team(s) composition, and the team(s) responsibilities.

RESPONSE

The Nuclear Quality Assurance (NQA) management team is comprised of the General Manager, NQA, and the managers reporting directly to him. Their composition and responsibilities are described in Section I on pages 16, 17, 34, and 38 to 42.

The "teams" referred to on Page 78 of Section II are the study groups which were established to provide input to the NQA management team. The study groups were comprised of individuals from the previous internal PE QA organizations, plus expert QA consultants. These study groups were responsible for providing input on organizational structure and function to address the spectrum of QA responsibilities of the new NQA organization. The study groups had the benefit of interactions with INPO and other utilities in developing their recommendations.

QUESTION II-21 (Page 87)

Activity Number CA1-1.1.1. Explain why selection of qualified candidates is limited to superintendent level and up.

RESPONSE

Selection of qualified candidates has not been limited to superintendent-level and above positions. Rather, as a restart commitment, emphasis has been placed on obtaining qualified candidates for these positions since they were newly created by the re-organization and candidates were not available at the site. Additionally, a priority was placed on completing the senior management team.

For other positions in the organization, qualified candidates have been selected and, if openings occur, qualified candidates will be selected. In many cases, these positions will be filled from the bottom-up within the Nuclear Group, whereas for superintendent and above, a talent search outside the Nuclear Group and PE was required in some cases. To allow for proper selection, more detailed position descriptions are being developed for positions at senior engineer level and above. The position descriptions describe qualifications, general position responsibilities, and specific duties as well as accountability criteria.

QUESTION II-22 (Page 88)

Activity Number CA1-2.2.1. Explain how the reorganization of control room work activities will provide for increased backshift activity to further assure operator alertness.

RESPONSE

Operator alertness has been enhanced by rescheduling selected surveillance testing to the afternoon and midnight shifts, and by the change in the shift rotation schedule from reverse to forward rotation. In addition, the re-organized operations shift organization includes a Shift Manager, Shift Supervisor and Assistant Shift Supervisor to provide direct supervision of control room work activities. The Shift Manager oversees and monitors all operations activities. The Shift Supervisor directly supervises the control room operators and plant operators. The Assistant Shift Supervisor provides backup relief and additional supervisory direction. This additional management presence on shift will ensure the professional behavior and attentiveness on the part of the operators.

QUESTION II-23 (Page 89)

Activity Number CA2-1.1.1. Explain how PECO management will determine that each operating crew is ready for plant restart. Describe whether the process will include certification on the Peach Bottom simulator and whether the certification will verify completion of training on revised procedures, the operations administration manual and the watchstanders manual. Describe the training on these procedures and manuals.

RESPONSE

PE's comprehensive program to address operator concerns is described in Section II of the Plan for Restart of PBAPS. Although the technical competence of operations personnel was not at issue as a Shutdown Order concern, the shift operations crews demonstrated their technical ability as well as their ability to work as a team at the Limerick simulator in the fall/winter of 1987. The NRC concurred in this conclusion as evidenced by the satisfactory evaluation provided in the inspection report on this training.

PE does not plan to re-certify each operating crew on the Peach Bottom simulator. The PBAPS simulator will be used, however, in continuing training and in satisfying the required 10CFR55 manipulations necessary to maintain the currency of licensed operators and licensed staff members in the operator re-qualification program. The PBAPS simulator, in its current state, has been evaluated as beneficial for use in operator training as it provides greater similarity than the Limerick simulator for PBAPS operation. At this

time, plans are for the current licensed operators to have two cycles (three days per cycle) on the PBAPS simulator prior to restart.

With regard to the completion of training on revised procedures, the simulator training will include training on revised procedures and/or drafts (in the case of new procedures) as they become available. This particular process serves to elicit operator feedback through use at the simulator. The comments and corrections are forwarded to the procedure rewrite group. This feedback is considered a major part and benefit of the current training program. System operating procedure training will continue beyond restart as part of the normal procedure review, upgrade, and training process.

The titles of the operations administration manual and watchstander's manual have been changed to operations management manual and operators' manual, respectively. Training on these manuals is currently being conducted by the Assistant Superintendent-Operations during the training on utility week. Operator comments are currently being incorporated into the final draft and the manuals will be finalized by the end of July 1988.

Training records will document completion of training for each person on the revised procedures, operations management manual and operators' manual. Routine procedure

changes will be handled as part of the normal operator re-qualification program.

QUESTION II-24 (Page 89)

Activity Number CA2-1.2.1. Describe the schedule for implementing higher entry standards and appropriate compensation schedule for recruitment and hiring of future licensed operator candidates.

RESPONSE

In July 1987, higher standards of screening for candidates for the licensed operator progression and an appropriate compensation schedule were adopted and implemented.

QUESTION II-25 (Page 89)

Activity Number CA2-1.2.2. Provide plans for additional operator training to provide ongoing reserve of licensed operators. Explain how and when the Peach Bottom simulator will be used to certify licensed operator candidates.

RESPONSE

Present:

- o 8 Reactor Operator candidates are in training - examinations were held July 19, 1988
- o 1 Reactor Operator candidate who failed the February 1988 examination was re-examined July 19, 1988
- o 1 SRO candidate was examined July 19, 1988
- o 7 "instant" SRO candidates begin training on July 25, 1988

Planned:

- o RO course commencing October 1988 for approximately 12 candidates
- o SRO class to commence in 1989 for SRO upgrades (class size is dependent on success of July 1988 RO exams)

RO and SRO training classes of the appropriate size will be provided on a regular basis to achieve and maintain our goal of 85 licensed staff members.

The PBAPS simulator is currently being used to certify that licensed operator candidates satisfy the eligibility requirements in accordance with NUREG-1021, "Operator Licensing Examiner Standards." The NRC is aware of, and has approved, the use of the PBAPS simulator in this capacity.

QUESTION II-26 (Page 89)

Activity Number CA2-1.3.1. Explain whether the blocking and support group rotates with the shift crew and when this group will be staffed.

RESPONSE

The blocking and support group will not rotate with the shift crew. The group will work day work during non-outages and as necessary during outages. It is expected that the group will be fully staffed with PE personnel in 1990. Presently, the group is functioning with staff engineers and contractor support.

QUESTION II-27 (Page 89)

Activity Number CA2-1.3.2. Explain who comprises the work control group, and describe their responsibilities and qualifications. Describe the extent to which they establish work priorities and when the group will be staffed.

RESPONSE

The Work Control Group is staffed with contractor personnel under PE supervision. The supervisor is SRO-licensed on PBAPS, and the contract personnel are either previously licensed (or certified) on other plants or are degreed engineers. In both cases, the personnel have significant nuclear experience. The group is currently configured into three sections: Unit 2, Unit 3 and Blocking. For the long term, PE plans to staff the group by licensed operators when sufficient numbers are available to permit off-shift rotation through the Work Control Group.

The Work Control Center is currently staffed Monday through Saturday on day shift with partial evening shift coverage. PE plans to fully staff the evening shift for Monday through Saturday coverage by September 1, 1988. For the long term, staffing and coverage will reflect the workload and outage status of the plant. When the Work Control Center is not staffed, the issuance of Maintenance Requests Forms (MRFs) and preparation of permits will be directly coordinated with Operations shift personnel.

The purpose of the Work Control Group is to direct the preparation of MRFs and permits needed to support the

schedule in a manner which will optimize the efforts of all participating groups. In this capacity, the Work Control Group assists Operations in releasing plant systems for maintenance, and writing and approving permits. The responsibility for the actual release of plant systems for work and the approval and application of permits is with Operations. The Work Control Group is not involved in setting work priorities. Work priorities are set as mutually agreed upon by Outage Planning and Operations (including the Shift Manager).

In order to accomplish these goals, the Work Control Group will:

- o Prepare, print, and approve permits using personnel under administrative control of the Operations department.
- o Confirm work is compatible with plant conditions.
- o Interface with Outage and Operations to develop work packages of MRFs that will efficiently reduce the number of permits required.
- o Maintain a duplicate set of approved permits and temporary clearances outside the Control Room in order to coordinate MRF and permit requests submitted to Operations. Station work groups will initially direct their questions on MRFs and permits to the Work Control Group. The Work Control Group is responsible for control of duplicates.
- o Maintain files for unissued MRFs and proposed permits ensuring that these are not released until approved by Operations.
- o Prepare and submit a daily shift blocking list for Shift Manager concurrence and approval. This will be a list of blocks to be applied.

- o Provide a focal point for feedback to other work groups on permit and MRF problems.
- o Assist Operations with the development of approved sequences for permits.

QUESTION II-28 (Page 90)

Activity Numbers CA2-2.2.1 and 2. Describe the scheduled goal for implementing selected degree and certificate programs.

RESPONSE

Implementation of the selected degree and certificate programs is dependent on having a sufficient number of licensed operators available to provide relief for those individuals who are selected for these programs. The present and projected numbers of qualified licensed operators will not support program implementation in 1988 or 1989. However, indications are that some small number of candidates could be made available to participate in these programs as early as 1990. We are proceeding with necessary steps to complete development of the program in time to be ready for these first eligible candidates.

QUESTION II-29 (Page 92)

Activity Number CA3-2.1.3. In addition to training for managers/supervisors developed as a result of a "training needs assessment survey", explain how a formalized training program for managers/supervisors will address:

- (1) How to coach and support subordinate levels of supervision,
- (2) How to evaluate training program effectiveness of subordinate staff, and
- (3) How to reinforce training given to subordinate staff.

Describe the schedule for developing and implementing a manager/supervisor training program following the training needs assessment survey.

Explain the similarities and differences between the Manager Training Program, PFE and MFE, and the reasons for them. Explain how the Manager/Supervisor Training Program will relate the Technical Staff/Manager Training area of the Accreditation Program. Provide the Manager/Supervisor Training Program syllabus.

Describe processes in place to ensure that the nuclear training organization received regular input from plant management about training needs and the effectiveness of training programs.

Describe the training (similar to PFE, MFE, PE and TEAM) that will be developed for new hires and for transfers from other parts of PECO.

RESPONSE

- (1) Before restart, all Peach Bottom first-level supervisors and above will have attended a one-day workshop on "Coaching and Counseling of Subordinates."

- (2) A questionnaire to evaluate the effectiveness of training will be developed by the Management and Professional Development Section, and completed by PBAPS managers at the Plant Manager level and above.

- (3) The PBAPS organizational development consultants will conduct a briefing for the site Vice President's staff to explain how to identify improved performance on the part of subordinates and how to reinforce that improvement.

Management and Supervisory Development has been identified as one of the eight strategy areas for the Nuclear Group for 1989-1991. An ad hoc task group is in the process of setting priorities and developing a timetable for their implementation as part of the strategy development process. A draft of the schedule for implementing this program is attached. The training needs assessment survey is part of the input the task group is using in developing the strategy.

PFE was designed as remedial training for operators. MFE was designed to familiarize shift managers with the content of the PFE program and to

provide them with skills to reinforce the learning of PFE. The Manager Training Program will result from the Management and Supervisory Development strategy noted above. As such, its focus will be Nuclear Group-wide and developmental in nature. Since concerns that led to the remedial training have been successfully addressed, the Manager Training Program will proceed from there. Its design will be based on enhancing organization performance. Modified versions of PFE and MFE will become part of the Accreditation Program at PBAPS. As noted above, the Manager Training Program will be a Nuclear Group program with a focus on organizational enhancement. Other than a design which ensures it will not provide information contradictory to MFE and PFE, it will not have any direct relationship to the Accreditation Program. With regard to a syllabus, the Manager/Supervisor Training Program has yet to be developed, and no syllabus is currently available. A syllabus will be available by December 1988.

The Central Training Committee (CTC) of PE was designed to provide an opportunity for station and department input on training needs to the Corporate Training Division. The PBAPS Training Superintendent is a member of the CTC. While gathering information

from PBAPS managers for input to the Corporate Training Division, he will also gather input from plant management about training needs and the effectiveness of training programs.

Progression training, which includes appropriate elements of PFE and MFE, will become part of the PBAPS Accreditation Program. New hires and transfers will receive this training as they progress.

ACTION STEPS

1. Define generic role expectations for all levels of Nuclear Management and supervision 4/89
2. Establish requirement and mechanism for communicating expectations 5/89
3. Develop and implement the program by which information about this strategy will be disseminated to Nuclear employees 4/89
4. Establish integrated performance evaluation process for Nuclear Group 4/89
5. Establish structured interview process and orient Nuclear managers in its use for first-line supervisory positions 4/89
6. Develop assessment methodology with input from line management 6/89
 - Establish specific criteria for first-line supervisory positions
 - Identify developmental activities for each criterion
 - Share criteria/activities with Independent Group Association (IGA)
 - Establish specific criteria for other supervisory and management positions
 - Make recommendations re; use of assessment methodology during 1990 to Executive Vice President-Nuclear/senior staff for approval
7. Develop and conduct training module in on-the-job coaching for second-line supervisors 7/89
8. Develop a plan for increased line management use of Organizational Development assistance with handling supervisory/managerial performance problems; orient line management to use 9/89
9. Develop and conduct supervisory training program in employee relations and discipline 12/89
10. Conduct training in selection interviewing skills for all managers and second-line supervisors 12/89
11. Develop succession plans for Nuclear management positions down to the Superintendent level 12/89

12. Implement assessment methodology plan 12/89
13. Establish a cross-functional task force comprised of managerial and supervisory personnel to develop recommendations re:
- o Non-supervisory career advancement paths for Nuclear personnel
 - o Job rotation and exchange/loan program for Nuclear managers and supervisors
- Report for approval to Executive Vice President-Nuclear/senior staff by 6/90
14. Orient Nuclear managers in the use of the structured interview process for management positions other than first-line supervisory positions 4/90
15. Develop and implement a program for establishment of individual development plans for all Nuclear management and supervisory plans 6/90
16. Develop succession plans for remaining Nuclear management positions 12/90
17. Develop and implement a Mentor Program for middle and first-line Nuclear managers 1/91
18. Implement recommendations of task force on non-supervisory career advancement, job rotation and exchange/loan programs 1/91

QUESTION II-30 (Page 92)

Activity Number CA-3-2.2.2. In addition to a PFE for first and second line supervisory personnel, describe what similar training will be given to non-operations personnel below supervisory level and why it should not be complete prior to restart.

RESPONSE:

An Individual and Organizational Effectiveness (IOE) course, similar in content, but oriented to supervisors, was conducted for a cross section of first- and second-level supervisory personnel. This course includes modules on supervising work groups, performance managing, managing task group meetings, and managing differences. Each participant in the course is expected to carry back these skills and use them with their personnel. This type of training will be completed for first-line supervisors prior to restart.

Non-operations personnel will participate in ongoing continuing training being planned as a follow up to the People-The Foundation of Excellence (PFE) and Personal Effectiveness (PE) courses. While this training will build on the concepts of PFE and PE, it will be designed to stand alone. Therefore, it will not be necessary to have attended the PFE and PE courses to benefit from it.

From a behavioral viewpoint, operations personnel were identified as being at the core of the problem which led to the shutdown. As such they attended either PFE or PE. It was not deemed necessary for non-operations personnel to

attend the remedial PFE and PE prior to restart because their behavior was not identified as contributing significantly to the shutdown. As such, they will participate in the continuing training.

In addition, several other activities have focused on employees:

- a) A series of all-hands meetings was convened by the Vice President for all PBAPS employees and contractors.
- b) Site divisions are presently working with their personnel through meetings to emphasize personnel performance and interface.

Finally, the Plant Manager's extended staff meeting periodically incorporates a module on management/supervisory skills development as an agenda item to ensure ongoing attention to improvement of skills.

As the re-organization and re-alignment of personnel are completed, other groups and levels of personnel may be identified who may benefit from this program. If this occurs, appropriate training will be provided.

QUESTION II-31 (Page 92)

Activity Number CA3-2.2.3. Explain why managers/supervisors should not be trained on conducting face-to-face performance appraisal interviews prior to restart. In addition to training for managers/supervisors on conducting face-to-face performance appraisal interviews, describe the training they will receive on writing performance standards and on writing effective performance evaluations.

RESPONSE

Managers and supervisors will receive training on conducting face-to-face performance appraisal interviews prior to restart. The training has been developed by the Management and Professional Development Section and is being conducted by outside consultants.

The course provides instruction on writing performance standards and effective performance evaluations which includes:

- 1) identification of importance of goal setting, praising, and reprimanding
- 2) practice writing and presenting clear goals, effective praising and reprimanding
- 3) identification of individual styles for performance appraisal meetings
- 4) details on filling out PE Performance Appraisal forms

QUESTION II-32 (Page 92)

Activity Number CA3-2.2.4. Explain why the training on disciplinary policies and work rules should not be completed prior to restart.

RESPONSE

Training on disciplinary policies and work rules will be completed prior to restart for the Plant Manager through Shift Manager levels of PBAPS. The training was developed by the Nuclear Group Director, Management and Professional Development, and the Personnel Administrator at PBAPS. The Personnel Administrator will conduct the training.

QUESTION II-33 (Page 92)

Activity Number CA3-3.2.1. Explain how the licensed operator training program addresses a supervisory/leadership curriculum. Provide the training syllabus.

RESPONSE

The training syllabus for the 27-day People-The Foundation of Excellence (PFE) course which was given to the current PBAPS licensed operators and Shift Technical Advisors is attached. As shown in this syllabus, the course is sequenced into four interconnected and progressive units of study that incorporate fundamental core elements of supervisory and leadership training. Specifically, this course begins with personal insight and interpersonal skills training and builds up to, and concludes with, group dynamics and conflict management. We believe that these awarenesses and skills constitute the basic building blocks of supervisory behavior and leadership skills required for executing licensed operator responsibilities, and ultimately shift supervisor responsibilities.

COURSE TITLE: People - The Foundation of Excellence

PURPOSE: To identify, develop and practice skills to improve interpersonal and group dynamics to develop excellence on the job. In addition, this course is designed to contribute to professionalism in the control room and Nuclear Operations.

TARGET POPULATION: Senior Reactor Operators, Reactor Operators and other designated Shift personnel.

PRE-REQUISITES: Management selection process

SCOPE AND DESCRIPTION:

This course is designed for improving individual and group process skills. The course consists of four units of instruction beginning with personal insight and interpersonal skills, and concluding with group dynamics and working with differences. Skills and abilities associated with effective communication, positive attitude, and professionalism are practiced and applied to general and specific problem solving and decision making situations. Moreover, the plant manager along with other members of the PBAPS management staff will participate in selected activities.

The training will occur primarily in the classroom/workshop setting. Other training settings may be identified through ongoing course feedback. Emphasis will be placed on providing shift workers with opportunities to function as a team and to build personal relationships that carry over to work situations.

CONTENT:

The course is sequenced into four interconnected and progressive units of study. The topics and skills learned and practiced in earlier units are used to develop more diversified interpersonal processes in later units.

In essence, the content of this course is the processes and skills needed to improve individual and group interaction. Typical content areas

include communication skills, change process models, behavior observation skills, listening skills, organizational behavior, positive reinforcement, coaching, group membership skills, group development and observation processes, task and maintenance roles, team building, contracting, and creating culture. Other topics, such as Kepner-Tregoe, Human Performance Evaluation System, and Work Rule Consistency have been incorporated into the course. These latter topics will be used to facilitate interpersonal and group interactions relevant to control room operations.

DURATION: This course is 27 days.

EVALUATION CRITERIA: Self, peer, management and instructor evaluations and feedback will occur throughout the course. A summary report will be submitted to management for further assessment of trainees and course effectiveness.

ATTACHMENTS:

(A) Unit Goals, Objectives and Activities/Topics

UNIT 1 PERSONAL INSIGHT

GOAL:

Provide methods for individuals to learn more about themselves.

OBJECTIVES:

1. Identify preferred individual approaches.
2. Identify sources of individual behavior.
3. Assess personal relevance of insights gained from analysis of responses to social and psychological measurement instruments for individual behavior.
4. Test levels of effectiveness/appropriateness of individual behavior in different situations.
5. Identify and describe perceptions of self and others in terms of observable behavior.
6. Make decisions about possible changes in interpersonal behavior.

ACTIVITIES AND TOPICS:

The unit on Personal Insight reflects the need for individuals to learn more about themselves. Individuals will identify preferred personal approaches and hence, sources of individual behavior. The assessment of personal relevance to insights gained from the analysis of responses to social and psychological measurement becomes a working tool for personal growth and development. With this personal insight individuals will be able to choose levels of effectiveness and appropriateness for their own behavior in different situations. After identifying personal behaviors individuals are able to make decisions about possible changes in interpersonal behavior to reflect the effectiveness of relations in the work place.

1. Effective communications and interpersonal relations-enhance productive interpersonal relations in the work place through the use of social style profiles.

2. Myers - Briggs Type Indicator (MBTI) - Understanding preferences and strengths of self and others and then relating to interpersonal differences.
3. Fundamental Interpersonal Relations Orientation (FIRO's B and F) - Understanding how people relate to one another and why people do what people do.
4. Skills Development Inventory (SDI) - Understanding personal strengths and weaknesses as a learner and applying insights to learn more about self.
5. Keeping journals - Understanding, developing and reiterating personal strengths and weaknesses, insights and growth.

UNIT 2 INTERPERSONAL PROCESSES

GOAL:

Provide methods for individuals to learn more about themselves in relation to others.

OBJECTIVES:

1. Identify individual preferences in interactions with others.
2. Identify potential barriers to effective communication.
3. Develop communication/interpersonal skills.
4. Assess effectiveness of working relationships.

ACTIVITIES AND TOPICS:

Interpersonal relationships reflect the preferences that individuals have for interacting with one another. Once identified, individual preferences can be modified or reinforced to reduce barriers to effective communication. With practice, individuals can learn to select communication techniques that tend to promote mutual understanding and positive working relationships. The overall effectiveness of people working together will be stressed through the use of informal job evaluation which includes coaching, feedback, and self-disclosure.

1. Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B)
 - The instrument measures the degree to which an individual expresses and wants
 - o To include people
 - o To lead people
 - o To involve people
2. Communication Skill Development
 - A series of activities to build confidence and trust in what we and others hear and say.

3. Positive Reinforcement Skills

- Based on the principles of the "One Minute Manager", the trainees will practice ways to help one another achieve better work habits through better communication and interpersonal relations.

4. Transactional Analysis (TA)

- A frame work for people to check out their awareness of themselves in terms of possibilities for growth and change. As a method to facilitate growth of the individual within a group, TA emphasizes the person's ability to change himself.

5. Johari Window - Understanding ones self through an exercise in self disclosure and group feedback.

UNIT 3 GROUP DYNAMICS

GOAL:

Provide methods for individuals and groups to examine group dynamics.

OBJECTIVES:

1. Identify individual roles and sets of role relationships in group activities.
2. Analyze and describe group activity in behavior terms.
3. Devise methods to improve the ways the group works.

ACTIVITIES AND TOPICS:

Activities during this unit of training will focus on identification of group dynamics and effective utilization of group problem solving and decision making processes. An integrated approach is used to accomplish the objectives. Specifically, group dynamics will be related to personal insight and interpersonal processes. Lessons learned in previous activities will provide a format to examine and practice processes that occur within and between groups.

1. Group Characteristics and Development
 - Leadership/Membership Style; What are the characteristics of a good/effective group? This question will be examined and processed.
 - Communications and Motivation; inter-group and intra-group feedback will be practiced and analyzed for its effect on motivation and group effectiveness.
 - Stages of Group Development; "forming", "storming", "norming" and "performing" and "adjourning" will be examined, observed and applied towards group effectiveness.
2. Group Observations
 - The dynamics of group activity are examined and discussed by an "observer" group.

3. Group Task Behavior

- Decision Making and Problem Solving; observe and apply group processes that effect decisions and solutions. Kepner - Tregge training will be used as a foundation for this portion of training.

UNIT 4 WORKING WITH DIFFERENCES

GOAL:

Provide methods for individuals and groups to use differences in constructive ways.

OBJECTIVES:

1. Select appropriate/effective approaches to interpersonal differences.
2. Manage and resolve group differences.
3. Assess inter/intra group relations.

ACTIVITIES AND TOPICS:

Activities utilized in this unit will focus on managing differences and creating effective group norms for the transition back to the work place. Participants will apply awareness and skills learned in this unit to become a more effective work team. While PBAPS specific items such as: consistency of shift operations, communications, work rules, policy, work systems/procedures and meetings will have been addressed throughout the course, attention will be paid to integration of each of these items prior to re-entry on shift.

1. Dynamics of Differences

This topic will focus on the merits of both competitive and collaboration models within the context of intragroup and intergroup relations. The impact of win-lose situation will be examined and processed.

Specific activities which highlight these dynamics include: Win as much as you can, Abilene Paradox and Prisoners Dilemma. They are designed as an experiential approach to the dynamics of win-lose situations.

2. Conflict Resolution/Collaboration

This topic covers (1) the nature of conflict, (2) strategies for managing conflict, and (3) creative fighting. Participants will integrate their Thomas-Kilman Conflict Mode scores on the dimensions of

(A) Competing, (B) Collaborating, (C) Compromising (D) Avoiding, and (E) Accommodating to analyze their behavior in relation to others during conflict situations. Methodologies include here and now settings as well as actual problem - solving situations.

3. Building High Performance Work Teams

Building high performance work teams rest on the ability and willingness of team members to work with each other in such a way that they consume resources, i.e. time, money, materials, human energy at a level less than what they contribute back to the organization. This requires awareness, skills and commitment to behavior in the areas of (1) Interacting, (2) Appreciative Understanding, (3) Integrating and (4) Implementing. This topic focuses on integrating the learnings of the other units to produce "synergistic" working relations, where $1 + 1$ is greater than 2. The result is more productive output than might have been expected if the two "1"'s had worked independently.

Participants will survey their work team along the dimensions of (1) Interacting, (2) Appreciative Understanding, (3) Integrating and (4) Implementing for the purpose of creating a more effective work team.

4. Team Building

Team Building is the introduction of a systematic, long - range plan to improve interpersonal relations among those workers with whom they are functionally interdependent. Approaches to team building at this stage of the team's development include actual agreements between team members, which will assist in diagnosing and changing group norms. Skills developed in decision-making, leadership, communication and membership will provide a basis for examining norms.

5. Transition/Re-Entry

Activities designed for transitions and re-entry will focus on the integration of learnings and the practice of skills developed in all four units.

LESSON PLAN INDEX

<u>Lesson Plan No.</u>	<u>Lesson Plan Title</u>
0100	Introduction
0105	Learning Styles
0110	Assessment Activity
0114	Firo B & F
0115	Personality Differences
0120	Social Styles Profile
0125	Communication Skills
0126	NRC Workshop
0205	Intentional Communications
0210	Johari Window
0220	Performance Expectations
0223	Fitness for Duty
0225	One Minute Manager
0227	Expectations and Managing Performance
0300	Introduction to Group Dynamics
0305	Stages of Group Development
0310	Group Process Observation
0315	Effective Group Member Roles
0400	Positive and Negative Impact of Competition
0405	Conflict Resolution
0410	Team Building
0413	Integration of Learnings
0415	Transition/Re-Entry
0420	Goal Setting
0425	Evaluation and Feedback
0430	Course Closure

QUESTION II-34 (Page 94)

Activity Number CA3-3.4.1. Describe the followup PFE and MFE training. Provide a schedule for and syllabus of this followup training.

RESPONSE

Follow-up PFE and MFE training will be focused on application of the knowledge gained in both courses. It will be highly interactive and will focus on building participants' skills in the areas of dealing with one-to-one interactions with peers and supervisors, group interactions and conflict situations. It also will include behavioral observation and feedback during simulator training. The program is currently under development and will be in place by the end of 1988. As such, no syllabus is currently available. The proposed schedule for implementation is to conduct follow-up training modules on an annual basis for the next one or two years, at which time the modules will cease and appropriate material will be added to the existing routine progression and annual training courses.

QUESTION II-35 (Page 95)

Activity Number CA3-3.7.2. Describe the followup processes in place to respond to suggestions/recommendations/concerns made by the employee involvement program (PB-TEAM).

RESPONSE

The PB-TEAM meets as a group (about 40 members) once each month. The steering committee, elected by the group, meets weekly and task groups meet on an as-needed basis. A representative from the Office of Site and Employee Communications attends all of the committee and steering committee meetings.

Recommendations, suggestions and concerns of the PB-TEAM are discussed with this representative and then formulated into a formal presentation to the site Vice President. As necessary the steering committee meets with the Vice President. Follow-up on most issues is handled by the Office of Site and Employee Communications, except where senior management attention is required.

The PB-TEAM has accomplished investigations into day care, an exercise facility, the selection of a site motto and logo, tee shirts, hats and golf shirts with the logo and motto, and is presently working on a site visitors/new employees guide, developing an outdoor lunch area, and the development of an employee recognition program.

Discussions with the steering committee indicate that the method for resolving PB-TEAM concerns is working well.

QUESTION II-36 (Page 95)

Activity Number CA3-3.7.3. In addition to meetings of the Plant Manager with Superintendents, Assistant Superintendents, Senior Engineers and Lead Vendor personnel to discuss work priorities, work progress and problem areas, describe any regularly scheduled meeting station management has with shift managers.

RESPONSE

A Shift Managers' meeting is conducted on a monthly basis to discuss current shift issues and problems as well as corporate issues and policies that influence shift personnel and activities. This meeting includes appropriate station management, such as the Superintendent-Operations and Assistant Superintendent-Operations. Moreover, these meetings are periodically attended by the Plant Manager, site Vice President, or Executive Vice President-Nuclear. In order to instill a feeling of partnership with management within the Shift Supervisors, the Shift Supervisors are included for attendance and participation at the Shift Managers' meeting.

In addition, the utility Shift Manager routinely conducts a shift meeting with his entire shift (licensed and non-licensed) during his utility week. This meeting is frequently attended by station management.

The Shift Manager also attends the daily station planning meeting and is invited to attend other

planning and management meetings that include participation by station management personnel. The Shift Manager is also invited to regulatory entry and exit meetings. In addition, a Shift Manager presentation has been established as a standing agenda item at NRB meetings for Peach Bottom. In these presentations, a Shift Manager presents improvements which have occurred since they were placed on shift, as well as any concerns they may have.

QUESTION II-37 (Page 95)

Activity Number CA3-3.7.4. Describe the organizational survey, and feedback process. Describe whether this survey focused on PECO or on Peach Bottom. Explain how the survey met the intent of the MAC recommendation.

The PBAPS Action Plan states that 15% of PBAPS managers, first line supervisors and employees participated.

- (1) Were the number of people surveyed from each group 15% of the total number of employees in that group? If not, explain how the 15% was distributed across groups.
- (2) In addition to managers and 1st line supervisors receiving the survey data and making recommendations, will employees who participated in the survey have the survey results reported to them and will they have the ability to make recommendations (i.e., beyond discussing the manager's and first line supervisor's recommendation).
- (3) Provide the results of the organizational survey and managements' response to the survey items.

RESPONSE

The survey instrument used was the Productivity Quality Profile (PQP), which is designed to measure organizational and work team performance. A copy of the instrument is attached. The survey focused on a cross-section of the Nuclear Group and included Peach Bottom, Limerick, Nuclear Services, Nuclear Engineering, Nuclear Quality Assurance, and Nuclear Maintenance personnel. The data received were fed back to the employees who were involved in the survey. After review of the 20 key questions and the 12 categories of the PQP, small groups developed

suggestions. With regard to Peach Bottom, the suggestions were given to the Vice President, PBAPS for incorporation into the PBAPS strategies for change.

The MAC report recommended that an organizational survey be conducted and followed up with an Employee Involvement Program. The results of the survey identified several changes that would be beneficial to PBAPS operations, and in lieu of an Employee Involvement Program, PE elected to work the issues through a top-down effort. A Managing Organizational Change Program was selected and the top 25 managers at PBAPS have participated. This program is designed to train managers in implementing organizational changes through becoming agents of change. Employees are the targets of change and managers are taught how to effectively involve employees in planning and implementing change. Implementation plans for changes which resulted from the implementation of the PQP include a detailed description of the employee role in a successful change project.

- (1) Yes, the number of people surveyed from each group was approximately 15 percent of the number of employees in that group.

413 PE employees were surveyed at four locations:

Peach Bottom	144	
Limerick	134	
Nuclear Maintenance	48	
Corporate (23rd St)	<u>87</u>	(Nuclear Engineering, Nuclear Services and NQA)
	413	

The direct reports to the Vice Presidents and NQA General Manager also participated. At each location the sample included personnel in the following positions:

<u>Position</u>	<u>Total</u>
Mid-level managers	60
First Line Supervisors	103
Line Employees	<u>250</u>
	413

- (2) Yes. Employees who participated in the survey will have the survey results reported to them and will have the ability to make successful recommendations.
- (3) The PQP survey process has not yet been completed. The survey data have been compiled and compared with industry norms; however, the process, which includes conducting feedback sessions, development of recommendations, management review, and formulation of action plans where appropriate, is still ongoing. As noted above, the recommendations resulting from the feedback sessions at PBAPS regarding those areas which deviated substantially from utility norms have been given to the Vice President-PBAPS for incorporation, as appropriate, into the PBAPS strategy for change.

A report, which will include an analysis of the data, feedback session recommendations, and resulting actions, will be provided to the NRC by August 31, 1988.

THE PRODUCTIVITY/QUALITY PROFILE

An Organization
Effectiveness Audit

Your organization recognizes that its productivity and quality directly depends not only on technical resources and market factors, but on the contribution its people make as individuals and as work teams. It has probably long been common knowledge among employees in your organization that how well you do each day hinges on how well everyone works together -- regardless of the materials and money available to do the job.

Management would like to know precisely how you see your work team and the organization doing in areas that contribute to the all-around fitness of the organization. What you say here, and your participation in developing follow-up action plans, will help determine what needs to be done to make it a healthier, happier, better functioning place in which to work.

The answers you give are very important in helping the organization to understand what the real conditions are. You personally have much to gain by being open and forthright in your answers. Your responses to this survey are completely confidential. Only group data is reported to the organization -- (on a graphic profile sheet and in computer print-outs) -- never any information about you as an individual.

INFORMATION BEFORE YOU BEGIN

This survey is divided into two sections. The first, **Organizational Performance Indicators**, asks how you and your co-workers perceive the organization as a whole. The second, **Work Team Performance Indicators**, measures how you feel about your work teams in key dimensions of working together.

PLEASE NOTE: We want you to know this is not a test. There are no "right" or "wrong" answers. Please answer the questions in a way that is the most satisfactory to you.

INSTRUCTIONS

1. Use the soft lead pencil you were given to mark the appropriate spaces on the answer sheets. If you wish to change an answer, please clearly erase your original mark
2. You will notice that most of the questions have five (5) possible answers, A - Always; F - Frequently; O - Occasionally; S - Seldom; N - Never. Select the one that most nearly describes your opinion, feeling or situation.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

SECTION I: ORGANIZATIONAL PERFORMANCE INDICATORS

Section I deals with your view of your organization as a whole. As you respond to the items in this section, try not to be thinking either "everything here is bad" or "everything here is great." Instead, take time to consider each item separately.

A. PLANNING

Does your organization take planning seriously? Are future trends incorporated into thinking? Items 1 through 11 help you to assess your organization's efforts to deal with the issues of strategic planning, communication about planning, implementation, and resource management.

1. This organization uses long-range planning effectively.
2. Future trends are considered by management in the company's planning process.
3. This organization gives sufficient consideration to innovations and important developments in its field.
4. It is obvious that management has a clear sense of the purpose and mission of the organization.
5. How often do you say to yourself "We spend so much time in crises around here that we don't have time to plan ahead"?
6. It seems that rumors are the only way people at my level can learn what is ahead in the organization's future.
7. Our upper management gives people sufficient information about plans so that these plans can be carried out.
8. The organization does a good enough job of planning so that people can get their work done right and on time.
9. Plans are flexible and allow people to adapt to changing circumstances and situations.
10. I have an opportunity to influence organization plans that might affect me and my work.
11. In this organization, people's ideas are a major resource used in planning.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

B. MANAGEMENT PROCEDURES

How an organization is managed can have a big effect on performance and morale. Items 12 through 23 help you to assess managerial control, vendor/consumer relations innovation, coordination, and decision making in your organization.

12. People spend so much effort accounting for their time and expenditures that they do less work than they could.
13. Managers maintain an appropriate balance between being boss and allowing subordinate influence.
14. The products and services of our subcontractors and vendors are excellent.
15. The customer's perspective is in our awareness.
16. Top leadership in the organization instills the motivation for coming up with new ideas and ways of doing things.
17. In comparison with similar organizations that I know about, this organization seems responsive to change.
18. The work flow seems to go smoothly throughout this organization.
19. People seem to have a good idea about how their work contributes to the corporate goals.
20. There are processes/procedures that make work difficult.
21. Procedures clearly define who is responsible for what.
22. In this organization people are able to influence decisions that affect them and their work.
23. It takes too long to get a decision made.

C. MOTIVATIONAL CLIMATE

Are people creatively motivated in your organization? Items 24 through 34 help you to assess the pride, commitment, and rewards that exist in the organization as a whole.

24. Those who do quality work have a bright future in this company.
25. People in this organization work hard and do their jobs even when their supervisors are not around.
26. People in this organization seem concerned only with putting in their time and picking up their paychecks.
27. People are just "cogs" in the machine in this organization.
28. This organization supports very high standards of performance.

A - Always

F - Frequently

O - Occasionally

S - Seldom

N - Never

29. I believe that the quality of the organization's product is outstanding.
30. People in this organization are willing to "go beyond the call of duty" to get the job done.
31. Given a choice, I believe that most people here would rather work for this organization than for similar organizations they know about.
32. People show genuine concern for the problems that face the organization.
33. Exceptional performance is rewarded in this organization.
34. The pay scale and benefits of this organization treat each employee fairly.

D. PHYSICAL ENVIRONMENT

The physical work environment is more important than most of us realize. It affects us all day, every day. Items 35 through 41 help you to assess the significant aspects of your surroundings.

How often do the following characteristics of your work place detract from the quality and/or quantity of work you do?

35. Noise
36. Location
37. Lighting
38. Decor (colors, wall textures, pictures, and so forth)
39. Interference from other people (work-flow patterns)
40. Physical discomfort (seating, room dividers, crowded space, and so forth)
41. Ventilation

E. ORGANIZATIONAL STRESS FACTORS

Your responses to certain items in other parts of this survey will be used to determine the amount of organizational stress you are experiencing at this time. Organizational stress will be addressed as a category in the results returned to your organization.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

SECTION II: WORK-TEAM PERFORMANCE INDICATORS

Your work team or immediate work group is the most important aspect of your life in this organization. It is your "family." The quality of your life in your work team has a direct impact on your physical and mental well-being. It is also in your work team that productivity happens or does not happen.

Although the major focus of Section II is the assessment of your own work team, some items pertain to the total organization. Any item that is exclusive to your work team is clearly worded in terms of your work team. Be sure to read everything carefully, including the copy directly below each heading. If anything is unclear, ask for clarification.

F. SUPERVISION

People need to believe that their supervisors care about them and understand their situations. They also need to believe that they are being evaluated fairly. Items 42 through 57 help you to assess your immediate supervisor's effectiveness in this respect.

42. I can go to my supervisor with a real problem and expect to be heard.
43. When I go to my supervisor with an idea, something positive happens in response.
44. My supervisor holds members of my work team accountable for our work.
45. I know exactly what my supervisor thinks of me and my work.
46. I know exactly when and how I will be evaluated for my work.
47. My supervisor supports me and my work.
48. My supervisor helps plan our work well.
49. My supervisor tells me what he or she likes about my work when I deserve it.
50. I only hear what I have done wrong and not what I have done right.
51. My supervisor is a source of help to me when I need it.
52. My supervisor shares ideas that are helpful to me and to the rest of my work team.
53. I believe that my supervisor is concerned about my professional growth and development.
54. When a new person comes on staff, he or she gets very good supervision and instruction until the job is learned.
55. My supervisor makes a point of letting me know how my tasks fit into the larger picture.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

- 56. My supervisor coordinates the work of our team well.
- 57. I am supervised by people other than my immediate supervisor.

G. ROLE CLARITY

In order to do your best work, you need to have a clear understanding of your own role and the roles of those with whom you work. In addition, your role needs to "fit" you and your skills, values, and goals. Items 58 through 66 address these concerns.

- 58. It seems that other work teams or departments are duplicating our efforts.
- 59. I know exactly what I am accountable for.
- 60. Work priorities are clear.
- 61. Other people at work seem to understand what my job really is.
- 62. In order to do my job well, I have to do some things that conflict with organizational policy.
- 63. I feel as though I have more than one supervisor, and this confuses me.
- 64. I am in a bind; if I do what my supervisor wants, I cannot meet requests from others.
- 65. In order to meet my supervisor's expectations, I have to do things that do not seem right to me.
- 66. Everything has such a high priority that I simply cannot do it all.

H. COMMUNICATIONS

Clear, timely, direct communication of information is crucial to effective performance in any organization. Items 67 through 77 help you to assess your organization's upward, downward, and horizontal communications.

- 67. My supervisor does a good job of communicating decisions to everyone in the work team.
- 68. The grapevine is a faster and better source of information than official channels.
- 69. Different groups don't know what each other's job responsibilities are.
- 70. I have difficulty obtaining the information I need to do a good job.
- 71. Others communicate clearly what they need from me in order to do their jobs.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

72. My supervisor doesn't really understand the problems I face.
73. If something is going wrong, I know I can communicate freely to the people who can do something about it.
74. My supervisor does not have the slightest idea about how I feel.
75. When I disagree with another member of my work team, I go directly to that person to resolve the matter.
76. People talk negatively about others when they are not around.
77. The members of my work team communicate clearly and honestly with one another.

I. CONFLICT MANAGEMENT

Is conflict a source of creative energy to your work team? If so, is it being handled well; if not, it may be a disruptive force and a drain on the organization's performance. Items 78 through 88 help you to assess your work team's approach to conflict.

78. When there is disagreement we are expected to handle the issues forthrightly.
79. When two or more people disagree, there are clear and effective methods to follow to resolve the situation.
80. A conflict that I have with someone in the work team affects my work.
81. When there are disagreements in the work team, they tend to be ignored.
82. There is evidence of significant, unresolved conflict in this work team.
83. Disagreements are used in ways that stimulate understanding and new ideas.
84. During times of disagreement, expression of negative feelings is accepted.
85. Disagreements between members of the work team seem impossible to resolve.
86. My work team has difficulty doing its job because of conflict between one or more members.
87. My work team supervisor handles conflict well.
88. Disagreeing with my work team supervisor is "O.K."

A - Always F - Frequently O - Occasionally S - Seldom N - Never

J. PROBLEM SOLVING

Problems are potential opportunities for growth and new directions. Items 89 through 100 help you to assess your own work team's functioning with regard to identifying and solving problems creatively.

89. My work team discovers problems right away, before they get too serious.
90. Members of my work team who point out problems and offer suggestions are regarded as contributing to the team.
91. My fellow work team members and I make sure we agree about what the real problem is **before** talking about a solution.
92. I have ideas about how to solve some of the problems that my work team faces in its work.
93. My ideas are taken seriously when my team works at solving tough problems.
94. In my work team, differences of opinion are encouraged before a final decision is made about a problem.
95. Before a solution to a problem is chosen, my work team discusses the pros and cons of several solutions.
96. Solutions to problems are discussed in my work team in terms of human concerns as well as material costs.
97. Before the team works on a problem, my fellow members and I make sure we understand how the final decision will be made and who will make it.
98. My fellow team members and I are asked to discuss a problem and recommend a solution when our supervisor has already determined the solution.
99. After a decision has been made, the members of my work team actually follow through on what they have agreed to do.
100. Even though my fellow work team members and I agree to solutions, the same problems keep coming back over and over again.

K. MEETING EFFECTIVENESS

Successful organizations have effective meetings that are characterized by clear purpose, competent leadership, and follow-through on the decisions that are made. Items 101 through 114 help you to assess the effectiveness of the meetings that you personally attend.

101. I believe that a lot of time is wasted in work team meetings.
102. People are asked to attend meetings only if it is important for them to attend.
103. People know the reasons for meetings before they arrive.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

104. The people who lead meetings ask for constructive criticism to improve their meeting leadership.
105. Those who lead meetings do not do most of the talking, but are able to help those attending to talk freely and give opinions.
106. The people who lead meetings plan them carefully so that the purpose is accomplished in the time allowed.
107. People speak up in meetings if they disagree with what is happening.
108. The total group attending a meeting works on issues that could be handled better by a smaller group.
109. If difficulties arise during a meeting, those attending stop the discussion and try to find out what the trouble is before proceeding.
110. In problem-solving meetings people sit so that they can see one another's faces.
111. It is easy to put my concerns on the agenda.
112. When a meeting ends, who should do what and by when is clear.
113. When a meeting is over, the people who said they would do things actually do them.
114. At each meeting, we review what people had agreed to do and whether they did them.

L. JOB SATISFACTION

Your satisfaction with your job is directly related to important organizational concerns such as performance, absenteeism, and turnover. Items 115 through 126 help you to assess the security, challenge, authority, responsibility, creativity, and rewards that you find in your job and in our organization.

115. I feel it's okay to try better ways of doing things in my work.
116. I am encouraged to think creatively and independently in my job.
117. If I were to have personal difficulties, my supervisor would hold these difficulties against me in my job.
118. It seems as if people are fired, laid off, or transferred without warning or clear cause.
119. If given the responsibility for a task, I also have the authority to do it.
120. I feel a sense of pride and accomplishment as a result of the work I do.
121. I believe that if I do excellent work I will be recognized and appreciated for it.
122. Others know that my job is important to the organization.

A - Always F - Frequently O - Occasionally S - Seldom N - Never

- 123. My job requires that I grow and try new things.
- 124. My job gives me the chance to do the things I do best.
- 125. If I had a choice, I would choose to work with the kind of people who are presently in my work team.
- 126. My relationships with members of my work team are satisfying to me.

M. GROUP PRODUCTIVITY

Group performance is effected by many factors. Items 127 through 140 helps you assess the impact of resource availability, system support, "Make it Work" norms, and intergroup activity on your work team.

- 127. Equipment, materials, resources are available when needed.
- 128. Repairs/breakdown are handled in a timely way.
- 129. The schedule of our task(s) is attainable.
- 130. What we're asked to do is technically feasible.
- 131. The funding is adequate.
- 132. Staffing is adequate.
- 133. Members are criticized in my work team if they try to improve things.
- 134. If things are not going well in my work team, I know I can influence the team to be more productive.
- 135. In my opinion, some members of my work team let their drinking or drug use effect their work.
- 136. My work team members and I know what other groups need from us, and we provide them with it.
- 137. My work team members and I can obtain what we need from other groups in order to do our jobs well.
- 138. Our work gets delayed due to factors outside our work team.
- 139. Other groups expect the impossible of us.
- 140. We are blamed for other groups' failures.

A - Always

F - Frequently

O - Occasionally

S - Seldom

N - Never

I am interested in seeing my own work team and/or the entire organization improve in the following areas:

- | | | |
|------------------------|---------------------------|-----------------------------------|
| 1. Supervision | 6. Meeting effectiveness | 11. Motivational climate |
| 2. Role clarity | 7. Job satisfaction | 12. Physical environment |
| 3. Communications | 8. Productivity factors | 13. Organizational stress factors |
| 4. Conflict management | 9. Planning | |
| 5. Problem solving | 10. Management procedures | |
-

QUESTION II-38 (Page 95)

Activity Number CA3-4.1.2. Describe the processes used to communicate the disciplinary and grievance policies to site employees, and to respond to questions/classifications.

Describe what tracking procedure has been developed to ensure that each step in the grievance process has been accomplished.

Describe the generic schedule to ensure timely resolution of grievances.

RESPONSE

The disciplinary and grievance processes have received considerable attention at senior levels of the Nuclear Group. The Executive Vice President-Nuclear and his staff have instituted a process to review and revise the grievance handling process.

The disciplinary guidelines and grievance procedures are communicated to all employees via the "You and Your Company" handbook issued to employees. This handbook is being revised and will be reissued to all employees in the near future. Employees are instructed to direct questions or concerns to their immediate supervision. Activity CA3-2.2.4 will initiate special training on disciplinary guidelines for the PBAPS operating chain from the Plant Manager to Shift Supervisors prior to restart.

The revised Nuclear Group grievance procedures require first-level supervision to promptly respond to employee concerns within 20 days. If this time period is not met or

the response is unsatisfactory to the employee, the employee has the opportunity to present the concern to successively higher levels of supervision up to and including the department head. Each level is required to respond in a timely manner, not to exceed 20 days. If the employee's concern is still not resolved, the employee has the opportunity to present a formal grievance to the company's Personnel and Industrial Relations Department. The Manager, Industrial Relations tracks each grievance submitted to the Personnel and Industrial Relations Department by maintaining a file which indicates its status. This file is periodically reviewed to ensure timely resolution of grievances.

In addition to these actions, a consultant has been retained to review PE Industrial Relations protocols. This effort is expected to be completed in November 1988. The result of the comprehensive review will be a revised set of protocols that will form the basis of discipline and grievance handling procedures for the company. Training for PE managers and supervisors will follow the development of the protocols in 1989.

QUESTION II-39 (Page 96)

Activity Number CA3-4.3.1. Describe the schedule established for developing performance standards for each employee and for coaching employees on their role in the performance evaluation process. Explain why more frequent performance evaluations should not be conducted until employee performance has stabilized (e.g. every six months) as one way of monitoring/evaluating the continuation of positive attitudes/culture changes among the managers/supervisors/staff.

RESPONSE

By the end of 1988, all employees at PBAPS will have had face-to-face performance discussions with their immediate supervisor. The process was begun in the spring of 1988, and will cascade down through the organization. These performance discussions will include the establishment of performance standards for each employee. In addition to the required annual performance review, the Plant Manager will conduct face-to-face performance reviews at nominal six-month intervals with each of his direct reports to provide more frequent opportunities to review management staff performance and to make any mid-course corrections required in a timely manner. They, in turn, have been instructed to conduct performance discussions with their subordinates as often as needed.

QUESTION II-40 (Page 96)

Activity Number CA3-4.4.1. Describe the formal procedure change initiation process and the process for developing new procedures, and the schedule for turn-around time from operator feedback through accomplishment.

RESPONSE

The change initiation process for Administrative procedures is contained in Administrative Procedure A-1. The change initiation process for initiating changes to operating procedures is contained in Administrative Procedure A-20. For all other procedure types, the change initiation process is contained in Administrative Procedure A-128 (currently being developed for use prior to restart).

For new procedures, the process is governed by Administrative Procedure A-1 and the specific Administrative Procedure for that category of procedure. Using the guidance and direction provided in A-1 and the Specific "A" procedure which governs the new procedure, the writer develops a draft of the new procedure under the oversight and sponsorship of the senior staff member assigned responsibility for the specific category of procedure being developed. During the development process, input and feedback is obtained from appropriate parties on the draft procedure. When the senior staff member is satisfied with the procedure, it is presented to the Plant Operations Review Committee (PORC) for review and recommendation for approval, and then to the issuing authority. Once approval

is obtained, the procedure is distributed to appropriate locations and positions for that specific category of procedure.

With regard to operating procedures changes, any operator or other operating procedure user who has marked up (revised) a copy of an existing procedure, or has written a new additional procedure, can submit it for review to the operations support group. This group will then have responsibility for reviewing it, securing any necessary review, and processing the proposed procedure or procedure change through PORC. In addition to this process, a procedure suggestion form exists with blank copies contained in the control room, so that an operator who encounters the need for procedure revision can initiate the revision process (by describing the change he is requesting and submitting that form to the operations support group for logging and evaluation). The recommended change is processed and an estimated completion date entered. In addition, the operator is advised as to the disposition of his recommendation.

Under the current shutdown condition, operator recommended changes that correct a potentially unsafe operation are addressed and resolved immediately, or at the latest, prior to the procedure being used to support the subject system operation. Given the current plant restart

readiness strategy, this latter option may be used to properly manage the procedure rewrite work load. However, the operator always has the option of correcting a potentially unsafe operation immediately by initiating a temporary procedure change (TPC).

Under normal conditions (after restart), it is expected that the maximum turnaround time for recommended changes would be two weeks. Again, for correction of potentially unsafe procedural operation, a TPC would be used for immediate correction.

QUESTION II-41 (Page 97)

Activity Number CA3-4.4.4. Explain why all training on revised procedures should not be complete prior to restart. Describe the tracking system for ensuring that new and revised procedures are incorporated into training programs.

RESPONSE

Prior to plant restart, personnel who need to effect a procedure will be trained in the revision to that procedure.

With regard to the tracking system for ensuring that new and revised procedures are incorporated into training programs, a Site Training Division software program, Program Revision Action, is used to initiate and track through to completion the subject procedure revisions entry into training. Input to Program Revision Action, i.e., new or revised procedure occurrences, is provided by individual Training Division instructors who have been assigned to specific functional areas for interface purposes that include the identification and transfer to the Training Division of new or revised procedures.

QUESTION II-42 (Page 97)

Activity Number CA3-4.4.7. Explain why all procedures should not be reviewed prior to restart.

RESPONSE

As part of PE's multi-pronged approach to improving adherence to procedures at PBAPS, the content of station procedures was assessed to determine needs for revision or upgrading of existing procedures, or for the development of any new procedures. First, an experienced PE Procedure Coordinator was assigned to develop the evaluation methodology to be used with assistance from plant management and consultants. Then, all station procedures were reviewed and evaluated against a set of criteria which distinguished between specific procedure revisions required prior to restart because the revisions impacted safety and general procedure upgrades which would not be required until after restart because they did not impact on the safety of plant restart and operations.

Any procedure with technical inaccuracies, errors in sequence that would result in misoperation, any procedure that would compromise personnel or equipment safety, or that would impact on compliance with regulations will be revised prior to restart.

Additional information on the procedure revision and upgrade effort can be found on pages 69-70 of the Restart Plan, Section II, and in the response to NRC Question II-14.

QUESTION II-43 (Page 98)

Activity Number CA3-4.5.1. Identify the areas in which site quality organizations and the site line organization have improved working relationships.

RESPONSE

The Manager-Quality, PBAPS, routinely attends the Vice President-PBAPS weekly staff meetings. At these meetings, the PBAPS Manager, Quality, reports on the status of Quality Assurance activities such as audits in progress and the status of findings and recommendations. As necessary, the Vice President-PBAPS and the PBAPS Manager, Quality, meet on specific topics related to Quality Assurance activities or to review Quality Assurance audit results. Additional areas of site line/quality organizations interface the following:

1. A team approach has been developed between Procurement Engineers, QC Technicians and Receiving Inspectors for expeditious parts evaluation, testing and release of spare parts.
2. The site quality organization has become more involved in performing reviews of station procedures, and provided experienced procedure writers to assist as needed.
3. The station staff is frequently consulted during the development of audit plans and scope.
4. Assistance has been provided to station management in the investigation of suspected problem areas.

QUESTION II-44 (Page 98)

Activity Number CA3-4.5.2. Explain why continuous QA/QC monitoring of operating activities should not be continued during restart of both units. Indicate how the appropriate level of QA coverage for ongoing operations at PBAPS will be determined.

RESPONSE

Line Management has primary responsibility for monitoring of operating activities. As part of the monitoring effort, Peach Bottom senior staff members conduct (and document) periodic observations of operating activities during backshifts and weekends. These monitoring efforts have also included observations by the company's Chief Executive Officer and Executive Vice President-Nuclear.

Continuous QA/QC monitoring of operations has been discontinued since the Shift Managers and their operating teams completed training and had demonstrated proficiency on shift. Our review indicated that continuation of this practice was not necessary and would not reinforce line management responsibility. This action was documented in PE letter from C. A. McNeill, Jr., to W. T. Russell dated April 8, 1988. QA monitoring of operations will be conducted randomly on a scheduled basis so that all shifts and shift crews are periodically monitored. The appropriate level of coverage will be determined by the General Manager, NQA and the site Quality Manager dependent on the level of shift activity and performance.

A number of NQA personnel have plant operations experience and others are receiving operations training. Sixteen current PE NQA personnel and a number of contractors have nuclear operations training and/or experience. Operations experience will be maintained in NQA through training and transfers.

QUESTION II-45 (Page 98)

Activity Number CA3-4.5.3. Clarify how developing a technically based audit program within Nuclear Operations QA has contributed to self-assessment efforts within site operations. Specify what important areas for improvement have been identified and any resulting improvements.

Describe the standards set in the 1988 Nuclear QA Goals which assure the maximization of performance based audits and surveillances.

Describe improvements which have been made in the processes and formats by which Nuclear QA reports independent assessment feedback to site and corporate management.

RESPONSE

PE's line management has the primary responsibility for assuring the safety and quality of its nuclear operations. A principal thrust of the Plan for Restart of Peach Bottom is to strengthen self-assessment and problem resolution capabilities within the Nuclear organization. In this context, self-assessment refers to PE self-assessment and includes both line and independent activities.

The assessments that result from an improved, technically-based audit program within Nuclear Operations QA contribute to overall PE self-assessment efforts, as well as serve to complement line management self-assessment efforts, by providing additional problem identification information. Thus, self-assessment efforts will be enhanced and line managers will be provided additional tools to better enable them to carry out their responsibilities.

The technical audit program has proven to be a valuable self-assessment function for site operations. Eleven technical audits were performed for PBAPS during 1987. Significant improvement opportunities were identified in the areas of Security, Fire Protection, and Emergency Preparedness. The 1988 NQA Goals call for greater than 50% of all audits and surveillances to be performance based.

A number of improvements have been made in NQA processes and formats for providing feedback to site and corporate management. These include:

1. Issuance of findings and recommendations requiring corrective action in color coded folders.
2. Revision of practices for issuance and distribution of findings and audit reports to responsible supervision.
3. Preparation and issuance of Executive Summaries for audit reports.
4. Standardization of supervisory levels to participate in exit interviews.
5. Preparation and issuance of monthly exceptions report for each Vice President and unique trending of each Department's performance.
6. Use of Executive Problem Statements to highlight issues requiring executive management attention.
7. Issuance of quarterly reports on the effectiveness of executive management response to identified problems.

QUESTION II-46 (Page 98)

Activity Number CA3-4.5.4. Explain when improved QA reporting practices will be in place.

RESPONSE

Each of the improved QA reporting practices described in response to Question II-45 is in place. Procedural changes formalizing these and other improvements are currently being prepared and will be in place prior to restart.

QUESTION II-47 (Page 99)

Activity Number CA3-4.6.7. Describe the schedule for development and implementation of interface agreements between site training and corporate training departments.

RESPONSE

The activity referenced in the question (CA3-4.6.7) relates to establishing interface agreements with regard to the Operating Experience Assessment Program (OEAP) and the Commitment Tracking Program (CTP). This activity will be completed by July 29, 1988. With regard to the question, interface agreements between site and corporate training departments are covered under the scope of Major Activities CA4-2.7.2 in Section I and CA3-2.1.1 in Section II of the Restart Plan. These agreements have been drafted and are currently in the approval process and will be completed July 1988.

A Nuclear Training Procedures Task Force is developing Nuclear Group Administrative Procedures which, when approved, will replace the transition interface agreements.

QUESTION II-48 (Page 99)

Describe the processes established for: identifying problems, developing corrective actions, tracking corrective action commitments, and evaluation of effectiveness of actions.

RESPONSE

Improved problem identification and corrective action programs are being developed and implemented. These include Nonconformance, Corrective Action, Reportability, and Root Cause processes. PE is implementing Nonconformance Reporting (NCR) and Corrective Action (CAR) programs that establish consistent controls for the identification of problems, development of corrective actions, and escalation of significant issues to proper levels of management attention. The Commitment Tracking Program (CTP) for tracking corrective action commitments and bringing overdue items to management's attention has also been upgraded and implemented. The CTP is described in response to Question I-16. As part of the CTP, the effectiveness of corrective actions is reviewed prior to closing out open items and in follow-up audits and/or surveillances.

To assure that items are appropriately evaluated, a uniform corporate-wide process (the Reportability Program) is being implemented to screen all potential deficiencies for reportability. A number of individuals throughout the

Nuclear organization have been designated and trained in this process to assure consistent and effective screening such that all appropriate items are evaluated.

Program descriptions and procedures controlling the above processes are available for NRC staff review at PE corporate offices.

While the above programs provide additional assurances that individual problems are identified, evaluated, and corrected, PE understands the importance of assessments from a broader perspective. Therefore, we are also in the process of developing an improved Root Cause Evaluation Program which will review problems to identify their underlying bases. In this way, corrective actions can be developed which will more effectively address the fundamental issues associated with individual items.

QUESTION II-49 (Page 99)

Describe the schedule for assessing work management processes and implementation of recommended changes in these processes.

RESPONSE

PE has identified four work management processes which were assigned a high priority for improved effectiveness (see Restart Plan, page 74 of Section II). These four processes are: the PBAPS Maintenance Management Process, the Plant Performance Reporting Process, the Nuclear Configuration Management Program, and the Nuclear Commitment Tracking Program. The status of these assessments is provided in the response to Question II-18.

In addition, PE will perform assessments of additional management processes as part of a comprehensive, long-term effort to improve effectiveness in other areas beyond those noted above (see Major Activities CA4-2.6.1 and CA4-2.6.2). The plan for conducting these follow-on assessments, as well as the prioritized list of Nuclear program areas to be assessed, is being reviewed with management and will be finalized by the end of July 1988.

QUESTION II-50 (Page 99)

Activity Number CA3-4.6.8. Explain when the Nuclear Performance Management Program will be in place.

RESPONSE

The Nuclear Performance Management Program is a systematic process for developing, communicating, and monitoring Nuclear group mission and objectives and departmental objectives and goals (specific and measurable tasks which support objectives). The Nuclear Performance Management Program began at PBAPS early in 1988 with the development of PBAPS Objectives and Goals for 1988, which support overall Nuclear Group objectives. This development effort was directed by the Vice President-PBAPS in conjunction with site managers and superintendents.

Co. current with this development effort (February 1988), a series of all-hands meetings was convened and all PBAPS employees and contractors had the opportunity to hear and question the Nuclear Group and PBAPS objectives.

Subsequent to these meetings, the PBAPS Objectives and Goals were disseminated throughout the site via company newspaper, site general employee training (GET), and site postings.

The PBAPS Division Managers and Training Superintendent* have incorporated the 1988 Goals into

their respective 1988 Division Goals. The Division Goals have been approved by the Vice President-PBAPS and have been communicated down through the divisions for planning and implementation.

Question II-51 (Page 103)

Explain why shutdown issue number 9 involving a management focus on compliance rather than acknowledgement and correction of the root causes of problems is not correlated with root cause number one involving a lack of adequate personal leadership skills on the part of senior management at the plant.

Response

The logic established to relate shutdown order issues to root causes was based on the rationale that since the root causes are so interrelated, a case could be made that all shutdown issues are related to all root causes. However, doing this would make it difficult to present the information in the plan in a concisely organized manner. With regard to Shutdown Issue 9, it was considered that a management focus on compliance flowed more directly from the station culture (RC-3) and corporate management's failure to recognize the developing severity of the problem at PBAPS and take sufficient corrective actions (RC-4). The lack of adequate personal leadership and management skills on the part of senior management at the plant (RC-1) was considered to be a more direct cause of the other shutdown issues (SD-1 through 8) than of Shut Down Issue 9 (SD-9). However, there is clearly a link that can be established between RC-1 and SD-9, and PE has no objection to acknowledging this by listing SD-9 as a shutdown issue related to Root Cause 1 (RC-1).

**PHILADELPHIA ELECTRIC COMPANY
RESPONSE TO SPECIFIC COMMENTS
PRESENTED BY THE STATE OF
MARYLAND**

COMMENT 1

The Restart Plan should give the number of operators required for normal operation of the plant without excessive overtime and describe how PECO will provide this number of operators.

Major Activities 2-1.1.1, 2-1.1.2, and 2-1.1.3 describe PECO's commitment to assess operator availability, accelerate operator training, and supplement operator corp with contractor and co-owner personnel. This should be augmented to include more detail, including the number of operators required, and specifically how PECO will provide these operators.

RESPONSE

Information which responds to these questions is provided in the responses to NRC questions. Specifically, the response to NRC Question II-5 provides the goal for operator staffing at Peach Bottom which is aimed at preventing excessive overtime. The responses to NRC Questions II-6 and II-25 provide the current and planned staffing of licensed positions at Peach Bottom.

Of particular note is PE's commitment to propose a revision to the PBAPS Technical Specifications, by August 31, 1988, to assure control of the overtime worked by ROs and SROs. This proposed revision will utilize the guidance in the NRC's current recommendations on the overtime issue as contained in its proposed policy statement.

COMMENT 2

The Restart Plan should describe the role in the new organization of those individuals serving as Shift Superintendents at the time of shutdown.

It is not clear from the Restart Plan whether or not the former Shift Superintendents will be in supervisory positions under the new organization. PECO should avoid using these individuals to supervise personnel which have undergone rehabilitation training, or address how this could be done without compromising efforts to effect an attitudinal change at Peach Bottom.

RESPONSE

There were six Shift Superintendents at Peach Bottom at the time of the shutdown order. Two have since retired and four are employed in non-supervisory positions. One is employed in outage planning, one is employed in radwaste, one is revising procedures, and one works in ISEG on human performance evaluations. None will be directing licensed operators; however, their valuable knowledge will be used to support operation at Peach Bottom.

COMMENT 3

Face-to-face performance evaluations of all employees at Peach Bottom should be conducted prior to restart.

Major Activity 3-2.2.3 commits PECO to developing a plan for training managers in how to conduct face-to-face evaluations. Face-to-face performance evaluations are important in evaluating improvement in performance and attitude. Because they have been conducted poorly if at all in the past, they should be conducted for all employees prior to restart. The results of these evaluations are critical for assessing PECO's success in changing attitudes and improving performance.

RESPONSE

The response to NRC Question II-13 provides a discussion of the face-to-face performance evaluations that have been and will be conducted at Peach Bottom.

Additionally, the responses to NRC Questions II-26, II-31, and II-39 describe the training in performance evaluations being provided to supervisors at Peach Bottom.

To ensure continued positive effects in terms of performance, PBAPS has incorporated a 1988 station goal to "conduct face-to-face performance appraisal interviews by December 31, 1988, for all PE employees assigned to PBAPS, that will address individual investment in and commitment to nuclear excellence." In addition to the required annual performance review, the Plant Manager will conduct face-to-face performance reviews at nominal six-month intervals with each of his direct reports to provide more frequent opportunities to review management staff performance and to make any mid-course corrections required in a timely manner.

COMMENT 4

Additional management training should be conducted for supervisory personnel.

Major Activities 3-2.1.1 through 3-2.1.4 and 3-2.2.1 through 3-2.2.6 describe management training given some supervisory personnel at Peach Bottom. PECO should provide all supervisory personnel with management training or describe and justify the method used in selecting those individuals who received training.

RESPONSE

Additional management training is being provided to supervisors at PBAPS. Every supervisor at the plant will have completed a series of Supervisor Training Modules by July 31, 1988. The modules, which are completed one day a week over a four week period, are described below.

Supervising Work Groups - Develop an awareness of the supervisor's role and responsibilities and how their work groups can develop effective on-the-job behaviors.

Managing Task Group Meetings - Develop skills in organizing and conducting effective meetings.

Managing Performance - Develop knowledge and skills in the principles of goal setting, praising, and reprimands.

Managing Differences - Develop skills in recognizing the differences in individuals and in dealing with on the job conflict situations.

Management and Supervisory Development has been identified as one of the eight strategy areas for the Nuclear Group for

1989-1991. An ad hoc task group has set priorities and developed a timetable for their implementation which has been accepted by senior management. Additional information related to management training is also provided in the responses to NRC Questions II-29 and II-30.

COMMENT 5

PECo should modify its personnel disciplinary guidelines to identify infractions warranting immediate dismissal.

Major Activity 3-4.1.1 states that disciplinary guidelines have been modified to identify infractions warranting immediate suspension. These should be further strengthened to identify even more serious measures, such as immediate dismissal, when justified.

RESPONSE

The disciplinary system at PECO is a multiple step process. The disciplinary guidelines for the Nuclear Group have been changed. Some infractions are recognized to be more serious at a nuclear plant than in a fossil plant, and will now result in disciplinary action at a higher level. Some infractions can result in immediate suspension without pay, but termination does not occur until the investigation is complete. As indicated in the response to NRC Question II-12, personnel terminations have occurred as a result of infractions of PE's drug policy.

Additional information which responds to this question is provided in the response to NRC Question II-38.

COMMENT 6

Opportunities for rotating operators off-shift should be identified and implemented prior to restart.

Major Activity 2-2.1.1 concerns developing opportunities for operators to rotate off-shift, and ultimately to enjoy career opportunities off-shift. While promotional opportunities can be developed over time, opportunities for licensed operators to have temporary relief from shift duty should be developed and implemented prior to restart. It is recognized that the overall number of operators may limit these opportunities in the near future.

RESPONSE

PE has conducted a comprehensive review of its operator career path program at PBAPS. Planned off-shift rotation for operators (both licensed and non-licensed) was addressed as part of this review. There are a number of positions which could be filled by experienced operators to enhance their career growth. The program for rotation has not been finalized and cannot be fully implemented until 1990 when sufficient experienced operators are available.

Additional information which responds to this question is provided in the response to NRC Question II-4. Response to NRC Question II-6 provides the schedule for staffing of licensed personnel as it relates to rotational assignments and the response to Question II-28 provides the current schedule for implementing the degree and certificate program for licensed operators.

COMMENT 7

The Restart Plan should address the maintenance backlog, both preventive and corrective, and how it will be reduced to an acceptable level.

The maintenance backlog at Peach Bottom has received a great deal of attention. Much of the outstanding corrective and preventive maintenance should be completed prior to restart. The Restart Plan should address commitments made to INPO concerning maintenance, any maintenance tasks which will be outstanding at the time of restart, and the schedule for completing all maintenance tasks.

RESPONSE

PE will evaluate the maintenance backlog prior to restart and defer only those items which are found to have a negligible effect on safe operation of the plant. All modifications committed to the NRC and preventive maintenance on safety systems will be completed prior to restart. Work orders which are not directly related to the operation of Unit 2 (for example Administration Building, Substation) are being removed from the maintenance list in order to provide better management of Unit 2 activities.

Additional information which responds to this question is provided in the response to NRC Question II-19.

COMMENT 8

The Restart Plan should address all outstanding commitments to NRC and INPO, and PECO's schedule for addressing them.

PECO has made several commitments to the NRC and INPO concerning corrective actions identified in, for example, NRC Inspection Reports, Information Notices, and INPO evaluations. While many of these commitments go beyond restart issues, it is important to ensure that PECO has an acceptable plan for addressing all issues, no matter how long term, prior to restart. The Restart Plan should contain a plan and schedule for addressing these additional comments.

RESPONSE

The Commitment Tracking Program (CTP) will provide management with a mechanism to measure the effectiveness of commitment identification, tracking, schedule adherence, and close out.

The program is described in an Interface Agreement approved by the Executive Vice President-Nuclear and has been implemented through a Nuclear Group Administrative Procedure, a copy of which is enclosed. The CTP includes commitments made in correspondence to and from PE with external organizations, including NRC, INPO, Joint Utility Management Audit (JUMA), ANI and other federal, state and local agencies, as well as commitments established by the Nuclear Review Board, Independent Safety Engineering Group, Nuclear QA and OEAP organizations. The program will ensure that an accurate status of the commitments is maintained. The CTP was fully implemented on July 1, 1988.

Additional information which responds to this question is provided in responses to NRC Questions I-16 and II-48.

1.0 PURPOSE

This Nuclear Group Administrative Procedure (NGAP) describes the Philadelphia Electric Company's (PECO) Commitment Tracking Program (CTP). Specifically, this NGAP establishes the responsibilities, authorities, process and organizational interfaces for tracking and assuring compliance with PECO commitments to the organizations listed in Exhibit 1.

2.0 SCOPE

This NGAP applies to commitment tracking and compliance activities for its operating nuclear facilities (PBAPS and LGS Unit 1). Commitments within the CTP scope are those made to or imposed by the organizations listed in Exhibit 1 with the exception that Design Basis commitments are not within the scope of the CTP. Design Basis commitments are within the scope of the Configuration Management Program. The documents that shall, as a minimum, be reviewed to identify commitments are listed in Exhibit 2.

3.0 SOURCES AND REFERENCES

3.1 SOURCE DOCUMENTS

- 3.1.1 PECO Plan for Restart of Peach Bottom Atomic Power Station - Section I-Corporate Actions, Revision 1, Relating to CTP.
- 3.1.2 PECO Plan for Restart of Peach Bottom Atomic Power Station - Section II-PBAPS Actions Relating to CTP.

3.2 CROSS-REFERENCES

- 3.2.1 Nuclear Group Policy No. 2.1, Licensing and Regulatory
- 3.2.2 NGAP-AA, Configuration Management Program (later)
- 3.2.3 NGAP-BB, Correspondence Control Program (later)

3.2.4 NGAP-052.1, Preparation and Control of Nuclear
Group Administrative Procedures

4.0 DEFINITIONS

4.1 COMMITMENT

A documented obligation, either imposed upon or made by a designated PECO representative by one of the organizations listed in Exhibit 1, that either has or will establish requirements or promises actions to be performed.

4.2 ACTION ITEM COMMITMENTS

Commitments that require a non-routine, one time, future action by PECO, where an action may be a single activity or set of activities.

4.3 PROGRAMMATIC COMMITMENTS

Commitments that: (a) define or describe required programs, (b) require continuing routine/periodic actions by PECO over a defined period of time or (c) maintenance of an existing programmatic condition.

4.4 DESIGN BASIS COMMITMENTS

Commitments that describe the design criteria or design basis associated with the structures, systems and components of PBAPS or LGS.

4.5 HISTORICAL COMMITMENTS

Commitments that have been closed out and, therefore, do not require future action. Historical commitments are typically Completed Action Item Commitments, but can also include commitments that are closed on some other basis, for example, commitments that are superceded by or redundant to other commitments. Historical commitment data records are archived in a data base, for retrieval when required, and provide the principal historical record describing how each commitment was satisfied or closed out.

4.6 RESPONSIBLE DEPARTMENT

The department (PBAPS, LGS, NED, NSD or NQA) assigned to either implement or ensure continuing compliance with a commitment.

4.7 RESPONSIBLE IMPLEMENTING ORGANIZATION (RIO)

The Section assigned by the Responsible Department to implement a commitment or a section that is responsible for procedures or other controlled documents that implement one or more Programmatic Commitments.

4.8 RESPONSIBLE INDIVIDUAL

The individual in the RIO accountable for carrying out the activities and responsibilities of the RIO.

4.9 SUPPORT ORGANIZATIONS

An organization that is assigned to perform a specified task to support the RIO in implementing a commitment.

4.10 IMPLEMENTING DOCUMENT

A document that contains information that forms the basis for partially or completely satisfying a commitment. For Action Item commitments, implementing documents can be any of a wide variety of documents including: procedures, modification packages, calculations, correspondence, program plans, etc. For Programmatic Commitments implementing documents are typically controlled procedures, but can be other controlled documents, such as the Quality Assurance Manual.

5.0 RESPONSIBILITY AND AUTHORITY

5.1 RESPONSIBILITIES

5.1.1 Vice President - PBAPS, Vice President-LGS are accountable for the following activities for commitments assigned to PBAPS or LGS:

- A. Ensures that commitment implementation responsibilities are assigned to a RIO and Responsible Individual.
- B. Ensures that commitment implementation activities assigned to plant staff are timely, and correctly implement the committed to actions.
- C. Ensures that Programmatic Commitments assigned to plant staff are complied with on a continuing basis.

5.1.2 Vice President - Nuclear Services is accountable for ensuring that an effective Commitment Tracking Program is in place to:

- A. Identify new or revised commitments;
- B. Identify the Nuclear Group Department responsible for implementing commitments;
- C. Track the status of commitment implementation activities to closure;
- D. Maintain a current, concise and accurate data base(s) of Action Item, Programmatic and Historical Commitment data records.

5.1.3 Vice President - Nuclear Engineering and Vice President - Nuclear Services are accountable for the following:

- A. Ensures that commitment implementation responsibilities are assigned to a RIO and Responsible Individual.
- B. Ensures that commitment implementation activities assigned to NED or NSD are timely and correctly implement the committed to actions.
- C. Ensures the Programmatic Commitments assigned to NED or NSD are complied with on a continuing basis.

5.1.4 Commitment Tracking Organization is accountable for the following activities:

- A. With the exception of safeguards Information, receives and reviews incoming information from external sources and internal sources for commitment identification.
- B. Forwards commitments as appropriate to Responsible Departments for implementation.
- C. Consults with Responsible Departments to identify the RIO and Responsible Individual for commitment action and schedule for that action.
- D. Maintains information on the status of commitment tracking assignments.
- E. Prepares monthly status reports for senior management on commitment tracking status with summary remarks flagging overdue items and areas of concern.
- F. Performs a self-assessment of the effectiveness of the Commitment Tracking Program on an annual basis. (An independent annual program effectiveness review of the CTP will also be performed by NQA.)
- G. Reports on the CTP through Director of Licensing to the Manager-Nuclear Support and the Vice President-Nuclear Services, to the Executive Vice President-Nuclear.

5.1.5 Director, Nuclear Plant Security Section is accountable for the following activities:

- A. Evaluates proposed new commitments in draft outgoing documents containing safeguards information.
- B. Receives and reviews safeguards information from external and internal sources for commitment identification.
- C. Completes commitment data records to the extent possible, without recording safeguards

information. This will typically include all required fields in the data record with the exception of all or part of the "Statement of Commitment". Specifically it shall include the identification of the Responsible Department.

- D. Forwards completed data records to the Commitment Tracking Organization for entry into the commitment tracking data base.
- E. Consults with NSD Licensing as necessary to control and assist in the processing of proposed revisions to commitments containing safeguards information.
- F. Provides limited verification of commitment closure for commitments containing safeguards information.
- G. Ensures that Programmatic Commitments containing safeguards information are complied with on a continuing basis.

5.1.6 NSD Licensing/Site Regulatory Organization are accountable for performing those activities necessary to:

- A. Evaluate from a regulatory perspective, proposed new or revised commitments in draft outgoing documents to the external agencies listed in Exhibit 1.
- B. Control and process revisions to commitments.
- C. Provide limited verification of commitment closure.

5.1.7 General Manager, Nuclear Quality Assurance is accountable for the following activities:

- A. Ensures that the closure of commitments made in responses to NRC Notices of Violation and INPO Findings are verified.

- B. Ensures that commitment implementation responsibilities are assigned to a RIO and Responsible Individual.
- C. Ensures that commitment implementation activities assigned to NQA are timely, and correctly implement the committed to actions.
- D. Ensures that Programmatic Commitments assigned to NQA are complied with on a continuing basis.

5.1.8 Responsible Implementing Organization is accountable for (1) managing the commitment implementation activities for assigned Action Item commitments or (2) ensuring continuing compliance with Programmatic Commitments for assigned Implementing Documents. For Action Item Commitments this includes:

- A. Plans commitment implementation tasks (schedule, manpower, budget).
- B. Acquires support from other organizations (Support RIOs) as necessary to plan and perform the implementation tasks.
- C. Coordinates the activities of all task participants to ensure completion of assigned activities within agreed to schedules.
- D. Consolidates all necessary documentation into a Commitment Completion Package.
- E. Consults with/assists Licensing and/or the Site Regulatory Organization, as required, with the preparation of documents to external organizations relative to the implementation of the commitment.

For Programmatic Commitments this includes:

- A. Ensures that Implementing Documents containing assigned commitments are not changed without an evaluation of their impact on commitments.

- B. Identifies the impacts of planned revisions to Implementing Documents on existing commitments. Develops proposed commitment revisions, as appropriate.
- C. Consults with NSD Licensing or the Site Regulatory Organization to ensure that proposed commitment revisions are captured and appropriately processed.
- D. Prepares a documentation package to provide objective evidence of the commitment review prior to revising assigned Implementing Documents.

5.1.9 Support Organizations are accountable for the timeliness, completeness and quality of performance of assigned commitment implementation tasks.

5.1.10 Responsible Individual is responsible for carrying out the activities and responsibilities of the PIC.

5.2 AUTHORITY

PECO commitments can only be made by Nuclear Group Vice Presidents or above; their direct reports; or the General Manager, Nuclear Quality Assurance.

6.0 PREREQUISITES

Not Applicable.

7.0 COMMITMENT TRACKING PROGRAM

7.1 PROCESS DIAGRAM

The process for the Commitment Tracking Program is depicted in Exhibit 3. Highlights of the process are delineated below.

7.1.1 New/Revised Commitments

Draft documents to the external agencies listed in Exhibit 1 shall be reviewed to identify and

evaluate new or revised commitments. This review shall include an identification and review of existing related commitments as well as an estimate of the schedule, budgets and priorities for implementation of the commitments. New or revised commitments that will require special budget approvals to implement, shall be planned in accordance with the Integrated Management Process and approved by appropriate management prior to submittal to external agencies. These activities shall be carried out by the organization originating the commitment in consultation with the Site Regulatory Organization or NSD Licensing, as appropriate.

Requests for revision to existing commitments shall be evaluated by the Site Regulatory Organization or NSD Licensing to identify the regulatory impact and to identify and coordinate the appropriate regulatory actions necessary to revise the commitment.

7.1.2 Document Capture

The Document Control Organization shall capture and distribute a copy to the Commitment Tracking Organization, of all incoming and outgoing documents listed in Exhibit 2.

7.1.3 Commitment Identification

The Commitment Tracking Organization shall review all documents listed in Exhibit 2 to identify commitments and complete commitment data records. This commitment identification process shall include: (a) a requirement to document the review and disposition of documents reviewed and (b) verification of newly created or revised commitment data records by a second individual.

7.1.4 Identify/Agree on Responsibility

The Commitment Tracking Organization shall identify the Responsible Department for each new commitment. The identified department shall review the proposed assignment and shall notify the

Commitment Tracking Organization as to whether it agrees or disagrees with the assignment. When an agreement has been reached, the Commitment Tracking Organization shall enter the assignment into the Commitment data base.

The Responsible Department shall assign a RIO, which in turn shall assign a Responsible Individual for Commitment implementation. These assignments shall be entered into the Commitment data base.

7.1.5 Task Planning

The Responsible Individual shall plan the tasks necessary to implement the assigned commitment and enter the completion due date (if not already established by the commitment itself) into the Commitment data base. For commitment implementation activities that require special budget approvals, Task Planning shall include budget approvals and scheduling through the Integrated Management Process as appropriate.

7.1.6 Task Tracking

The Responsible Individual shall routinely update the Commitment data base to provide current status information. The Commitment Tracking Organization shall generate routine and ad hoc reports for managers at all levels as necessary to monitor the commitment activities within their areas of responsibility.

7.1.7 Commitment Closure

Commitment closure activities shall include: (a) consolidation of a Commitment Completion Package by the RIO; (b) certification by the RIO that the commitment has been satisfied; (c) a checking activity by the Site Regulatory or NSD Licensing Organizations to the extent necessary to concur that the commitment has been closed; and (d) 100% verification by Nuclear Quality Assurance of the closure of commitments made in responses to NRC Notices of Violation and INPO findings. The

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Commitment Tracking Organization shall archive and maintain the data records for closed commitments in the Commitment Tracking data base.

7.1.8 Continuing Compliance with Existing Commitments

RIOs assigned responsibility for ensuring continuing compliance with Programmatic Commitments shall control the revision of assigned Implementing documents to assure that commitments are not inadvertently violated or changed. These controls shall include: (a) a review of the Commitment data base and development of documentation to provide evidence of this review; (b) appropriate processing of requested revisions to existing commitments (see 7.1.1).

8.0 DOCUMENTATION

Documentation shall be retained to provide objective evidence of the performance, results and conclusions of various commitment tracking and compliance activities, and shall include the following: (a) a record of document reviews to identify commitments; (b) commitment closure documentation (Commitment Completion Package, RIO certifications, and concurrence of verifying organizations); (c) commitment data records for Action Item, Programmatic and Historical Commitments; (d) a record of commitment review prior to revising documents implementing Programmatic Commitments; (e) the basis for approvals received and applicable regulatory correspondence for commitment revisions; and (f) self assessment reports.

9.0 EXHIBITS

Exhibit 01 - Organizations Included in Scope of the Commitment Tracking Program

Exhibit 02 - Document Sources for Commitments

Exhibit 03 - Commitment Tracking Process Diagram

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9.1 ORGANIZATIONS INCLUDED IN THE SCOPE OF THE COMMITMENT TRACKING PROGRAM

9.1.1 External Organizations

Nuclear Regulatory Commission (NRC)
U.S. Environmental Protection Agency (EPA)
State and Local Agencies
U. S. Department of Transportation (DOT)
American Nuclear Insurers (ANI)
Institute of Nuclear Power Operations (INPO)
Joint Utility Management Audits (JUMA)

9.1.2 Internal Organizations

Nuclear Review Board (NRB)
Independent Safety Evaluation Group (ISEG)
Nuclear Quality Assurance (NQA)
Operating Event Analysis Program (OEAP)

9.2 DOCUMENT SOURCES FOR COMMITMENTS

NUCLEAR REGULATORY COMMISSION

Imposed Commitment Document Sources

NRC Rules and Regulations (10 CFR)
Operating License and License Amendments
Technical Specifications
NRC Orders

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Document Sources of Utility General Commitments to NRC

FSAR

Environmental Reports
Correspondence - Utility to NRC
Quality Assurance Program Description
Emergency Plan
Environmental Qualification Program
Fire Protection Program Plan
Site Security Plan
PSI/ISI/IST Program Descriptions
Process Control Program Description
Offsite Dose Calculation Manual
Special Reports (e.g., Event Related Reports, Overexposure Reports, Effluent greater than Appendix I, Declared Emergency Event Reports, ILRT Reports)
Other Routine Reports (Annual Rad. Env. Op Report, Annual Env. Op. Report, Annual Personnel Exposure Report, 5-3, Effluent Release Reports, Annual 10CFR50.59 Report, Annual Operating Reports, Monthly Operating Reports)
Hearing Transcripts

Other Potential NRC Commitment Document Sources

NRC Generic Letters
NRC Letters Representing Information under 10CFR50.54(f)
NRC Inspection Reports Requesting info under 10CFR2.2401
NRC Safety Evaluation Reports
NRC Letters related to Owner's Group Activities
NRC Meeting Minutes or Inspection Reports, etc., referencing PECO Commitments
NRC Bulletins and Information Notices
LERS
10 CFR Part 21 Reports
NRC Environmental Impact Statements

9.3 COMMITMENT TRACKING PROCESS DIAGRAM

MANAGEMENT

DOCUMENT CONTROL ORGANIZATION (DCO)

COMMITMENT TRACKING ORGANIZATION (NSD LIC.)

SITE REGULATORY OR NSD LICENSING (SR/NL)

RESPONSIBLE IMPLEMENTING ORGANIZATION (RIO)

INDEPENDENT VERIFICATION

MANAGEMENT MAKING THE COMMITMENT

REVIEW AND APPROVE PLANNED COMMITMENTS, BUDGETS, SCHEDULE

LEGAL REVIEW AS REQUIRED

SEARCH COMMITMENT DATA BASE TO ID AND REVIEW RELATED EXISTING COMMITMENTS

AGREE ON COMMITMENTS TO BE MADE ?

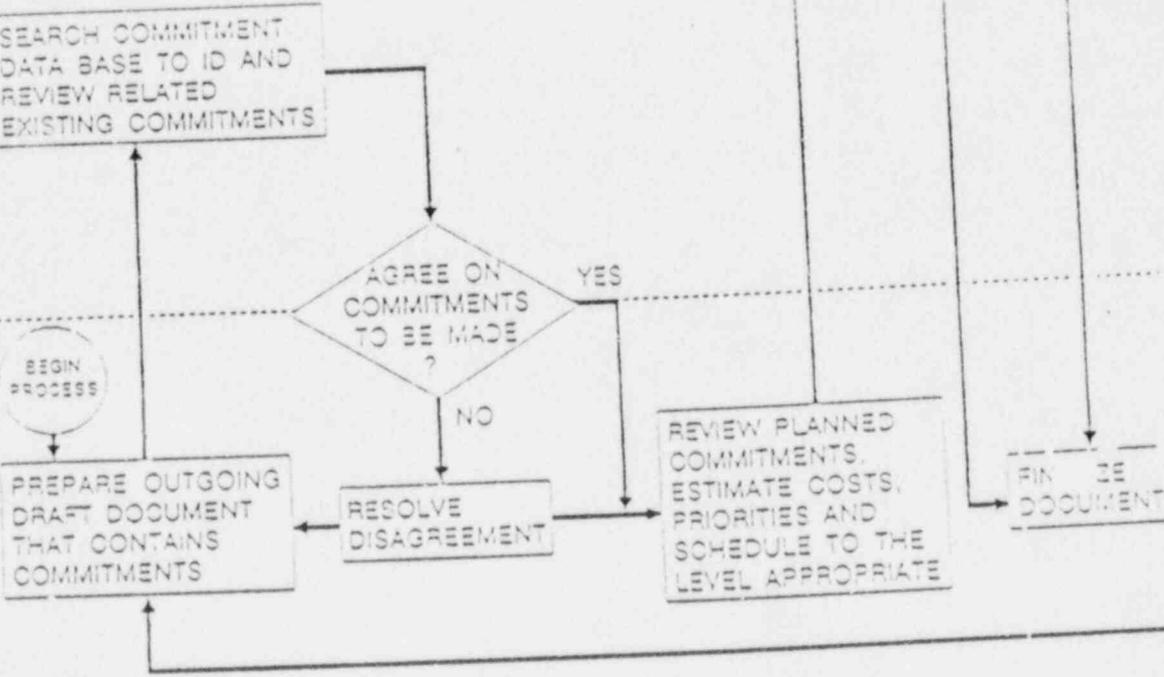
BEGIN PROCESS

PREPARE OUTGOING DRAFT DOCUMENT THAT CONTAINS COMMITMENTS

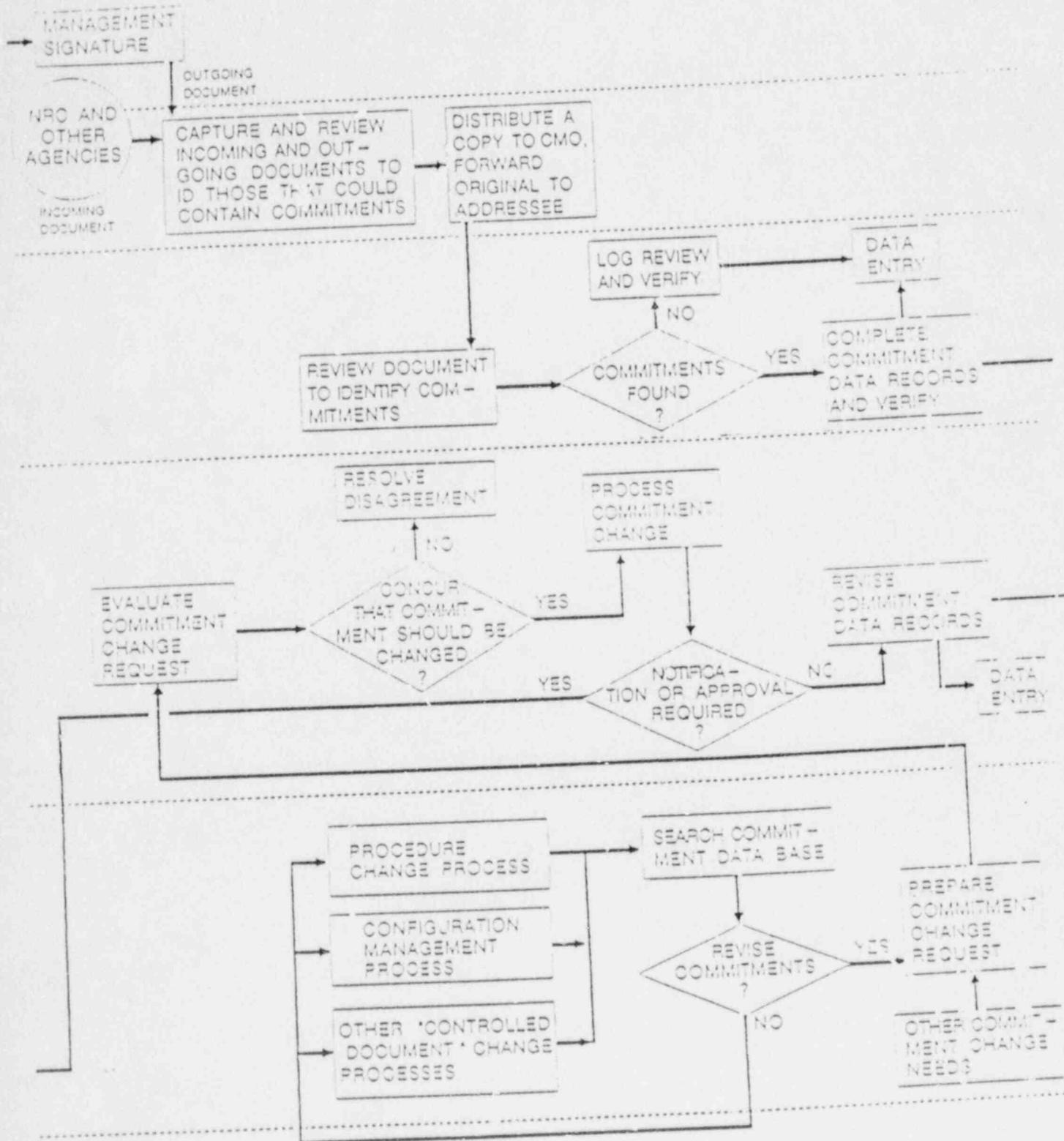
RESOLVE DISAGREEMENT

REVIEW PLANNED COMMITMENTS, ESTIMATE COSTS, PRIORITIES AND SCHEDULE TO THE LEVEL APPROPRIATE

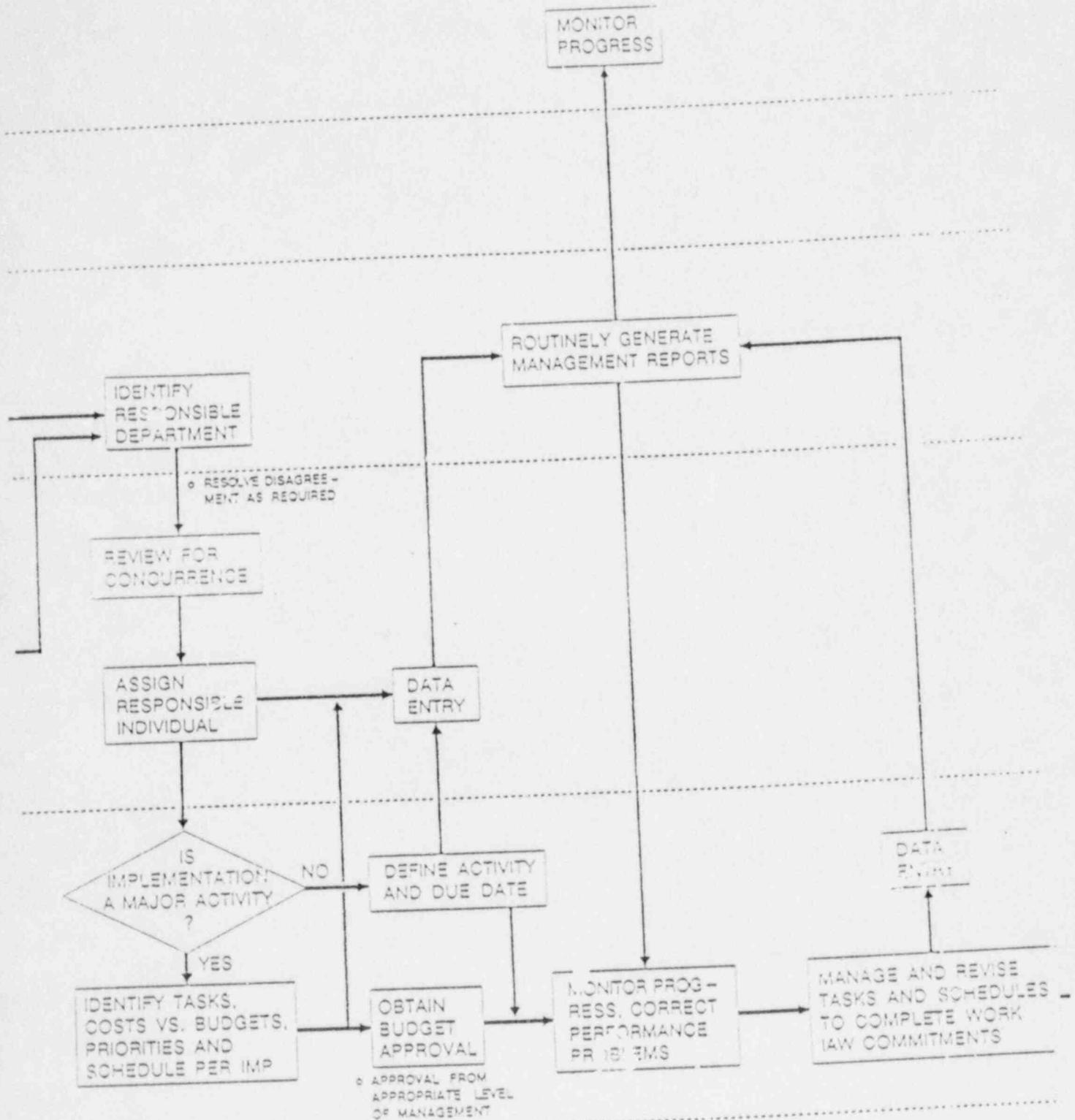
FINALIZE DOCUMENT

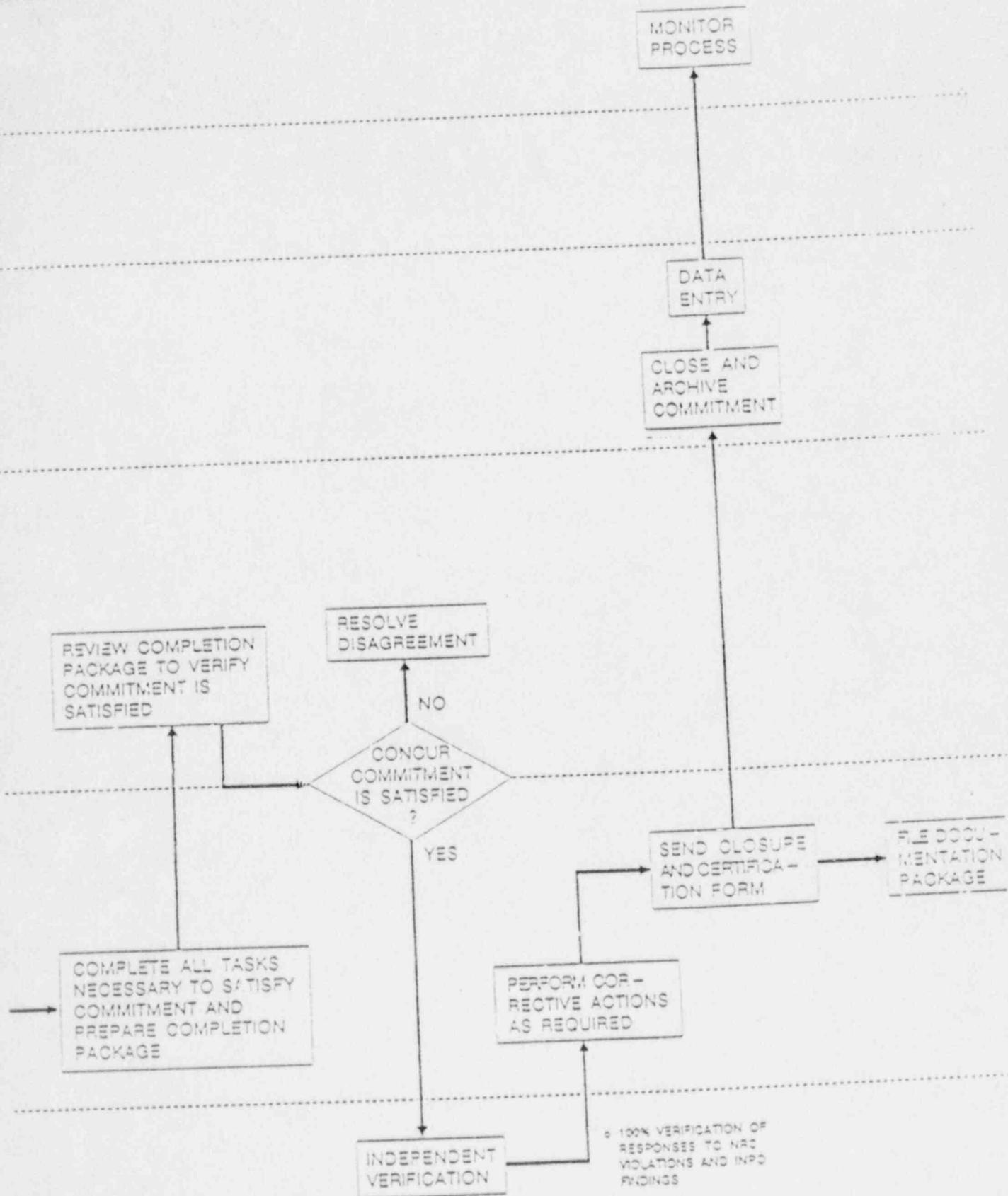


COMMITMENT TRACKING



PROCESS DIAGRAM





• 100% VERIFICATION OF RESPONSES TO NRC VIOLATIONS AND INPO FINDINGS