

PHILADELPHIA ELECTRIC COMPANY

**PLAN FOR RESTART
OF
PEACH BOTTOM
ATOMIC POWER STATION**

SECTION II
PBAPS ACTION



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CHAIRMAN
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February 12, 1988

AN OPEN LETTER FROM
J. LEE EVERETT
CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER
PHILADELPHIA ELECTRIC COMPANY

My Fellow Employees:

The Plan for Restart of Peach Bottom Atomic Power Station describes the management changes and actions being implemented to address the root causes of declining station performance.

I want to emphasize, that the preeminent themes discussed in Section II--plant leadership and station culture--cannot be addressed in isolation from our corporate environment. Changes in a company's culture must start at the very top.

Culture embodies our basic values and beliefs, and how we translate those values and beliefs into the operations of our Company. Philadelphia Electric's top management must clearly define those values and whole-heartedly support, by word and action, the changes we want to bring about in Company culture. Without such a Company commitment, our efforts to alter the cultural environment at Peach Bottom can only be marginally successful.

Therefore, I believe it is important for me to describe in this letter the cultural environment we want to establish for all of Philadelphia Electric Company, including our nuclear generating stations.

First, as business people, we want to provide quality services to our customers on a reliable basis at fair prices while earning a fair return for our stockholders. To accomplish this mission Philadelphia Electric Company, with our significant investment in nuclear power, is totally committed to the safe and reliable operation of Peach Bottom and Limerick. This simple statement of commitment has taken on new meaning as we deepen our understanding of today's nuclear requirements and re-dedicate ourselves toward nuclear excellence.

I believe that the foundation for excellence of our operations is a work force that believes that excellence is the minimum acceptable level of performance. This means that we in management must provide the leadership to develop the vision of excellence that will guide every work activity, and establish the work climate that will enable employees to enact that vision in their daily job performance. It means that we provide the organizational structure, staff resources, training and facilities to support excellence of work; recognize and reward excellence; and make it clear, through decisive actions, that we will not tolerate substandard performance. It means that all employees understand and accept high work performance standards; participate actively in performance monitoring; and make it clear, through timely communications, when conditions exist which do not support excellence of work.

While individual performance accountabilities must be clearly defined and upheld, excellence is equally dependent on team performance. Team performance requires trust and open communications at all levels so that there is clear understanding of what must be done, why, by when, by whom, and with what approval authority. Team performance means that we all recognize that each work group has a vital role to play as a service provider to other work groups so that the Company can provide timely, reliable quality service to its customers.

If each of us understands and believes in our vision of excellence and commits to supporting the vision through individual performance, and if each of us recognizes that our success depends on team performance, we have two of the basic ingredients for the Company culture I want to establish. A third element of that culture is pride in our work -- not arrogance, but pride. Pride is infectious and creates its own momentum toward excellence. I believe that all of us want to succeed and feel proud of our work.

Demonstration of these beliefs must be especially clear at Peach Bottom. Peach Bottom personnel want to succeed. Corporately we support their efforts to the maximum extent, because success at Peach Bottom means success for all of us.

We know that on the day that Peach Bottom goes back on line, it may not yet be among the best operating nuclear plants in the country. Culture is not changed overnight, nor are efforts toward bringing about cultural

change immediately effective in achieving the desired results. But, if a cultural change is sincerely motivated, constantly supported and consistently implemented, it will be successful in steadily improving the operational performance at Peach Bottom. Improved performance instills pride and a prideful work force refuses to accept anything less than the best.

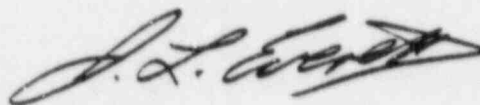
In summary, these are some of the key elements of the corporate culture that I intend for Philadelphia Electric Company. I know that my intentions are supported by corporate and Peach Bottom leadership.

To support our cultural change efforts, we have adopted a set of guiding principles to which the entire Company, from the Chief Executive Officer to the individual employee, must be dedicated:

- o Assuring the safety, quality and reliability of nuclear operations, in accordance with the highest standards of excellence, to fulfill and exceed government and industry requirements.
- o Assuring timely training of all Nuclear managers, supervisors, technical and crafts personnel to the highest industry standards; achieving and maintaining INPO accreditation in all relevant training areas.
- o Maintaining candid, open communications with the NRC, INPO, other industry groups and other utilities, to promote understanding and effective utilization of regulatory and industry experience by PE.
- o Maintaining candid, open communications between all nuclear line and support organizations, between all levels of nuclear management, and between nuclear management and employees, to promote efficient operations, timely problem identification, and effective problem resolution.
- o Promoting cultural change by fostering management and work behaviors which support an orientation to nuclear excellence, and routinely monitoring progress toward those objectives.

- o Assuring that the nuclear organizational structure, management systems and staffing levels are adequate to provide the necessary authorities and resources to those managers who are held accountable for the excellence of each aspect of the nuclear program.
- o Assuring that the programs and information management systems are in place to assist line management with timely and effective self-assessment of the quality of operations.
- o Assuring that the independent assessment process supports line management and is structured and staffed to provide the broadest possible coverage of nuclear operations at different levels of Company management up to and including the Board of Directors.

I am personally committed to these principles and will do everything within my power as Chief Executive Officer to support their implementation as we proceed with our Plan for the Restart of Peach Bottom.



J. L. Everett
Chairman and Chief Executive
Officer

PHILADELPHIA ELECTRIC COMPANY
PLAN FOR RESTART
OF
PEACH BOTTOM ATOMIC POWER STATION
SECTION II: PBAPS ACTION

February 12, 1988

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

On March 31, 1987, the Nuclear Regulatory Commission (NRC) ordered Philadelphia Electric Company (PE) to shut down the Peach Bottom Atomic Power Station (PBAPS) at Delta, Pennsylvania. The Shutdown Order stated that neither unit at PBAPS could be restarted until PE submitted a detailed, comprehensive plan and schedule to assure the NRC that Peach Bottom would be operated safely and in compliance with all requirements.

PE has identified four root causes of declining performance at PBAPS:

- 1) There was a lack of adequate personal leadership and management skills on the part of senior management at the plant.
- 2) The Company failed to initiate timely licensed operator replacement training programs.
- 3) The station culture, which had its roots in fossil and pre-TMI operations, had not adapted to changing nuclear requirements.
- 4) Corporate management failed to recognize the developing severity of the problems at PBAPS and thus, did not take sufficient corrective actions.

On November 25, 1987, PE submitted Section I of its Plan for Restart of Peach Bottom Atomic Power Station, which described the corporate actions PE is taking to address the fourth root cause of the issues identified in the Shutdown Order.

This document, Section II, describes the corrective actions PE is taking to address the first three root causes of the issues identified in the Shutdown Order and to ensure that PBAPS is ready to restart and operate safely. Section I and Section II are submitted collectively as PE's response to the NRC's requirement for a comprehensive corrective action plan prior to restart of PBAPS.

Section II: PBAPS Action

PE has developed the following eight corrective action objectives for the Plan for Restart of Peach Bottom Atomic Power Station: Section II, PBAPS Action.

Corrective Action Objectives to Address Root Cause 1:

- 1) Establish a PBAPS management team with strong leadership and management skills.
- 2) Increase the number of site management positions to ensure effective supervision and accountability for each function.

Corrective Action Objectives to Address Root Cause 2:

- 1) Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift.
- 2) Provide shift personnel with alternative career paths and opportunities for relief from shift work during their career progression.

Corrective Action Objectives to Address Root Cause 3:

- 1) Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence.
- 2) Provide training and team building support for management to live by these values.
- 3) Provide training and communications processes which support employee commitment to these values.
- 4) Ensure that management policies, programs and control systems support these values.

Establishing a Strong PBAPS Management Team

Philadelphia Electric Company's top priorities in the last several months have been to develop an effective management team for the Nuclear Group and correct the previous deficiencies in leadership and management skills at PBAPS. The Company recognizes that excellence in nuclear operations depends upon excellent management,

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and that nuclear managers must have a high level of technical expertise and industry knowledge, be able to develop and implement effective programs, be skillful and caring managers of people, and be committed to the development of a cultural environment which supports excellence of operations.

PE has assembled a strong leadership team to provide new direction at PBAPS. All five senior site managers (the Vice President, Plant Manager, Project Manager, Support Manager and the Training Superintendent) have demonstrated records of successful leadership and achievement of excellence across a broad spectrum of relevant backgrounds. Three of the five (the Vice President, Project Manager and Training Superintendent) are recent PE hires and contribute new managerial perspectives from other organizational cultures.

The PBAPS Operations organization has been similarly infused with management talent, as have other management positions in the expanded site organization. Of the top 16 PBAPS line managers at the Superintendent level or above, seven have been brought in from outside PE, two have been transferred from Limerick Generating Station (LGS), four have been assigned from the corporate organization and three have come from within the PBAPS organization. Collectively, these managers provide a strong leadership team with a balanced combination of new perspectives and solid continuity, and a common commitment to establish a site culture dedicated to nuclear excellence.

Increasing Supervision and Management Accountability at PBAPS

The new Nuclear organization eliminates the company-wide matrix under which PE formerly provided engineering, maintenance and construction support for its nuclear

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operations. The new site organization provides single-point accountability and control for site operations under the Vice President-PBAPS.

Each site work function was analyzed to determine whether it was a necessary part of the nuclear Plant Manager's responsibilities for day-to-day plant operations or whether it could be reassigned to other site organizations responsible for support activities. The result of this analysis is a revised site organization, expanded from 23 to 54 management positions at the senior engineer level or above, which provides more focused direction and accountability for plant operations, outage management and other station support activities, including contractor activities.

In addition to increased management accountability, there is also more employee accountability built into the revised organization. All permanent and contract employees assigned on a regular basis to PBAPS work locations are accountable through their PE or contract management reporting chains to the Vice President-PBAPS, except those personnel involved in independent assessment and oversight activities.

The revised organizational structure also provides for a strong corporate management presence on site; shortens and strengthens the nuclear operations chain of command; and enhances interactive communications between the station organization and management of off-site support organizations.

Recruitment, Training and Career Paths for Licensed Operators

PE has taken several actions to accelerate the recruitment and training of candidates for licensed operator training. Personnel policies and compensation

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practices related to the hiring of new employees have been revised to permit nuclear personnel to be hired more promptly and at other than entry levels. Fifteen new candidates for the licensed operator job progression were obtained in the summer of 1987 and are nearing qualification as Auxiliary Operators. Twenty more Helper candidates are currently being recruited. For the longer term, PE is committed to a goal of 85 licensed staff personnel, and will continue to aggressively recruit and train licensed operator candidates to attain this goal.

Additional career path opportunities for licensed and non-licensed operator personnel have been established by the new Operations organizational structure. The new daytime organization also provides licensed operators with rotational and permanent career progression opportunities beyond operating shift assignments. Other career path opportunities will be opened in the future to licensed operators through increased use of their skills in positions in training, quality assurance, outage planning, and other site and corporate support functions. PE is also committed to supporting the career advancement of licensed personnel into positions requiring college degrees. Two programs are being developed, one of which will provide Company support in terms of tuition and paid leave for selected personnel who wish to pursue this educational opportunity.

With an accelerated schedule for licensed operator training and the revised entry-level hiring policy, PE will be able to create and maintain a permanent reserve of licensed operator personnel to provide additional supervisory and operator coverage on each shift, manage overtime effectively, increase flexibility for relief and rotational assignments, and enable licensed personnel to pursue additional career opportunities off shift.

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Identification and Communication of Cultural Values

Significant efforts are underway to establish a PBAPS culture that will exemplify nuclear excellence. As emphasized by Mr. Everett in his Open Letter at the beginning of this document, these efforts have not been addressed in isolation from corporate, since changes in a company's culture must begin at the highest levels of corporate management.

The foundation upon which PE management is building its nuclear culture includes the following themes: individual accountability for performance, individual responsibility for safety and assurance of quality, teamwork, open and candid communications, and striving for excellence in all aspects of nuclear operational and organizational performance.

PE has taken substantive action to implement this top-down cultural change. The Nuclear Group Vision, Mission and Objectives has been widely communicated and actively supported by Nuclear managers. The Senior Vice President-Nuclear and his executive Nuclear management team have defined their commitments to employees and expectations of employees with respect to assurance of quality. This statement of management's philosophy for assurance of quality is being communicated by management to every employee in the Nuclear Group.

The Vice President-PBAPS, the Plant Manager and the Project Manager will be conducting a series of all-hands meetings the week of February 15, 1988, to personally discuss the Nuclear and PBAPS management philosophy, goals, and commitment to cultural change with site PE and contract employees.

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In their ongoing communications with site personnel, the PBAPS managers are emphasizing the continuing importance of the material condition of the plant and safety of operations as the basic building blocks of the PBAPS culture. Site managers have consistently demonstrated their belief in these basics as reported in examples contained in the body of this document.

Management Training and Team Building for Cultural Change

PE has recognized that excellence in nuclear operations requires excellence in management and supervision. A high priority has thus been placed on improved Nuclear management training and development. An assessment process to determine Nuclear management and supervisory training needs has already been initiated at the executive level and will be continued down through the organization to the first line supervisors.

The six new Shift Managers and three other PBAPS managers have successfully completed a four-week course, Managing for Excellence, as a first step in PE's enhanced management development and training program. During March, 1988, 12 to 16 first- and second-line supervisors from different site work groups will participate in a four-week training program which will focus on interpersonal skills and team development. Another near-term management training effort will provide PBAPS managers and supervisors with training in personnel management policies, including performance evaluations, and application of disciplinary guidelines.

Ongoing development efforts to ensure that PE managers have the skills and knowledge to support cultural change will include formal training, individual coaching, meeting management assistance and team-building support from organization

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development professionals, role modeling of management excellence by the new PBAPS management team, and visits to well-managed nuclear plants.

All of these methods are being used to assist corporate and PBAPS management to live by the cultural value themes which they have identified as critically necessary to success.

The Senior Vice President-Nuclear and his executive management staff meet monthly with the Nuclear Management Team of the top 30 Nuclear Group managers. These meetings have been recognized as very productive in providing strategic direction, identifying and addressing organizational concerns, and fostering a sense of interdepartmental team spirit and participative management. On January 19, 1988, an all day off-site meeting of almost 100 Nuclear Group Managers (all superintendents and above) was held to discuss the Nuclear Objectives for 1988, the Restart Plan, the Nuclear reorganization and specific objectives for cultural change in the Nuclear Group. The success of the meeting has resulted in the decision to hold similar off-site meetings on a quarterly basis.

As part of his team building efforts on site, the Vice President-PBAPS meets weekly with his PE direct reports and their immediate staffs to ensure they are providing unified direction by working to the same priorities. Assistant Superintendents, Senior Engineers, and lead vendor personnel are also included in extended site management staff meetings held by the Plant Manager every two weeks.

Employee Training and Communications for Cultural Change

Aware that employee attitudes toward their work have, in the past, been identified as a major concern at PBAPS, PE has extended maximum effort to provide the

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opportunity and environment for these attitudes to be changed. As with management training for cultural change, PE realized that formal classroom training would not be the only, nor even the preferred, method for changing employee attitudes and the PBAPS culture. A wide variety of training and communications activities has been implemented for these purposes including: a six-week attitude assessment and training program for licensed operators, an eight-day team training session for each shift manager and his shift team, a two-week attitude training program for non-licensed operators, an employee/management communications program ("Tell It To the Vice President") to solicit and respond to site employee concerns and suggestions, and an employee involvement program, PB-TEAM (Together Employees and Management), to give all PBAPS personnel an opportunity to become more involved in improving site conditions.

An organizational survey was conducted in January, 1988, to obtain additional information about employee concerns. This survey showed an encouraging response with regard to perceived improvement by site personnel in management's increased openness to employee communications about work-related problems and suggestions. Survey feedback and follow-up sessions with site managers and employees who participated in the survey will provide further opportunities to improve organization and work team performance.

Management Policies, Programs and Control Systems to Support Cultural Change

PE is aware that management must establish clear, consistent and effective policies, programs and control systems to support cultural change. The following are examples of PE's efforts in this regard.

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- **Personnel Policy Application**

PE is committed to returning more authority for personnel management from the staff to the line managers. To date, PE has strengthened line management authority and discretion by modifying the application of personnel policies for Nuclear personnel in the areas of hiring, supervisory promotion, discipline and grievance resolution. Requirements for timely and meaningful performance evaluations of all Nuclear Group employees are being emphasized to support continued focus on individual performance accountability.

- **Improvements to Support Procedural Compliance**

Recognizing the importance of procedural compliance as one component of nuclear safety and excellence, PE has taken a three-pronged approach to improving adherence to procedures. First, significant improvements have been made to the content of station procedures. Second, the management processes by which they are maintained, controlled and distributed have been strengthened. Third, attitudinal factors which impacted negatively on procedural compliance have been addressed through training. These efforts to strengthen procedural compliance at PBAPS will be reinforced by including compliance with procedures as a performance assessment item in all Nuclear employee performance evaluations.

Recent events indicate a new attitude toward the importance of procedural compliance. First, there has been an increase in employee submitted procedure change requests. A second important indicator of this change is the careful attention paid by line managers and operators to conducting work activities in accordance with formally approved procedures. For example, in two recent cases,

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line managers and operators delayed work that they knew how to perform until approved written procedures were available.

- **Improvements in Site Work Planning and Management**

A major effort is underway to improve site work planning and management processes as well. Positive changes in the methods used to plan and schedule work have been implemented as a result of the new site organizational structure, the reinstatement of daily station work planning meetings, the increased involvement of support groups such as Health Physics in work planning and scheduling, and general improvements in communications between work groups. These changes are demonstrating to employees that management is sincerely committed to high performance standards and efficiency of work activities at PBAPS.

- **Relationships with Regulatory Agencies and Auditors**

PE realizes that the establishment and maintenance of open, candid and constructive relationships with regulatory agencies and industry auditors is a key indicator of excellence in nuclear operations. PE has taken steps to establish and maintain such relationships and to ensure that individual managers and employees understand the Company's expectations with respect to regular exchanges of information with resident NRC Inspectors and cooperative assistance to site auditors and visitors.

A major concern of regulatory agencies and INPO has been the limited capability in the past of PBAPS to identify problems, develop appropriate corrective actions, track the status of corrective action commitments, and evaluate the

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effectiveness of results. Several of the changes in organizational structure and many of the improvements being made to management systems will enable PE to improve this capability.

- **Site Quality Organization Improvements**

The site Quality organization has been improved through organization and staffing changes, strengthening of audit and surveillance programs, development of improved interfaces and reporting practices, and initiation of cultural change activities.

Prior to the reorganization, there were four separate quality organizations at PBAPS, each led by separate first line supervision which reported off-site at relatively low levels of the corporate structure. The new organization is headed by a Manager-PBAPS Quality Division who reports directly to the General Manager-Nuclear QA, and is the single point of accountability for all site QA and QC activities.

Appropriate staffing of the new site quality organization has resulted in the recruitment and selection of a significant number of new experienced personnel.

CONCLUSION

PE has assembled a top management team, with demonstrated records of leadership and achievement, to direct the new PBAPS organization. The supporting positions on the PBAPS management team have also been staffed by individuals with proven technical and managerial ability. This strong and balanced management team provides the solid

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continuity and new perspectives needed to ensure that the previous deficiencies in leadership and managerial skills are corrected.

The new site organization structure establishes clearly focused accountability, provides for a strong corporate management presence on site, and shortens and strengthens the nuclear operations chain of command.

Changes in recruitment, hiring, employee transfer and training programs will ensure that an adequate reserve of licensed operator personnel is available and that operators have a variety of career paths open to them.

Although cultural change efforts cannot achieve their desired results overnight, there are already indicators of the positive impact of management's efforts to date. These indicators include more open communications between employees and management, improved interdepartmental working relationships, increased involvement by employees in problem identification, and demonstrated awareness of the importance of procedural compliance.

PE management and employees are firmly convinced that achievement of the Company's cultural change objectives will result in establishing a new culture that is dedicated to nuclear excellence. PE is committed to providing for continued enhancement of that culture over time. Our vision is to be recognized and respected as a leader in the nuclear power industry.

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CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

The concerns which led the Nuclear Regulatory Commission (NRC) to order the shutdown of the Peach Bottom Atomic Power Station (PBAPS) have been discussed in the Plan for Restart of Peach Bottom Atomic Power Station: Section I, Corporate Action submitted to the NRC on November 25, 1987, by the Philadelphia Electric Company (PE).

Based on extensive investigative and review activities, four root causes have been identified for declining performance at PBAPS:

- 1) There was a lack of adequate personal leadership and management skills on the part of senior management at the plant.
- 2) The Company failed to initiate timely licensed operator replacement training programs.
- 3) The station culture, which had its roots in fossil and pre-TMI operations, had not adapted to changing nuclear requirements.
- 4) Corporate management failed to recognize the developing severity of the problems at PBAPS and, thus, did not take sufficient corrective actions.

Section I of the Restart Plan presented the corrective actions PE is taking to address the fourth root cause. This document, Section II, describes the actions PE is taking to address the first three root causes of the issues identified in the Shutdown Order and to ensure that PBAPS is ready to restart and operate safely. Section I and Section II are submitted collectively as PE's response to the NRC's requirement for a comprehensive corrective action plan prior to restart of PBAPS.

1.1 ORGANIZATION OF SECTION II

Chapter 1 of this document provides an overview of the approach PE has taken in developing its corrective action program to address the first three root causes. Chapters 2, 3, and 4 focus on root causes 1, 2 and 3, respectively. Each chapter

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presents an analysis of that root cause, the corrective actions which are being implemented to address the root cause and the benefits to PBAPS as a result of these corrective actions.

Chapter 2 describes the new leadership at PBAPS and the organizational changes made to support effective management. Recruitment and training of new licensed operators and the career development opportunities which are being made available to them are described in Chapter 3. Chapter 4 discusses the extensive efforts which PE has made to establish a new culture at PBAPS and provides some examples of how these cultural change efforts are having effect. Chapter 5 lists the major corrective action activities which will be completed before restart.

A review of the NRC Shutdown Order suggests and PE's analysis confirms that the major contributing factors leading to the shutdown involved human behavior. The root causes of human behavior are multiple, complex and interrelated, as are the actions selected to change these behaviors. A detailed Relationship Index is presented in Appendix A which shows the relationships between the issues raised by the NRC in the Shutdown Order, the root causes identified by PE, the corrective action objectives, and the corrective actions and related major activities being taken by PE to address the shutdown issues and root causes.

1.2 CORRECTIVE ACTION OBJECTIVES FOR PBAPS

In determining how to address the first three root causes and promote excellence in the operation and management of PBAPS, PE was guided by two important concepts. The first of these concepts, as summarized in Section I, is that organizational structures, systems and people must be viewed as interdependent elements in cultural change efforts.

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To introduce cultural change in an organization, improvement efforts must be directed at all three elements. It is not enough to establish a new organizational structure without the appropriate leadership and management systems to support excellence in the work of the organization. Nor is it enough to put the right managers in place without developing the appropriate organizational structures and management systems to support excellence of leadership. Similarly, the excellence of an organization's management systems is dependent on appropriate organizational structures and strong management to hold people accountable for the development and use of these systems.

In Section I, PE described some of the major improvements which it is making to the corporate organizational structure and the management systems by which it will operate its nuclear program. Section II provides additional information about the site organizational structure and concentrates on the people part of the equation by describing the new leadership at PEAPS and the extensive cultural change efforts which are being implemented to motivate employee commitment to excellence.

The second concept which guided the development of the corrective action program for root causes 1, 2 and 3 is that site cultural change is heavily dependent on corporate cultural change. The underlying values of the company, as demonstrated by the ways in which it establishes and applies personnel policies, selects personnel for management positions, responds to requisitions for staffing resources, and communicates with company employees, must be congruent with and supportive of the commitment to nuclear excellence. Thus, Section II contains considerable information about corporate cultural change activities in areas such as the development and communication of Nuclear values and goals, revisions to

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personnel policies, selection of management personnel, and responsiveness to Nuclear resource requirements.

These two concepts (i.e., the interdependency of organization structure, management systems, and managerial ability, and the pervasive influence of corporate culture on site cultural change efforts) have formed the foundation on which the corrective action objectives for Section II of the Restart Plan were developed.

PE has established eight corrective action objectives to address the first three root causes.

Corrective Action Objectives to Address Root Cause 1

- 1) Establish a PBAPS management team with strong leadership and management skills.
- 2) Increase the number of site management positions to ensure effective supervision and accountability for each function.

Corrective Action Objectives to Address Root Cause 2

- 1) Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift.
- 2) Ensure that shift personnel have opportunities to pursue alternate career paths and to have relief from shift work during their career progression at PE.

Corrective Action Objectives to Address Root Cause 3

- 1) Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence.
- 2) Provide training and team building support for management to live by these values.
- 3) Provide training and communication processes which support employee commitment to these values.
- 4) Ensure that management policies, programs and control systems support these cultural values.

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PE believes that the achievement of these eight corrective action objectives, combined with the extensive corporate organizational changes and nuclear program improvements described in Section I, will resolve the root causes of the performance problems at Peach Bottom which led to the Shutdown Order and establish the foundation for a culture that is committed to nuclear excellence.

CHAPTER 2

IMPROVED LEADERSHIP AND MANAGEMENT AT PBAPS

2.0 IMPROVED LEADERSHIP AND MANAGEMENT AT PBAPS

The first root cause which PE has addressed in its Restart Plan is:

There was a lack of adequate personal leadership and management skills on the part of senior management at the plant.

2.1 ANALYSIS OF ROOT CAUSE 1

Leadership skills at PBAPS were inadequate to develop employee understanding of and willingness to comply with high nuclear standards. Plant management's goals and performance expectations had not been communicated effectively to Peach Bottom employees; organizational and individual accountabilities had not been clearly established; and little effort had been made to establish a team approach to site work planning and implementation. In general, there were poor communications among site work groups, and between the station and off-site work groups. Much of the communication downward in the organization was handled by memos and there was a lack of open two-way communications between station management and employees. This lack of adequate leadership skills had resulted in poor morale in general. The operators, who were also feeling the results of the second root cause discussed later in this document, had developed serious attitude problems evidenced by their lack of professionalism in the control room and by the hostility which they occasionally expressed toward other work groups, upper management, and visitors.

2.2 CORRECTIVE ACTIONS TO ADDRESS ROOT CAUSE 1

PE developed the following corrective action objectives to address the first root cause:

- 1) Establish a PBAPS management team with strong leadership and management skills.

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- 2) Increase the number of site management positions to ensure effective supervision and accountability for each function. Specifically:
- Develop the organizational structure to provide increased management direction, control, authority and accountability for site work activities.
 - Establish and implement an Operations organization structure which will support effective management and use of shift resources.

2.2.1 Establishing a Strong PBAPS Management Team

PE's first priorities in the last several months have been to develop an effective management team for the Nuclear Group and correct the previous deficiencies in leadership and management skills at PBAPS. The Company's approach to assembling the required management talent has combined identification and promotion of experienced PE managers with recruitment and hiring of new managerial personnel. The Company recognizes that excellence in nuclear operations depends upon excellent management, and that nuclear managers must have a high level of technical expertise and industry knowledge, be able to develop and implement effective programs and management systems, be skillful and caring managers of people, and be committed to the development of a cultural environment which supports excellence of operations.

PE has assembled a strong management team to provide new leadership for PBAPS. The individual team members bring a wide variety of disciplines and professional experience to their positions, including U.S. Navy nuclear experience, management leadership at high performing nuclear plants, extensive background in nuclear engineering and management, successful nuclear project management experience, effective management of nuclear technical and managerial training programs, and demonstrated results as managers of organizational change. Three of the five members of the site leadership team (the Vice President, Project Manager and Training Superintendent) are recent PE hires and bring new management perspectives

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to their assignments. All of the five are dedicated to developing a site culture that supports excellence. Under the direction and leadership of the Vice President-PBAPS, this team will be responsible for returning PBAPS to full power operation.

PBAPS Management Team

On May 4, 1987, PE appointed Dickinson M. Smith, Rear Admiral, U.S. Navy (Retired) as Manager-PBAPS. During his 25 years of Navy nuclear experience, Mr. Smith served as Chief of Staff, Allied Command Atlantic, where he directed an international military staff of 450 personnel from 11 NATO countries. Prior to that, he was Senior Military Commander in the Philippines, managing the largest U.S. Naval installation overseas with a total military and civilian work force of 35,000. Mr. Smith brings to his new duties well developed leadership abilities and has demonstrated the commitment to make PBAPS one of the best-run plants in the country. He has served ably at PBAPS, introducing several major improvements in site management and organizational communications, which are described later in this document. When the corporate reorganization was planned in October, 1987, Mr. Smith agreed to assume the responsibilities of the newly created position of Vice President-Peach Bottom Atomic Power Station.

To staff the newly redefined position of Plant Manager-PBAPS, the Company selected John F. Franz, who, as Manager-Limerick Generating Station (LGS), provided leadership to the management team which achieved high Systematic Assessment of Licensee Performance (SALP) ratings for Limerick. Mr. Franz brings 25 years of PE experience to his new assignment, including a variety of supervisory positions at PBAPS prior to 1976, nine years as Superintendent-Operations, LGS and nearly two

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years as Plant Manager, LGS. He has held NRC Senior Reactor Operator (SRO) licenses for PBAPS Units 1, 2, and 3 and LGS Unit 1. His extensive operating experience, thorough knowledge of the plant, and his demonstrated exceptional ability to involve employees in achieving team success make him an invaluable asset to the PBAPS management team.

The site Project Manager position has been capably filled by Kenneth P. Powers who has over 20 years of experience in engineering, craft supervision, quality control, cost engineering, and planning and scheduling, as well as Navy nuclear shipyard service. Thirteen years of his experience have been in nuclear, including seven years with Bechtel, where he was assigned for over four years as Project Field Engineer at LGS. There, he led an organization of 1000 professional personnel through fuel loading and initial operations. Earlier in his career, while working for United Engineers and Constructors, he served as Project Engineering Manager at Seabrook Nuclear Power Station from Pre-Reactor Pressure Vessel Hydrostatic Testing through hot functional testing. He brings to the management team demonstrated ability in planning, organizing and leading complex organizations to achieve their stated goals.

David R. Meyers, recently appointed Support Manager at PBAPS, brings to his new role proven leadership skills gained during his 23 years of experience in PE's Electric Production Department. Mr. Meyers has held supervisory and management positions since 1973, and, in 1984, became Assistant Superintendent at PE's Delaware Station where he served until accepting the PBAPS position. At Delaware Station, he successfully implemented several programs to reduce the costs of power generation. A recognized community leader, he has served for eight years as a school board member for the Centennial School District, including two years as Vice President

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and two years as President. He has also been Vice-Chairman (1982-83) and Chairman (1984-85) of the Pennsylvania Electric Association's System Operation Committee.

Completing the top PBAPS management team is Ernest A. Till, who joins PE as Site Training Superintendent. During 1986 and 1987, Mr. Till served as Nuclear Training Manager for Illinois Power Company, where he instituted major changes in the training department which were designed to ensure the success of general and INPO accredited training programs. Mr. Till brings a wide range of professional experiences to his new position, including 33 years of service as a career Naval Officer assigned to command positions in the Nuclear Navy and three years as Director of the Mathematics and Science faculty at the U.S. Naval Academy in Annapolis, MD.

In summary, all five members of the PBAPS top management team have proven records of successful leadership and achievement of excellence across a broad spectrum of relevant backgrounds. They are quickly becoming a close-knit management team with a common commitment to excellence for PBAPS. A team perspective has been developed and communicated which emphasizes that PBAPS is "our plant" and problems belong to "us, not them". This enhances the team's ability to focus on proactive problem-solving, make timely and appropriate decisions, and implement actions effectively and efficiently.

The PBAPS Operations management team, reporting to Mr. Franz, has been similarly infused with strong leadership. All managers in the Operations organization, from the Plant Manager down to and including the Shift Superintendents, have been replaced by strong managers with proven records of leadership and achievement.

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John B. Cotton is the leader of the new Operations team. Mr. Cotton was appointed Superintendent-Operations in November, 1987, upon successful completion of his SRO examination for PBAPS. Prior to accepting this position, Mr. Cotton served as Superintendent-Plant Services, PBAPS. He has had fifteen years of experience with PE, including six years as Maintenance Engineer at LGS, where he was SRO-licensed. During his five years as a U.S. Naval Officer, Mr. Cotton completed Navy Nuclear Power Training and performed effectively in a variety of supervisory roles. With experience at both of PE's nuclear plants in different key positions, Mr. Cotton has developed extensive knowledge of plant operations and a full appreciation of the importance of a team approach.

Frederick W. Polaski, who has over 16 years of experience as an engineer with PE, has been assigned as Assistant Superintendent-Operations. He has held positions of increasing responsibility in nuclear operations since he joined PE in 1972. Mr. Polaski assumed the duties of Operations Engineer at PBAPS following the shutdown in April, 1987. Prior to that assignment, he had served as Outage Planning Engineer for four years. His thorough knowledge of plant systems, work management processes and site personnel will contribute significantly to effective Operations management.

Another key member of the Operations team is Thomas N. Mitchell, Operations Support Engineer, who is on loan to PE from the Institute of Nuclear Power Operations (INPO). At INPO he has served as Assistant Manager and Manager of the Radiological Protection Department, and as Secretary of the Corporation and Staff Assistant to the President. He brings 10 years of experience in nuclear engineering and certification as a Health Physicist (Power Reactors) to his new position.

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The newly created Shift Manager positions complete the Operations management team. These positions have been filled by six carefully selected and trained PE SR0-licensed personnel: Joseph L. Clupp, George L. Gellrich, Steven J. Mannix, Thomas J. Niessen, Donald B. Warfel, and Anthony J. Wasong. They are each dr treed engineers and have had 6 to 14 years of experience with PE in a variety of technical and supervisory roles. Each of the Shift Managers has completed the Managing for Excellence course, a four-week intensive management training program, specifically designed to enhance managerial skills for this new position. They have convincingly demonstrated their leadership ability by building shift teams which have a high degree of cohesion and proficiency, as demonstrated by the impressive performance of these teams during team simulator training, to the full satisfaction of INPO and NRC evaluators.

In addition to the Operations group, Mr. Franz is supported by three other newly established or redefined superintendent-level organizations. The position of Superintendent-Maintenance/Instrumentation and Controls has been filled by Gerald R. Rainey, an experienced PE nuclear manager. Mr. Rainey's management experience includes assignment as Superintendent-Plant Services at PBAPS from April 1987 until his new assignment, and as Branch Engineer, Testing and Laboratories Division, and I&C Engineer at LGS. The newly appointed Superintendent-Plant Services, is Derryl LeQuia, who joins PE from the NRC where he has served over 13 years as a Radiation Specialist. With extensive experience as a Health Physics Supervisor and laboratory technician in the Navy Nuclear Program, Mr. LeQuia brings to the site management team a reputation for strong hands-on and supervisory experience in nuclear power plant health physics. The Superintendent-Technical position has been staffed by George F. Daebeler, another highly respected PE manager who has had 21 years of nuclear engineering and management experience with PE, serving as Branch Supervisor

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for the Safety and Licensing Branch, Fuel Branch, and Nuclear Steam Supply System Branch; head of Environmental Branch of the Nuclear and Environmental Sections; and Supervising Buyer for Nuclear Fuel Procurement.

Additional support for special projects is provided to the Plant Manager by the Staff Engineer, Jack E. Winzenried. Mr. Winzenried has had 20 years of nuclear experience with PE as an engineer and manager and has held an SRD license at PBAPS. Prior to joining PE, Mr. Winzenried served in the Nuclear Navy.

Under Kenneth P. Powers, in the Project organization, there are four new superintendents on the PBAPS management team. The Superintendent-Outages, James P. Wilson, came to PE in 1987 with seven years of experience with NUS Corporation, where he most recently served as Assistant General Manager of the Field Operations and Maintenance Division, and 20 years of experience with the U.S. Navy, where he was a Nuclear Submarine Qualified Engineer and also served as Assistant Repair Superintendent and Planning Superintendent at the Norfolk Naval Ship Yard. The Superintendent-Planning, Scheduling and Reporting, J. Terry Netzer, has joined PE from Bechtel bringing 20 years of extensive supervisory experience at exemplary nuclear facilities including LGS. John W. Austin, the Superintendent-Modifications, brings 20 years of fossil and nuclear engineering and construction experience, including substantial managerial assignments at PBAPS, to his new position. The Superintendent-Materials, Ocee G. Brown, also joins PE from Bechtel where he was most recently assigned as Material Manager/Assistant Project Manager at LGS for Unit 2 construction completion and startup. Mr. Brown has had over 20 years of nuclear power procurement experience.

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The Support Manager, David R. Meyers, also has four reports as part of the site management team. The new Superintendent-Administration position has been filled by Bruce L. Clark, an engineer with 21 years of experience at PE, primarily at Peach Bottom. In addition to his other experience, Mr. Clark was the manager of the successful restoration restart program following the PBAPS Unit 2 pipe replacement outage, and he served as the program manager for the PBAPS Improvement Program. The Personnel Administrator is Stephen S. Grosh, who has 20 years of experience at PE. In addition to his experience as a health physics technician, Mr. Grosh has served as a labor relations specialist at PE. Joseph C. Oddo has been selected to fill the Nuclear Security Specialist position. Mr. Oddo brings impressive experience in security and security training to this role from Shoreham Nuclear Power Station where he worked on the development of the initial security training program. Mr. Oddo has been assigned to PBAPS since 1985. The fourth position reporting to the Support Manager, the Station Controller position, is expected to be staffed by the end of February, 1988.

Also reporting to the Vice President-PBAPS is Hugh J. Diamond, the Commitment To Excellence (CTE) Site Program Manager, who has 20 years of experience at PE, 17 of which were in both site and corporate nuclear assignments. Mr. Diamond served as a PBAPS Test Engineer and Assistant Reactor Engineer for seven years. In his most recent assignment he served as Branch Head in the Fuel Management Section of Nuclear Services.

The remaining PBAPS site management positions have also been staffed by individuals who have demonstrated their technical and managerial competencies. Additional management biographical data will be found in Appendix B.

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Of the top 16 PBAPS line managers at the superintendent level or above, seven have been recruited and hired from outside PE, two have been transferred from LGS, four have been reassigned from corporate Nuclear, and three have come from within the PBAPS organization.

This management team will provide strong leadership. The members represent the varied disciplines necessary for effective management and have a broad spectrum of experience in the nuclear industry. They bring both new perspectives and solid continuity to their commitment to achieve excellence of nuclear operations at PBAPS.

PBAPS Quality Management Team

The General Manager-Nuclear Quality Assurance (QA) and his management team have taken great care in establishing and staffing the new site Quality organization. Appropriate staffing of the PBAPS Quality Division required recruitment of a significant number of experienced personnel.

J. Michael Pratt has been selected as the new Manager, PBAPS Quality Division, reporting directly to the General Manager-Nuclear QA. He brings over 30 years of engineering and management experience in power generation, including 21 years in nuclear power. He retired from the Royal Navy as Manager of Nuclear Repair at Britain's premier nuclear base, has held senior management positions in nuclear generation and quality assurance, has worked with INPO and also served as Chairman of the American Society of Quality Control's Working Committee on Operations QA Surveillance. Mr. Pratt will assume his responsibilities in February. In the interim, the Assistant General Manager-Nuclear QA has been serving as Acting Manager.

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Supporting Mr. Pratt are three new superintendent-level organizations. The Superintendent-PBAPS Quality Support is J. Thomas Wilson, who brings 19 years of technical and management experience in the PE Electric Production and Nuclear Operations Departments. The Superintendent-PBAPS Quality Control (QC), Donald E. McGarrigan, joins PE from United Engineers and Constructors where he has had 17 years of experience in QA engineering and management positions. John M. Cockroft, the Superintendent-PBAPS Quality Assurance, joined PE's Engineering and Research Quality Assurance organization in 1986, and brings over 17 years of operations, QA and management experience in the nuclear power industry to his new position at PBAPS.

Of the eight site Quality management and supervisory positions which have been staffed to date, two have been filled by experienced new hires who have not previously worked at PE, one by a recent PE hire with substantial external experience, two by individuals who have worked with PE as contractors and are now in the process of being hired as permanent employees of the Company, and one by a PE employee transferred from the corporate office. Each of these individuals has a proven record of performance in technical, management and QA/QC areas. In total, they represent an infusion of over 116 man-years of relevant experience into the PBAPS Quality organization.

2.2.2 Increasing Supervision and Management Accountability at PBAPS

As part of the corporate analysis preceding the Nuclear reorganization, the distribution of work within the corporate matrix organization in existence at that time was reviewed to determine which work functions should be reassigned to the

Section II: PBAPS ACTION

emerging Nuclear organization. At the site level, each work function was analyzed to determine whether it was a necessary part of the nuclear Plant Manager's responsibilities for day-to-day plant operations, or whether it could be reassigned to other site organizations responsible for support activities. The result of these analyses was the establishment of a Nuclear-dedicated corporate organization (described in Section I) and a revised site organization which provides more focused management direction and accountability for plant operations, outage management and other station support activities.

The new site organization is not just a rearrangement of the reporting structure. There are now 54 management positions at the senior engineer level or above (as compared to 23 such positions prior to the reorganization) to provide dedicated management attention to each site work function and ensure increased supervision of site personnel.

Table 1 provides comparison data on PBAPS plant management staff and PBAPS site management staff positions as of March, 1987 and February, 1988.

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TABLE 1

PBAPS Plant Management Staff¹

<u>March, 1987</u>	<u>February, 1988</u>
1 Manager	1 Manager
2 Superintendents	4 Superintendents
1 Staff Engineer	1 Staff Engineer
8 Senior Engineers	3 Ass't Superintendents
	10 Senior Engineers
	<u>6</u> Shift Managers
Totals: <u>12</u>	25

PBAPS Site Management Staff¹

<u>March, 1987</u>		<u>February, 1988</u>
<u>Plant Manager's Staff</u>	<u>Additional Matrixed Management²</u>	<u>PBAPS Line Management reporting through the Nuclear Group organization²</u>
1 Manager	3 Superintendents	1 Vice President
2 Superintendents	3 Ass't Superintendents or equivalents	4 Managers
1 Staff Engineer	5 Senior Engineers or equivalents	10 Superintendents
8 Senior Engineers		1 Staff Engineer
		6 Ass't Superintendents ³
		26 Senior Engineers or equivalents ³
Totals: <u>12</u>	<u>11</u>	<u>6</u> Shift Managers
		54

¹ Management staff is defined as those positions included in the Company's Management Salary Plan.

² Does not include site Quality organization management staff.

³ Not all of these Assistant Superintendent and Senior Engineer positions have been staffed as of this date, but all remaining positions will be staffed prior to restart.

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In addition to increased management accountability, there is also more employee accountability built into the revised organization. All permanent and contract employees assigned on a regular basis to PBAPS work locations are accountable through their PE or contract management reporting chains to the Vice President-PBAPS, except for those personnel involved in independent assessment and oversight activities. This reporting structure enables the Vice President-PBAPS to have full authority for planning, directing, coordinating and controlling all site work activities.

Figure 1 on the following page shows the top management reporting structure and division of functional responsibilities for the site organization. The accountabilities of the Senior Vice President and each of his direct reports were presented in Section I and are attached to this document for reference as Appendix C, along with functional organizational charts for each of the other Nuclear Group organizations (Appendix D).

The new site organization structure down to the superintendent level of management is described briefly in the following pages. More detailed information about individual management accountabilities at PBAPS is included in Appendix E.

VICE PRESIDENT-PBAPS FUNCTIONAL ORGANIZATIONAL CHART

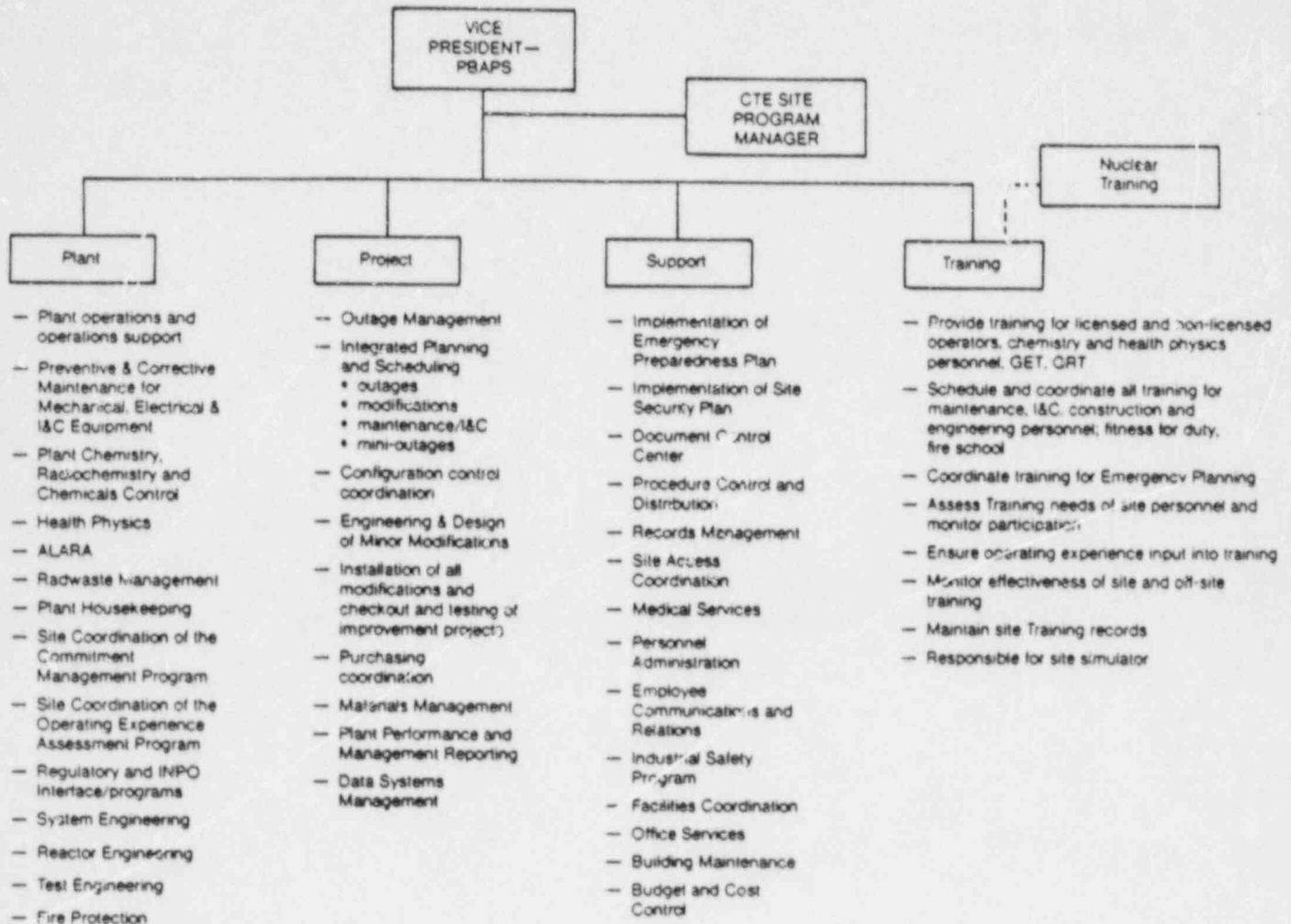


Figure 1. Site Vice President: Functional Organizational Chart

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PLANT MANAGER-PBAPS

The Plant Manager and his organization are responsible for operating the station safely, reliably, efficiently and in compliance with all applicable regulatory requirements, and for upholding standards of excellence in plant operations. The revised definition of functional responsibilities for this organization emphasizes the day-to-day operations of the station and eliminates some of the Plant Manager's former responsibilities for outage planning and management, modifications, personnel administration, security, and other support activities which have been assigned to the Project and Support organizations. The Plant Manager serves as PBAPS Emergency Director, in accordance with the PBAPS Emergency Plan.

Previously, there were two superintendents reporting to the Manager-PBAPS. With the reorganization, there are now four superintendents:

- Superintendent-Operations: responsible for shift operations, including supervision of shift managers and shift technical advisors, and for operations support, including blocking coordination, and shift training and administration.
- Superintendent-Maintenance/Instrumentation and Controls (I&C): responsible for developing and implementing effective preventive, predictive and corrective maintenance programs for station mechanical, electrical and I&C equipment.
- Superintendent-Plant Services: responsible for providing on-site Plant Chemistry, Health Physics and Radwaste management services in support of plant operations.
- Superintendent-Technical: responsible for providing plant technical support; reactor system and test engineering; fire protection; site coordination of the LER program, the commitment management program and the Operating Experience Assessment Program; and site interfaces with regulatory and industry groups.

The Plant Manager organization chart (Figure 2) on the following page provides more information about the reporting structure and functional responsibility assignments at the Superintendent-level.

FUNCTIONAL ORGANIZATIONAL CHART FOR PLANT MANAGER

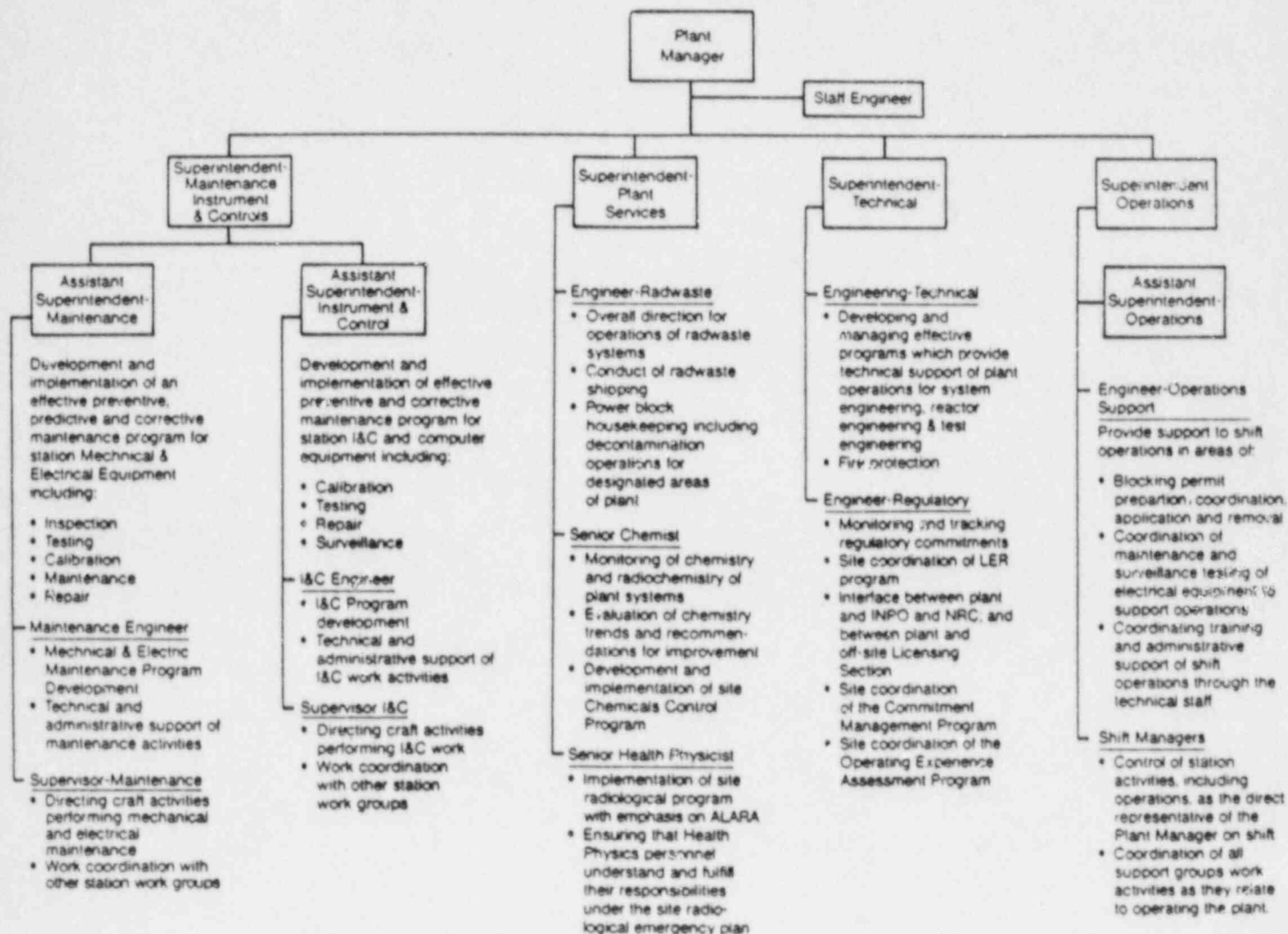


Figure 2. Plant Manager: Functional Organizational Chart

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PROJECT MANAGER

The Project Manager and his organization are responsible for planning, scheduling and reporting of site work activities; assuring that outages are effectively planned and managed; implementation of plant modifications; and materials management. The Project Manager works closely with the Plant Manager to ensure the effective coordination of work activities for their respective work groups. Supporting the Project Manager are four new superintendent positions:

- Superintendent-Outages: responsible for planning and execution of major outages
- Superintendent-Planning, Scheduling and Reporting: responsible for integrated planning and scheduling of station activities, site management of the Integrated Living Schedule (ILS) and plant performance reporting
- Superintendent-Modifications: responsible for design and implementation of minor modifications and installation of major modifications
- Superintendent-Materials: responsible for the coordination of purchasing; stores and spare parts management; and materials engineering

The Project Manager organization chart (Figure 3) on the following page provides more information about the reporting structure and functional responsibility assignments at the Superintendent level.

FUNCTIONAL ORGANIZATIONAL CHART FOR SITE PROJECT MANAGER

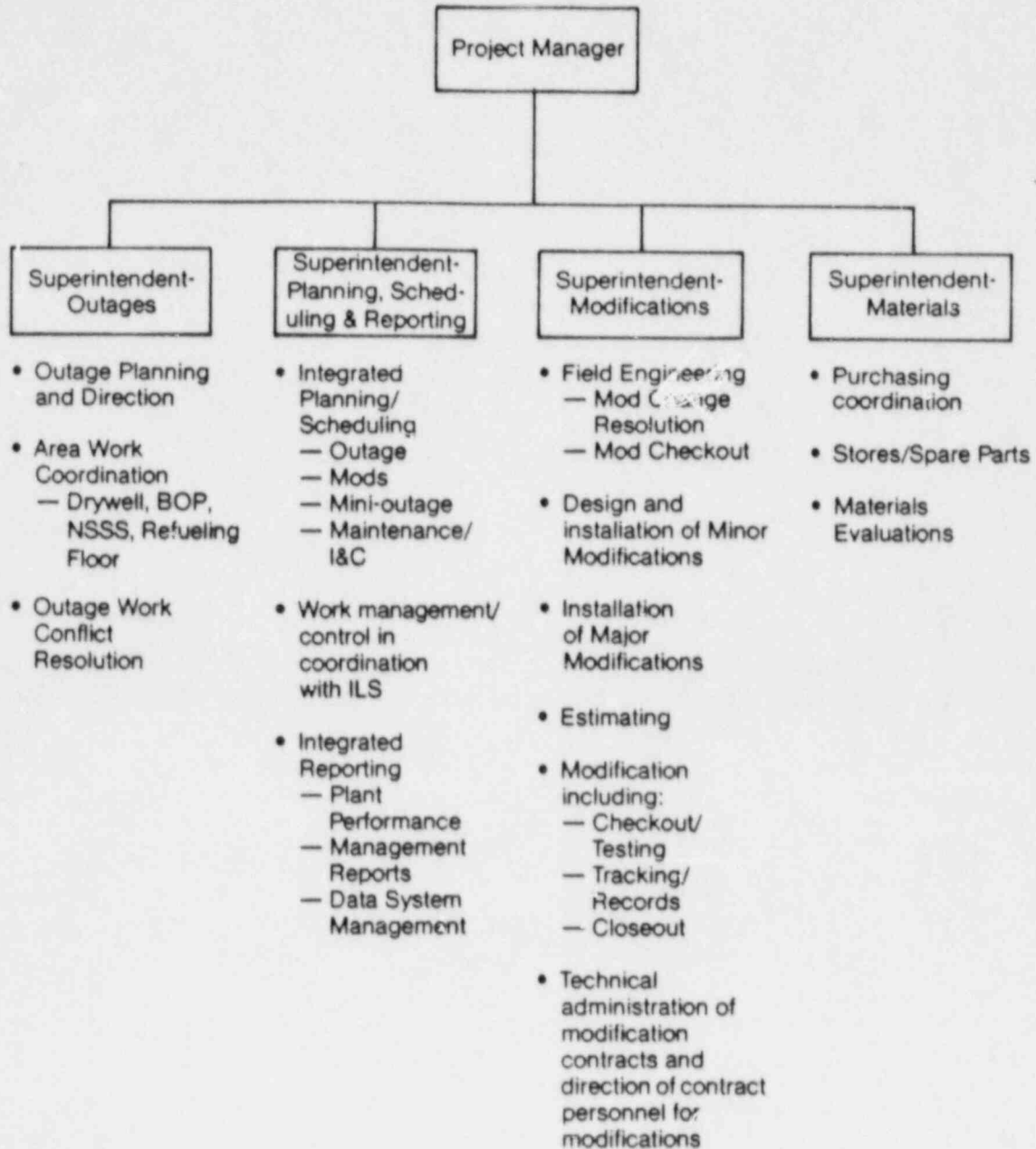


Figure 3. Project Manager: Functional Organizational Chart

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SUPPORT MANAGER

The Support Manager and his organization are responsible for implementing the site emergency preparedness plan and the site security plan; procedure control and distribution; records management and document control; coordination of site budget and cost control activities, personnel administration, the industrial safety program, and other administrative support functions. Reporting to the Support Manager are four new positions:

- Superintendent-Administration: responsible for implementing the site emergency preparedness plan, records management and document control, procedure control and distribution, administration of the industrial safety program, site and employee communications programs, facilities planning and engineering, office services and administrative building maintenance, and administration of site Quality Concerns program.
- Nuclear Security Specialist: responsible for implementation of the PBAPS Security Plan.
- Personnel Administrator: responsible for site access coordination, personnel administration, coordination of medical services and the Employee Assistance Program, and industrial relations.
- Station Controller: responsible for development of the PBAPS Operations and Maintenance (O&M) and Capital budgets; determining standards and guidelines for cost tracking and control; and general administration of site contracts.

The Support Manager organization chart (Figure 4) on the following page provides more information about the reporting structure and functional responsibility assignments of the direct reports to the Support Manager.

FUNCTIONAL ORGANIZATIONAL CHART FOR SITE SUPPORT MANAGER

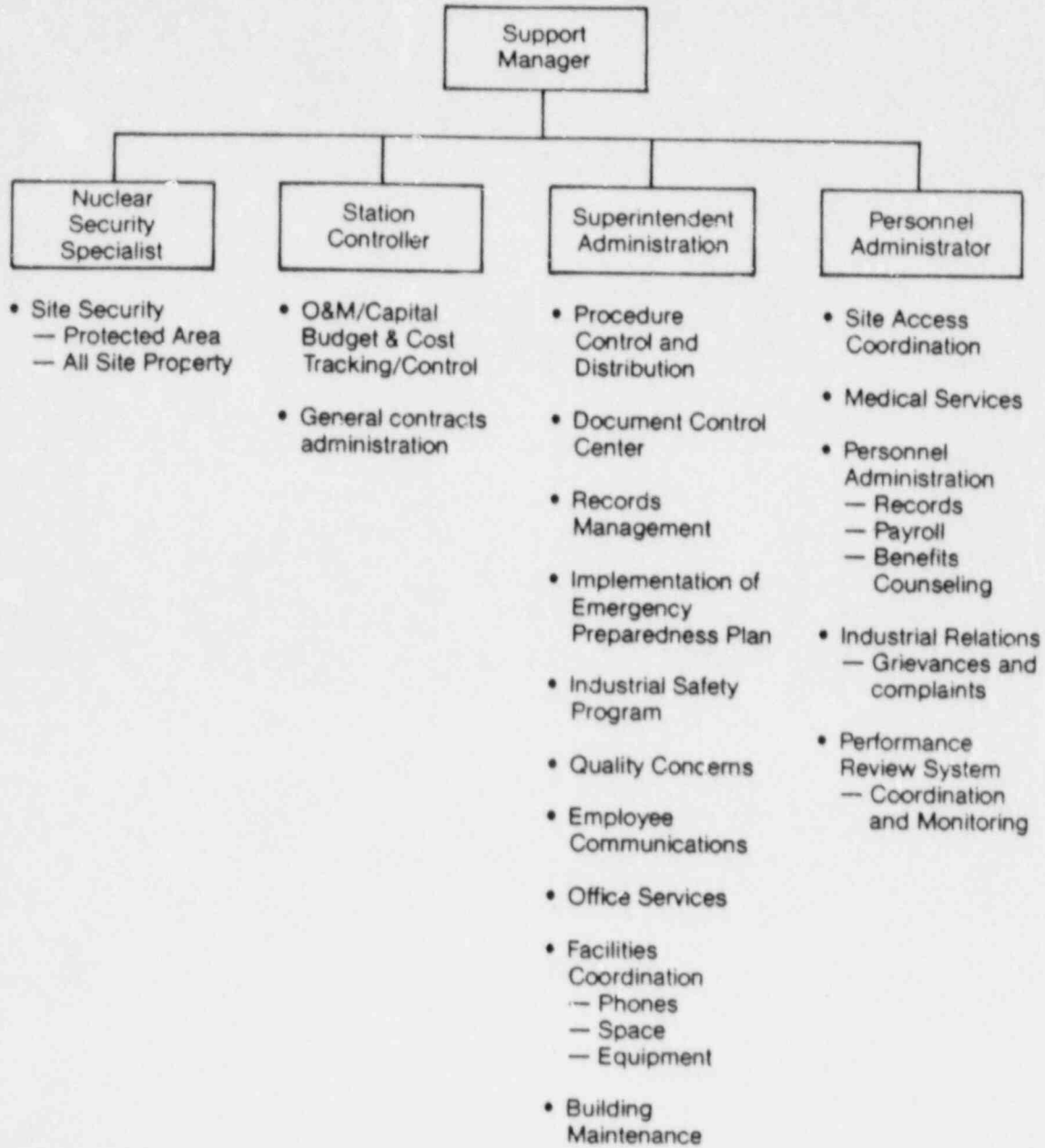


Figure 4. Support Manager: Functional Organizational Chart

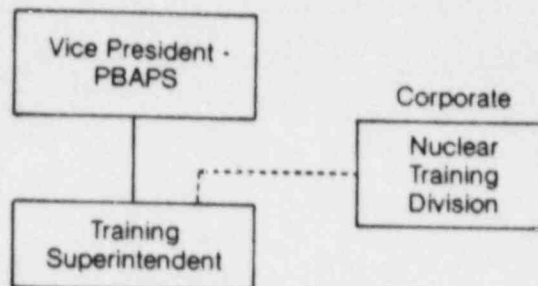
SITE TRAINING SUPERINTENDENT

Figure 5 on the following page shows the reporting relationships and the functional responsibilities of the Superintendent-Training, PBAPS.

The establishment of a superintendent-level position for the training function on site provides dedicated management attention to the specific training needs of PBAPS employees and managers, as well as single-point accountability for the effectiveness of site training programs. By working closely with site management, the PBAPS Training Superintendent will prepare a master training schedule, in coordination with planned site work activities, to facilitate more timely participation by site managers and employees in relevant training programs. The on-site location of the Training Superintendent will permit closer monitoring of management and employee participation in training programs, and of the quality of site training programs, as well as maintenance of accurate training records for site personnel.

Regular interaction with site management will also assist the site Training Superintendent in making timely changes to site training programs with respect to changes in plant hardware, programs or procedures, and in communicating such information in a timely manner to corporate Nuclear Training for incorporation into off-site training programs.

FUNCTIONAL ORGANIZATIONAL CHART FOR SITE TRAINING SUPERINTENDENT



- Identify programmatic training needs for all site personnel
- Develop and provide training for:
 - Licensed operators
 - Non-licensed operators
 - Chemistry
 - HP
 - GET/GRT
 - First Aid
- Schedule/coordinate training for:
 - Maintenance
 - I&C
 - Construction
 - Professional (Engineering)
 - Emergency Planning
 - Fitness for Duty
 - Fire School
 - Fire Drills
- Monitor effectiveness of all training/inputs to corporate
- Feed back operating experience into training (mods, procedure changes)
- Monitor participation of site personnel in training
- Responsible for site simulator

Figure 5. Site Training Superintendent: Functional Organizational Chart

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Shift Operations Management

Figure 6 on the following page shows the shift operations management structure. A new position, Assistant Superintendent-Operations, has been established and staffed to assist the Superintendent-Operations in day-to-day shift operations management and administration. The establishment and staffing of this position ensures that one of these two senior shift operations managers is routinely available to shift operations personnel.

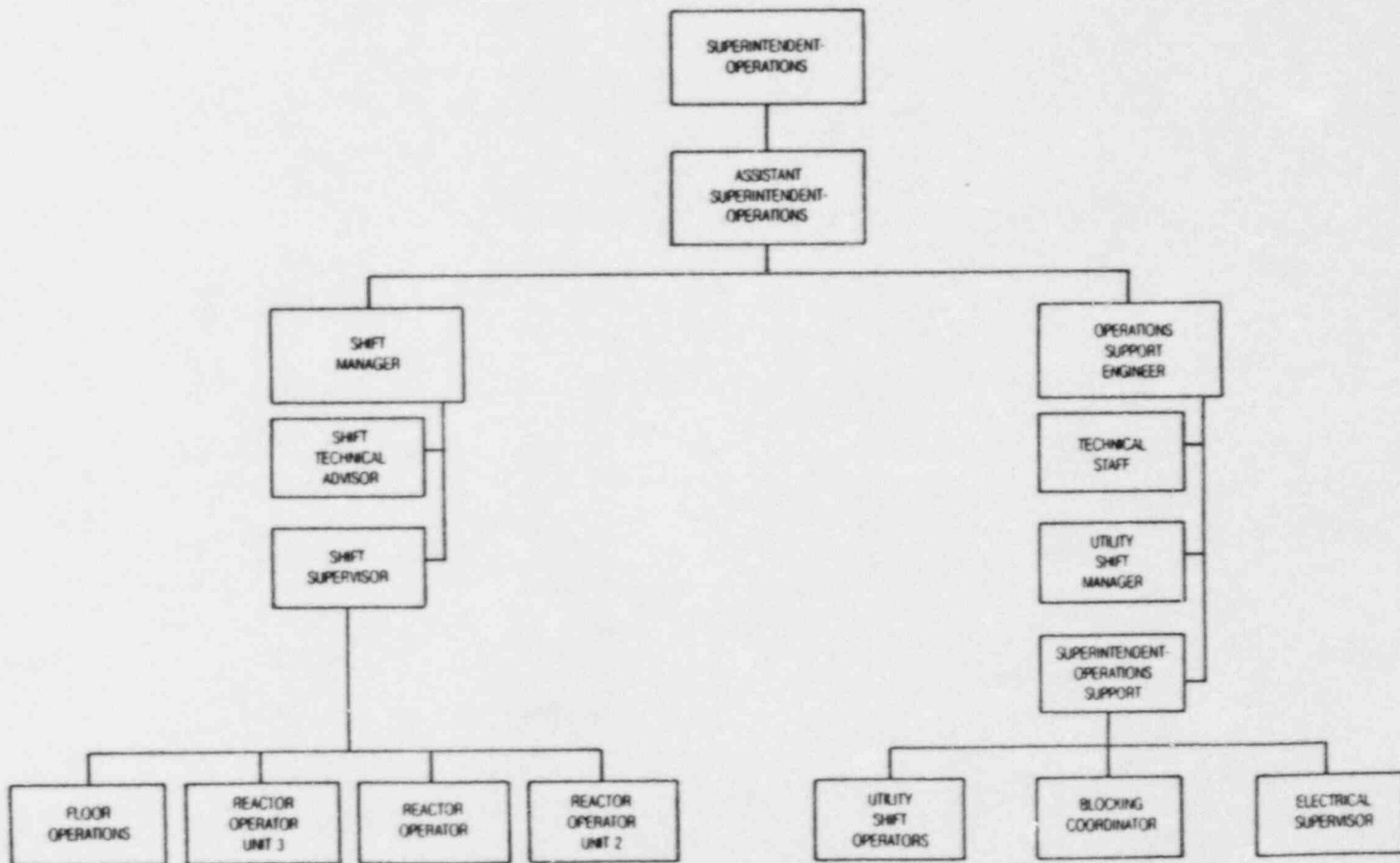
The newly created position of Shift Manager, reporting to the Assistant Superintendent-Operations, was established to provide a higher level of management authority on each shift and address past problems with the isolation of operators from management. The Shift Managers serve as the Plant Manager's direct representatives while on shift and have the authority to control shift operations. They coordinate the activities of health physics, chemistry, maintenance, instrumentation and control, security, construction, vendor personnel and other site personnel working during their shift as these activities relate to operating the plant.

Incumbents of the Shift Manager position will be rotated to and from other management positions every three to five years. The cross-exposure to different functions (e.g., maintenance, outage planning, engineering) will develop increased understanding of the concerns and priorities of each functional organization involved in supporting station operations.

The Shift Managers directly supervise the Shift Supervisors and Shift Technical Advisors (STAs). Reporting to the Shift Supervisor is another new position of Floor Foreman. This position is responsible for coordinating and monitoring the

Figure 6. Shift Operations Management: Organizational Chart

PBAPS SHIFT OPERATIONS MANAGEMENT STRUCTURE



Section II: PBAPS ACTION

activities of the non-licensed operators and overseeing such areas as watch-standing performance, attentiveness to duty, training and overtime.

The new Operations Support organization is headed by the Operations Support Engineer, who also reports directly to the Assistant Superintendent-Operations. This group was developed to support the daytime shift organization by relieving operators and shift management of some of their administrative burden and ensuring effective coordination of all work associated with control room activities.

Reporting to the Operations Support Engineer is the Operations Support Superintendent, another new position. In addition to other support duties, this position is responsible for overseeing training and administrative matters for the Shift Supervisors.

The Blocking Coordinator and the Electrical Supervisor report to the Operations Support Superintendent. The new Blocking Coordinator position, available to SR0 licensed operators on a rotational basis, will ensure the efficiency and safety of the blocking permit process. The position will supervise a group of licensed operators temporarily assigned to blocking permit processing for two to three months at a time. This arrangement will provide rotational opportunities from shift work for both SR0- and Reactor Operator (RO) licensed personnel. The Electrical Supervisor position is responsible for coordination of maintenance and surveillance testing of electrical equipment to support operations.

At the time of restart each of the six shifts will be staffed by a Shift Manager, two Shift Supervisors, three ROs, an STA and a complement of non-licensed operators. This shift complement reflects an increase of one additional Shift Supervisor above

Section II: PBAPS ACTION

the Technical Specification requirements and will provide additional supervisory direction for shift operations activities and backup relief to the Lead Shift Supervisor. One Shift Supervisor will remain in the control room and the other will be available to go where needed to observe, supervise and direct activities throughout the rest of the plant.

A fourth licensed RO will also be added to the team as additional licensed operator resources become available. Each shift team will thus be augmented to provide greater flexibility for relief and rotation of operators and increased resources to handle unusual occurrences. These changes, combined with an increased reserve of licensed operators will ensure that any overtime is managed effectively and that no operators work overtime above an amount approved by plant management.

The shift rotation schedule has been changed from reverse rotation to forward rotation. The schedule change was a result of extensive analysis by a task force of operators and management, facilitated by Circadian Technology, Inc. PE management included operators in the task force study to ensure that any change in shift policy would have a positive effect on morale. Early indications are that the change in the shift rotation schedule has had such a positive effect.

2.3 BENEFITS OF CORRECTIVE ACTIONS

PE has assembled a strong management team to provide leadership to the new PBAPS organization. All five members of the PBAPS senior management group have demonstrated records of successful leadership and achievement of excellence across a broad spectrum of relevant backgrounds. The PBAPS Operations organization has been similarly infused with management talent, as have the other management positions in the expanded site organization.

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There is a balanced combination of solid continuity and new perspectives represented by the members of this new management team, and there is a common commitment to establish a culture dedicated to nuclear excellence.

The establishment of the Vice President-PBAPS as an on-site corporate officer position provides several important benefits. The site Vice President is dedicated solely to the management of PBAPS, focusing corporate-level attention on station needs, fostering corporate accountability and shortening and strengthening the nuclear operations chain of command. With his close involvement in the day-to-day activities of the station, combined with his corporate-level decision-making authority, the site Vice President is able to provide more informed and timely responses to PBAPS organizational and operational concerns.

The Vice President-PBAPS brings first-hand knowledge of PBAPS issues which require collaborative attention from site and off-site support organizations to weekly executive Nuclear management staff meetings for timely resolution. This has resulted in improved interactive communications and problem solving between the station and corporate support groups.

The responsibilities and authorities of the many disciplines required to safely operate a nuclear plant have been allocated among several upper management positions to ensure more concentrated attention to those activities while establishing a direct line of accountability to the Vice President-PBAPS and ultimately to the Chief Operating Officer.

The site organizational structure ensures that the Plant Manager's attention is wholly focused on safe and reliable operations, and provides separate management

Section II: PBAPS ACTION

accountability and authority for plant operations and outage management. While each of these critical functions will receive dedicated management attention, the integrated planning and scheduling of both outage and non-outage work will ensure that activities and resources are coordinated to support the needs of both organizations.

Strengthened management focus and accountability for critical station support functions, such as implementation of the site security and emergency preparedness plans, document control, personnel administration and facilities management, are provided by the establishment of a separate station support organization.

A site-dedicated training function assures more attention and responsiveness to site training needs while the corporate Nuclear Training Division provides technical direction and support.

Significant changes have been made to the PBAPS Operations organization to provide additional managerial and supervisory focus on shift control room operations and floor activities. The addition of the Shift Manager position also addresses the past problem of the isolation of operators from management.

The new daytime Operations organization relieves operators of some of their administrative burden, while ensuring effective coordination of all administrative work associated with shift control room activities.

Additional reactor operator coverage on each shift, once more licensed personnel become available, will provide more flexibility for relief and rotational assignments and increased resources to handle any unusual occurrences on shift.

CHAPTER 3

**LICENSED OPERATOR
RESOURCE DEVELOPMENT**

Section II: PBAPS ACTION

3.0 LICENSED OPERATOR RESOURCE DEVELOPMENT

The second root cause addressed in the Restart Plan for PBAPS is:

The Company failed to initiate timely licensed operator replacement training programs.

3.1 ANALYSIS OF ROOT CAUSE 2

PE has determined that there were not enough reserve licensed operator personnel or new replacements ready to take over as the existing work force transferred, retired or resigned. Although shift coverage met safety requirements and Technical Specifications, there was an inadequate supply of licensed operator personnel to provide flexibility for relief or rotational assignments, handle the shift administrative workload effectively, or assure direct supervision of floor activity.

Many licensed operator personnel were complaining about the negative impact on their family lives created by having to work extensive overtime. They were also seriously concerned about the lack of opportunities to pursue alternative career paths or to have some relief from shift work at some point in their career progression with the Company.

3.2 CORRECTIVE ACTIONS TO ADDRESS ROOT CAUSE 2

To address the second root cause, PE established the following corrective action objectives:

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- 1) Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift. Specifically:
 - Ensure availability of sufficient numbers of qualified licensed operators to restart PBAPS.
 - Develop and initiate plans to create and maintain an adequate reserve of licensed personnel ready to fill temporary and permanent vacancies.
 - Staff, on a rotating basis, a blocking and support group to reduce the administrative burden on the control room shift.

- 2) Ensure that shift personnel have opportunities to pursue alternate career paths and to have relief from shift work during their career progression at PE. Specifically:
 - Develop additional career paths for shift personnel.
 - Develop educational programs for operator personnel who wish to progress into technical and/or management positions.

Ensuring Adequate Reserves of Licensed Operators

PE has taken several actions to accelerate the recruitment and training of candidates for licensed operator training.

Existing personnel policies and compensation practices related to the hiring of new employees were reviewed to determine what changes were needed to permit Nuclear personnel to be hired more promptly and at other than entry levels. Following the review, appropriate changes in both the written policy and compensation practices were made.

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In July, 1987, higher standards of screening for candidates for the licensed operator progression were adopted to include a minimum of two years of post high school technical education, U.S. Navy nuclear training or equivalent education and work experience. Successful candidates are paid at an advanced starting wage level. The hiring procedures have been revised to include three new provisions: 1) a review by the site Vice Presidents is conducted to establish budgeted positions critical to the operation at each nuclear plant; 2) an "open posting" is maintained for these critical positions so that PE's ability to expand forces and/or replace losses will be maximized; and 3) any requisitions for employment in these critical areas are expedited by simultaneous processing of potential candidates for transfer from within the Company and new hires from outside the Company.

PE's Personnel and Industrial Relations organization was requested to recruit and hire additional licensed operator candidates in accordance with these revised requirements. Fifteen employees (14 new hires with Navy nuclear experience and one internal PE transfer) were recruited in the summer of 1987 and successfully passed a plant operator screening test. They are now completing qualification as Auxiliary Operators at PBAPS. PE is currently in the process of hiring 20 additional employees to enter training as Helpers.

A second near-term action was to begin an accelerated license training program for experienced PBAPS plant operators in August, 1987. This is expected to lead to additional licensed operators in the summer of 1988.

Six operators, enrolled in earlier classes, took their NRC license examinations on October 5, 1987, and five qualified (two as ROs and three as SROs). The sixth will

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re-take the plant walkaround examination in February, 1988. One additional plant operator is scheduled to take his NRC RO examination in February, 1988.

For the longer term, PE has made a strong management commitment to ensure that the licensed operator pipeline is maintained at an optimum level to support the goal of having 85 licensed staff members. This complement of licensed personnel would be comprised of the following:

SRO licensed personnel:

- 1 Operations Support Superintendent
- 6 Shift Managers
- 2 Backup Shift Managers
- 12 Shift Supervisors
- 2 Off-shift Positions (serving as Blocking Coordinator and Electrical Supervisor)
- 12 plant staff and/or licensed engineers
- 8 extra SROs to ensure flexibility for rotational assignments
- 4 SROs in training

RO licensed personnel:

- 24 operators
- 8 blocking permit writers
- 6 extra ROs to ensure flexibility for rotational assignments

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A continuing series of licensed operator training classes will be conducted to fill now licensed operator positions, maintain an adequate reserve of licensed personnel ready to fill temporary and permanent vacancies, provide career path opportunities, and manage overtime of operators effectively.

PE analyzed the number of licensed operators required for safe restart. Although the number currently available meets Technical Specifications requirements, it was determined that augmentation of the licensed operator staff from outside PE would be beneficial in order to release additional PBAPS ROs for SRO training and to provide assistance with the processing of blocking permits. Accordingly, four RO candidates were contracted from General Electric and placed in the PBAPS training program. Two of these ROs have since been released from the training program. The other two are scheduled to be examined in February, 1988, and placed in the shift rotation after they are licensed until they can be replaced by additional PE licensed operators.

A team of three Hope Creek licensed personnel have been provided by Public Service Electric and Gas, a co-owner, to assist in processing blocking permits which had previously consumed significant amounts of control room operators' time and attention. The loaned Hope Creek operators are not performing licensed duties and will be released when additional licensed operators are available for PBAPS.

Career Development Opportunities for Operators

Additional career path opportunities have been established for licensed and non-licensed operator personnel by the new Operations organization structure described in Chapter 2. The new position of Operations Support Superintendent

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establishes an additional career progression opportunity for licensed personnel beyond operating shift assignments. The new positions of Blocking Coordinator and Electrical Supervisor provide licensed operators with two additional off-shift assignment possibilities. The new Floor Foreman positions provide additional promotional opportunities for non-licensed operator personnel.

As more licensed operator personnel become available for shift assignments, other career path opportunities will be opened for licensed operators who choose to accept assignments off shift in training, quality assurance, outage planning and other site and corporate support functions which would benefit from the addition of more staff with operating experience.

PE is committed to supporting the career advancement of licensed operator personnel into positions requiring college degrees. A special program is being developed with a local university for licensed operators who wish to earn a Bachelor of Engineering degree. The Company will provide support in terms of tuition and paid leave for selected personnel who wish to pursue this educational opportunity. PE is also investigating a continuing education alternative, the University of Maryland off-campus program in Nuclear Operations Technology. Both programs will offer licensed operators the opportunity to progress into plant and corporate management or professional assignments, including the position of Shift Manager.

3.3 BENEFITS OF CORRECTIVE ACTIONS

The new daytime operational structure provides for temporary and permanent promotions or transfers out of control room shift operations in the licensed operator career path. Other career path opportunities will be opened to licensed operators through increased use of their skills in positions in training, quality

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assurance, outage planning, and other site and corporate support functions. The opportunity to earn a college degree while on shift will also provide operations personnel with alternative career paths such as Shift Manager and plant management staff positions.

With an accelerated schedule for licensed operator training and the revised entry-level hiring policy, PE will be able to create and maintain a permanent reserve of licensed operator personnel to provide additional supervisory and operator coverage on each shift, manage overtime effectively, increase flexibility for relief and rotational assignments, and enable licensed personnel to pursue additional career opportunities off shift.

CHAPTER 4

**CULTURAL CHANGE
TO
ACHIEVE NUCLEAR EXCELLENCE**

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4.0 CULTURAL CHANGE TO ACHIEVE NUCLEAR EXCELLENCE

The third root cause which PE has addressed in its Restart Plan is:

The station culture, which had its roots in fossil and pre-TMI operations, had not adapted to changing nuclear requirements.

4.1 ANALYSIS OF ROOT CAUSE 3

PE operated a high temperature helium-cooled reactor at Peach Bottom Unit 1 from March, 1966, until the unit was decommissioned in October, 1974. As Peach Bottom Units 2 and 3 became operational, Unit 1 personnel were assigned to operate these new units. With few exceptions, the PBAPS management personnel and operations crews were transferred employees from PE fossil fuel powered plants who had received nuclear operations training. The organizational structure and management philosophy used to operate the units were typical of those in the fossil plants.

In the early years of PBAPS operations, the transferred plant staff proved to be technically competent, and PBAPS had an excellent reputation in the industry. However, with their roots in the pre-TMI culture, and the confidence in their own technical proficiency, there was an inadequate response to the increasing complexity of systems and the imperative for high standards of operating excellence in the post-TMI environment.

Corporate management, which had developed in the same pre-TMI environment, did not provide the leadership to adapt the PE culture to the newer standards.

4.2 CORRECTIVE ACTIONS TO ADDRESS ROOT CAUSE 3

To address the third root cause, PE established four corrective action objectives:

- 1) Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence.

- 2) Provide training and team building support for management to live by these values, including:
 - Classroom management training
 - Organization development services for management
 - Intergroup meetings to improve working relationships
 - Off-site management meetings to plan for cultural change
 - Recognition of excellent managers as managerial role models
 - Supplemental training in today's nuclear environment through visits and interactions with personnel at other nuclear plants
 - Additional team building activities

- 3) Provide training and communication processes which support employee commitment to these values, including:
 - Attitude Assessment and Training Programs for Licensed Operators
 - Team Training for Shift Managers and Shift Personnel
 - Attitude Training Programs for Non-licensed Operator Personnel
 - Employee/Management Communications Program
 - Employee Involvement Program
 - Organizational Survey and Feedback

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4) Ensure that management policies, programs and control systems support these cultural values, including:

- Personnel Management Policies and Practices
- Programs to Support Procedural Compliance
- Improved Site Work Planning and Management Processes
- Relationships with Regulatory Agencies and Auditors
- Site Quality Organization Improvements

The corrective actions taken to date and PE's plans for additional cultural change activities are discussed in the following pages.

4.2.1 Identification and Communication of Cultural Values

The foundation upon which PE management is building its nuclear culture includes the following primary themes:

- Individual accountability for performance
- Individual responsibility for safety and assurance of quality
- Team work
- Open and candid communications
- Striving for excellence in all aspects of nuclear operational and organizational performance

The Nuclear Group management team has made conscious efforts to demonstrate these values in all of its planning and management activities, and is committed to the principles outlined in the Open Letter from Mr. Everett at the beginning of this document.

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As one of their first actions, the Senior Vice President-Nuclear and his direct reports met off-site to develop their Vision for the Nuclear Group, along with a Mission Statement and organization Objectives for 1988. Appendix F contains a copy of the Nuclear Group Vision, Mission and Objectives, as endorsed by the executive Nuclear management team. In the past, there was a fragmented approach to nuclear goals and objectives programs, with each department developing its own goals independently to support multiple goals programs, including the Corporate Goals and Objectives Program, the Corporate Performance Award Program and the INPO Performance Indicators Program. With the Nuclear reorganization, the executive Nuclear management team has established the Nuclear Group objectives as a single integrated set of goals toward which all Nuclear departments are working.

The Nuclear Group Vision, Mission and Objectives have been personally presented by the Senior Vice President-Nuclear to a gathering of nearly 100 managers, including PBAPS managers and superintendents. During this presentation, the Senior Vice President-Nuclear spoke of his personal commitment and the commitment of his executive management staff to the Nuclear Group Objectives, and requested the support of each Nuclear manager in accomplishing them. Each site and off-site support organization is establishing supportive goals to implement the Nuclear Group objectives and management philosophy.

At PBAPS, the Vice President is holding a series of meetings with his Managers and Superintendents to develop PBAPS objectives and goals for 1988 which will support the overall Nuclear Group objectives. The PBAPS Management staff has established Mission and Vision Statements for PBAPS as follows:

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Our Mission is to operate Peach Bottom safely, reliably, and economically in the pursuit of excellence.

Our Vision is that Peach Bottom will come to be known by us, the public, the NRC, and the nuclear industry as one of THE BEST NUCLEAR GENERATING FACILITIES.

To provide ongoing direction on station priorities, while he was Manager-PBAPS, Mr. Smith issued two memoranda to all PBAPS personnel. The first, dated October 1, 1987 and entitled "Reporting Guarantees Nuclear Safety," urged all site personnel to take an active part in assuring safe operations by assuming individual responsibility for reporting anything that they believed to be a deficiency or a potential problem. He outlined several methods of reporting deficiencies, including a telephone number to report directly to the Shift Clerk, an order of reporting up through the Station chain of command from the first-line Supervisor to the Plant Manager, and additional plant and corporate personnel to be contacted in cases where the employee felt that the concern had not been satisfactorily resolved through these other reporting methods. The memorandum assures employees that all such reports will be investigated and resolved, and that there will be no recriminations, regardless of the nature of the report.

The second memo, dated October 20, 1987, clearly and succinctly discussed the importance of safety and quality as the first and second priorities to be considered in all work activities. Mr. Smith emphasized that only when these first two priorities had been met should schedule be considered as the third priority. In addition, Mr. Smith directed his staff to personally discuss these priorities with site personnel. This memorandum has reinforced the intention of PBAPS management

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to "do it right the first time" as they plan and implement restart activities for Unit 2 and pipe replacement outage activities on Unit 3.

The Nuclear management team recognized that "assurance of quality" was not a well understood concept among corporate and PBAPS personnel. To promote understanding and implementation of this concept, the team members developed a statement of philosophy for assurance of quality, including the commitments which management is making to employees and the expectations which management has for employees to fulfill individual responsibilities for assurance of quality. This statement, which has been endorsed by the executive Nuclear management team, reads as follows:

NUCLEAR GROUP MANAGEMENT PHILOSOPHY FOR ASSURANCE OF QUALITY

Definition

Assurance of quality is paramount in all nuclear activities. Assurance of quality involves a commitment to excellence in one's own work performance and an acceptance of personal responsibility for the overall safety and quality of nuclear activities.

Nuclear Group Management Commitments to the Nuclear Employee Team

The Nuclear Group is committed to the assurance of quality as Philadelphia Electric Company's approach to nuclear activities. To provide leadership in, and support for, assurance of quality, we will:

- 1) Establish performance goals which contribute to achieving and maintaining excellence in our nuclear activities.
- 2) Communicate with you about these goals to assure your understanding and support.
- 3) Use effective performance reporting systems, so that we can monitor progress toward meeting our goals and identify and resolve potential problem areas on a timely basis.
- 4) Support procedural compliance by assuring that procedures are accurate, up-to-date and "user friendly."

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- 5) Develop and maintain effective problem reporting processes so that you can report observed quality problems or deficiencies quickly and easily.
- 6) Encourage your involvement in the pursuit of excellence by responding quickly and constructively to good suggestions for improving the quality and efficiency of work.
- 7) Encourage open communications about all areas that affect the safety and quality of nuclear activities.
- 8) Recognize each employee's success in pursuit of assurance of quality in performance evaluations.

Nuclear Group Management Expectations for the Nuclear Employee Team

In turn we have expectations for a commitment from each Nuclear employee to assurance of quality. Each of you will be held accountable to:

- 1) Support the accomplishment of your work group's performance goals through the quality and timeliness of your work activities.
- 2) Supply accurate and timely data as required for performance tracking and reporting.
- 3) Adhere to established procedures in the performance of your work.
- 4) Notify your management in a timely manner of any problems with procedural compliance, using established administrative processes.
- 5) Report observed quality problems or deficiencies in a timely manner, using established administrative processes.
- 6) Make recommendations to your management for improving the quality and efficiency of work.

This statement is indicative of the approach and tone which is being used in management communications with PBAPS employees to underscore the cultural values which Nuclear management has committed to supporting. The statement will be published in company newspapers, displayed on site bulletin boards and incorporated into the General Employee Training (GET) program. Although PBAPS management believes that written communications about their vision, objectives, priorities and philosophy are important, they are aware that, no matter how sincerely intentioned and well written communications of this nature might be, there is no substitute for face-to-face communications with employees when discussing such matters.

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During the week of February 15, 1988, a series of all-hands meetings will be convened and all PBAPS employees and contractors will have the the opportunity to hear personally from the Site Vice President, Plant Manager and Project Manager about the PBAPS Restart Plan. The three site leaders will discuss their management philosophy and their needs for employee cooperation and support for both the restart effort and the long-term cultural change process at Peach Bottom. They will present the corporate and station goals for 1988, and identify the values which they want to support as the hallmarks of the PBAPS culture. Steps taken to accomplish these goals and foster these values, as well as progress to date on the restart plan, will be discussed. The managers will also explain the intent behind the Commitment to Excellence Program. The meetings will be held in a location near the plant for groups of 250-300 people at a time who will be relieved from their normal duties to participate in the one and one-half hour to two-hour meetings. Night sessions will also be scheduled.

4.2.2 Management Training and Team Building for Cultural Change

Information about PE's new Nuclear Training organization and the management and professional development programs which it will be responsible for developing was presented in part 3.7.2 of Section I of the Restart Plan and is included for reference in Appendix G of this document.

An assessment process to determine Nuclear management and supervisory training needs has already been initiated at the senior Nuclear management level and will be continued down through the organization to the first-line supervisory levels. The new manager of the Nuclear Training Division's Management and Professional

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Development Branch will work with the newly appointed PBAPS and LGS Training Superintendents on this project.

Classroom Management Training

A first priority, in terms of PBAPS management training, was to ensure that the new Shift Managers were prepared to fill their roles. A four-week course in managerial skills, Managing for Excellence, was developed and conducted to accomplish this purpose. Prior to participating in the course, all of the candidates for the Shift Manager positions had to meet carefully defined qualification requirements (e.g., senior operating licenses, degrees in relevant disciplines, and identified leadership skills) and undergo an assessment process conducted by Rohrer, Hibler, and Replogle, Inc. (RHR) psychologists. The assessment process focused on two areas: 1) the attitudinal readiness of each candidate to establish and maintain standards of nuclear operations excellence, and 2) the managerial aptitude of each candidate in terms of the ability to take command, decision-making initiative, discretionary judgement, intuition, and interpersonal skills.

The curriculum for the Managing for Excellence course included managerial skills, group dynamics, interpersonal communications, disciplinary issues, and management performance expectations. The course was successfully completed by the six final candidates selected as Shift Managers, as well as three other PBAPS management personnel.

Commencing on February 29, 1988, a special four-week training program will be conducted along the lines of the People-The Foundation of Excellence course described later in this chapter. In addition to three operator personnel who are

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scheduled to take their RO examination in February, 1988, course participants will include 12 to 16 first- and second-line supervisors from as many of the following departments as possible: Maintenance, I&C, Technical Staff, Health Physics, Chemistry, Modifications and Security. One senior staff member (senior engineer, assistant superintendent, or superintendent) will also participate.

This will be the first of these intensive experienced-based training programs to involve a cross-representation of supervisory personnel from site work functions other than Operations. It is thus viewed as an important opportunity to concentrate on site-wide team building.

Another near-term, management training effort is focused on providing PBAPS managers and supervisors with additional training in personnel management policies, including employee performance evaluations and application of disciplinary guidelines for Nuclear employees. The first of these additional training programs in conducting effective employee performance evaluations was held on site on January 28, 1988, for selected PBAPS managers and supervisors.

Two meetings have been held at PBAPS with management and first-line supervisors to discuss their concerns and training needs in the area of discipline and the application of PE disciplinary policies. The data collected in these meetings are being used to develop a training module to address the expressed concerns. As currently planned, the training will be completed for the Operations organization in April, 1988, and implemented for the remaining PBAPS organizations over the next year.

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PE recognizes that management training in support of cultural change can be accomplished by many other methods in addition to formal classroom training. These methods include:

- 1) Using the services of organization development professionals to provide individual coaching to managers, facilitate management staff meetings at which good management practices are discussed, offer informal training sessions in specific management skills such as meeting management, and reinforce good management practices as these are demonstrated in the organization.
- 2) Holding meetings between work groups to identify ways to improve working relationships and program management.
- 3) Having special off-site meetings at which management takes the time to discuss its cultural values and agree on the kinds of management behaviors which will support such a culture.
- 4) Observing and learning from those individuals who are recognized as excellent managers within the organization (management modeling).
- 5) Providing supplemental training in today's nuclear environment by arranging for PE management to interact with personnel at other nuclear plants to observe good practices which can be adapted for use at PE.

All of these methods are being used to assist corporate and PBAPS management to live by the cultural values which they have identified as critical to success.

Organization Development Services for Management

The Senior Vice President-Nuclear and his direct reports are each working closely with organization development professionals who are also available to other managers within the department. For example, the PBAPS organization development professional works not only with the Vice President and his direct reports, but also with PBAPS superintendents and senior engineers on areas such as transition planning to implement the new site organization, meeting management effectiveness, management/employee communications, interface agreements to clarify roles and responsibilities between work groups, and other management practices which will

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support cultural change. The results to date of these coaching/consulting relationships have been very positive, with members of the executive Nuclear management team receiving unsolicited comments from their staffs about perceived improvements in Nuclear management practices.

Use of Intergroup Meetings to Improve Working Relationships

As meetings are held on reorganization issues among site work group managers and between site and off-site work group managers, ways in which improvements can be made to working relationships and program management are also discussed. Some of these discussions will result in formal interface agreements; equally important is that these face-to-face conversations about working relationships are improving management practices and contributing to a collaborative team work approach to site activities.

Off-site Management Meetings

A special all-day off-site meeting was held by the Senior Vice President-Nuclear on January 19, 1988, for Nuclear Group management, down to and including all superintendents and assistant superintendents. This was the first time in PE's history that such a large-scale management retreat was held, with nearly 100 management personnel participating. The success of the event has resulted in a decision by the Senior Vice President-Nuclear to convene similar meetings on a quarterly basis. In addition to introducing new members of the PE Nuclear management team, the purposes of this meeting were to: discuss progress and answer questions about the Nuclear reorganization and PBAPS restart plans; commit to the Nuclear Group Vision, Mission, Objectives and Philosophy for Assurance of Quality;

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and identify specific management behavior changes which the group believed would be supportive of cultural change efforts.

In small groups, Nuclear managers listened to each other discuss the kinds of management practices which needed to be reinforced or adopted to contribute to excellent management of PE's nuclear operation. Following these discussions, many important recommendations were made for the large group's consideration. Each of the executive Nuclear management staff was charged by the Senior Vice President-Nuclear to discuss these recommended management practices further with his management staff and develop a list of good practices and management behavior changes which they would personally commit to supporting. The lists will be reported back to the Senior Vice President-Nuclear in March, 1988, and a composite list of Nuclear management behavior commitments will be developed at that time. The superintendents at this meeting were requested by the Senior Vice President-Nuclear to have follow-up meetings with their staffs to communicate all of the information covered down through the rest of the supervisory chain.

Management Modeling

An example of how the alternative training method of management modeling is being used involves a presentation made by John Franz, recognized for his excellent leadership of LGS, at a special meeting of PBAPS managers and superintendents during January, 1988. At this meeting, Mr. Franz spoke of his "Proposed Value System for Business Success" (Appendix H). Discussing his earlier years at PBAPS and his last ten years at LGS, he identified what he believes to be some of the most important themes for effective management and teamwork to promote nuclear excellence at PBAPS. Due to the credibility which Mr. Franz has with his peers because of the commonality

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of their backgrounds and the high GALP ratings which Limerick received under his management, this type of alternative training method is having significant impact on site management practices. On their own initiative, many of the managers and superintendents who attended this meeting have posted Mr. Franz's outline of his values for business success on their office walls.

Another example of how communications from individual site managers can offer a model for other PBAPS managers and employees to use in changing the site culture was provided by the new Project Manager. In his initial communication package (Appendix I) distributed to each employee in the PBAPS Project organization, Mr. Powers reemphasized station priorities, as these had been outlined in the earlier memo from Mr. Smith (referred to in section 4.2.1), and then discussed his own management philosophy and style. The ten-page memo stresses the importance of team work and defines the "real key people on this site [as] the working level people who actually do the work." Continuing in this collaborative tone, Mr. Powers describes what he expects from his employees in terms of individual flexibility and willingness to put the needs of the plant first during this period, a true spirit of cooperation, and active involvement in making things happen rather than making excuses.

In turn, he communicates what his people can expect of him in terms of openness to their concerns and recommendations, as well as willingness to delegate routine decision-making down to the people closest to the situation and then support them, as long as they keep those around and above them informed. As with Mr. Franz's presentation, the tone and the examples used are, in themselves, indicators of cultural change as well as means to promote further cultural change at PBAPS.

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Interactions with Personnel at Other Nuclear Plants

As another important alternative training method, PE is encouraging visits and interaction by PBAPS personnel with personnel from other nuclear sites in order to observe first-hand and learn from other plants' experience. In developing the expanded site QC program, a PE team visited Nine Mile Point 2 to observe and review a similar program there. Visits have also been made to Salem and Hope Creek generating stations to observe their engineering and information management programs. The Superintendent-Operations, Assistant Superintendent-Operations, Operations Support Engineer and all Shift Managers have gone as a team to visit Susquehanna Steam Electric Station to review that operation and identify good practices for incorporation at PBAPS. Similarly, the Director of the Corporate Radwaste Section and the Radwaste Engineers from Peach Bottom and Limerick visited the Georgia Power Company's Hatch Plant to review programs and practices there for storing and shipping radioactive waste.

Additional visits in the future will include other older vintage nuclear plants which have successfully made the transition into the post-TMI environment.

Many meetings are being held to bring together managers at PBAPS and their counterpart managers at Limerick in order to open the dialogue between these two groups and promote an interchange of good practices between the two plants. Similar meetings are being held between PBAPS and LGS managers and their counterparts in Nuclear Support and Nuclear QA. Periodic off-site meetings for in-depth evaluation of plant performance and consideration of Operating Experience Assessment Program (OEAP) data will also contribute to keeping plant staff from both Limerick and PBAPS current with industry concerns and good practices.

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Additional Team Building Activities

In addition to the team building aspects of all of the activities discussed above, the Senior Vice President-Nuclear has been holding monthly Nuclear Management Team meetings attended by all Nuclear department and division managers. At these meetings, organizational and operational concerns are identified and selected topics are discussed to keep managers informed of Nuclear program developments and of each other's progress and plans. Following the monthly Nuclear Management Team meetings, the PBAPS Plant Manager, Project Manager, Support Manager and Training Superintendent hold meetings with their own staffs to discuss the topics covered at each of these meetings and ensure that appropriate information is conveyed down to first-line supervisors and employees.

As part of his site team-building efforts, the Vice President-PBAPS holds weekly staff meetings to ensure that all of the station managers and superintendents are working to the same priorities and providing unified direction on site work activities. These meetings are also attended by the PBAPS CTE Site Program Manager and the organization development professional working with PBAPS management.

Every other week, the PBAPS Plant, Project and Support Managers hold an extended staff meeting, which is attended by superintendents, assistant superintendents, senior engineers and lead vendor personnel to discuss priorities and work progress and identify and resolve any problem areas. On a periodic basis, station management holds meetings with the Shift Managers and, also, with shift personnel when they are on utility shift.

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All participants at site management meetings are directed to follow up by communicating relevant information as quickly as possible to their staffs and to monitor that such information is communicated on down the supervisory chain to employees. These regular and extended staff meetings have contributed to improved site communications and better understanding of work priorities and the actions necessary to get the work done.

4.2.3 Employee Training and Communications for Cultural Change

Again, as with management training for cultural change, PE recognized that formal classroom training would not be the only (nor, in many cases, the preferred) method for changing employee attitudes and the PBAPS culture. The strategy developed by the PBAPS management team was to promote employee attitudinal change through six major types of training and communications activities:

- 1) Attitude assessment and training programs for licensed operator personnel
- 2) Team training for shift managers and shift personnel
- 3) Attitude training programs for non-licensed operator personnel
- 4) An employee/management communications program to solicit and respond to site employee concerns and suggestions
- 5) An employee involvement program to give all PBAPS personnel an opportunity to become more involved in site activities and concerns
- 6) An organizational survey and feedback process with site personnel focused on improving organizational and work team performance factors

In addition to these formally structured programs, two other informal strategies are being used to address employee attitudinal concerns and improve communications. First, the all-hands meetings, discussed earlier in this chapter, will be used as a key opportunity to promote cultural change with all PBAPS employees. Second, site managers have placed an increased emphasis on "MBWA" -- Management By Walking Around

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-- so that they can regularly engage in informal exchanges with employees, discuss their management philosophy and commitments, and listen to what their employees have to say.

Attitude Assessment and Training Programs for Licensed and Non-licensed Operators

Based on the problems identified in the Shutdown Order, PE's own internal investigation, and the root cause analysis, it was considered essential to determine the potential of each operator to change behavior and attitudes, if given the opportunity to do so through intensive training, to the extent necessary for reassignment to control room duties.

Following the Shutdown Order, Mr. Smith conducted individual interviews with every operator. Extensive interviews were also conducted by PE's Claim Security Division with each operator and other shift personnel. Information from these interviews and a signed statement given by each interviewee were made available to Mr. Smith.

Rohrer, Hibler and Replogle, Inc. (RHR) was hired in June, 1987, to conduct individual psychological assessments of all operators. The focus of the assessment process was to identify any characteristics of individual operators which would suggest that their attitudes were not conducive to successful retraining.

RHR's process consisted of a two- to three-hour interview with each operator and the use of appropriate questionnaires and instruments. A verbal report regarding each operator was made to Mr. Smith. The report included RHR's conclusions about each individual in five areas: intellectual functioning/problem solving, emotional

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stability and overall maturity, skill with people, understanding of self and others, and the ability to organize and direct others.

After the above information was reviewed, a final decision was made by Mr. Smith on each operator's acceptability for participation in the training course, People-The Foundation of Excellence. Operators who were accepted for retraining were given the opportunity to volunteer for the course with the understanding that return to control room duty required that they complete the course successfully.

The objectives of the People-The Foundation of Excellence course were to:

- 1) Help licensed operators identify the underlying attitudes that promoted unacceptable behavior in the control room and to show them how to change these attitudes.
- 2) Improve control room working relationships through the development of interpersonal and group dynamics skills.
- 3) Enhance professionalism on the job.

The course was designed under the direction of the Nuclear Training Superintendent and in collaboration with a team of Management Analysis Company (MAC) applied behavioral scientists. The course content was developed based upon review of documents (the Shutdown Order, INPO reports, SALP reports, the MAC Problem Root Cause Assessment, and other NRC documents) relevant to the course objectives, and a position paper outlining the philosophy and training approach to be taken.

The four units of the six-week course covered the following topics:

- Unit 1. Personal insight into sources of behavior; personal behavioral characteristics and their effects; individual facades and their consequences; methods of changing/modifying behavior; personal responsibility for one's own behavior.

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- Unit 2. Interpersonal processes; role of feedback/leveling; definition of interpersonal competence; effects of behavior in interpersonal transactions (impact of self on others/impact of others on self); management of interpersonal processes; personal responsibility for the quality of one's interpersonal relationships.
- Unit 3. Group membership influences on behavior; group dynamics; "group think" potential and methods for its management; diagnosing group dynamics; methods of improving group processes; personal responsibility for one's own behavior in a group setting.
- Unit 4. Conflict; dynamics of differences; productive use of differences; choosing between strategies of conflict and collaboration; conflict management.

Throughout the course, issues of professionalism and adherence to procedures were addressed using examples from the plant setting. The participation of the Vice President-PBAPS and the Assistant Superintendent-Operations at relevant times during the course helped participants transfer their learning from the training setting to the work place.

People-The Foundation of Excellence was presented in July, August and October, 1987, and has been successfully completed by 44 operators, STAs, and Operations management staff. At the completion of their training course, all licensed operators signed a "Commitment to Excellence" Statement (Appendix J) to affirm their renewed dedication to assurance of quality and professionalism on the job.

Team Training for Shift Managers and Shift Personnel

To help Shift Managers and licensed operators integrate the learnings from their respective training courses and function effectively as shift operating teams, a Team Training Course was developed and conducted for each shift team. In the eight days of the course, participants worked through simulator sessions on normal plant operations, plant manipulations specified by the NRC, plant start-up scenarios and

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plant transients. Through videotape reviews of their simulator sessions and classroom discussions, participants identified their strengths and weaknesses with respect to communications and teamwork. Based on each team's performance, plans for follow-up training will be incorporated into each team's sessions at the Peach Bottom simulator in the spring. Each of the six PBAPS shift operating teams has now successfully completed the Team Training Course, demonstrating their proficiency and cohesiveness as teams during the simulator training to the full satisfaction of INPO and NRC evaluators.

Attitude Training Programs for Non-licensed Operator Personnel

PE has also designed and conducted a two-week course, Personal Effectiveness, for all non-licensed operator personnel which was started in October, 1987. The course objectives were to: 1) enable the participants to identify and develop skills needed to assess and manage personal effectiveness in work situations; and 2) provide a foundation for continuing training of non-licensed operators in team building. Non-licensed operator personnel have now completed this course.

To further sustain new behaviors and attitudes of PBAPS Operations personnel, PE will design and conduct follow-up training for employees who have participated in People-The Foundation of Excellence, Managing for Excellence, Personal Effectiveness, and the Team Training Course. The purposes of the follow-up training during 1988 will be to: 1) reinforce the behavioral and attitudinal changes of course participants; 2) extend their skills and knowledge in a manner that will increase their ability to apply these skills in the work setting; and 3) continue the process of team development. The training will be designed to provide maximum

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flexibility and focus. In this way the needs of specific sub-groups (e.g., Shift Managers, Shift teams, Floor Foremen and their direct reports) can be met.

Employee/Management Communications Program

In July, 1987, Mr. Smith, then Manager-PBAPS, initiated a "Tell It To the Manager" program wherein any employee on site could communicate directly to the station manager in writing about work-related questions, concerns or suggestions for improvement. The employees drop their written notes in one of two conveniently located collection boxes on site. To ensure confidentiality, Mr. Smith, who has the only key to the collection boxes, personally collects the items on a regular basis, and there is a code system available for those employees who wish to remain anonymous. Mr. Smith responds to relevant items either personally or in his "Answers From the Manager" (now renamed "Answers From the Vice President"), which is published every two to four weeks. The publication contains any messages Mr. Smith wishes to convey to employees, as well as answers to those questions which have been resolved since the last issue. Items yet to be resolved are put into a computer tracking system and formal inquiries are sent to the responsible party. When a resolution is available on an unresolved item, it is printed in the next issue of "Answers From the Vice President" or communicated personally.

Over 1000 items have been received since the program was initiated. Some items request information or contain questions concerning policy. Other items report violations of safety procedures, or safety-related concerns. Still others recommend changes to improve work activities or conditions. In addition to serving as an important means of changing employee attitudes about site management's willingness

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to listen to their concerns and suggestions, the program has also resulted in some significant programmatic improvements.

Several problems with Security concerning entry procedures were identified and corrected, and some problems with equipment items that should have been repaired under the normal routine of plant operations were noted. In the latter case, the employee correspondence resulted not only in the specific equipment problem being fixed but, also, in the correction of the system which failed to identify and resolve the problem in the first place. Suggestions for improving the methods of handling radioactive waste and reducing its volume have also been submitted.

Of the 1014 "Tell It To the Manager" comments received on or before January 21, 1988, Mr. Smith has personally resolved 161 items; 436 items have been answered in written "Answers From the Manager"; 159 items have required action generating a tracking form; 201 items have required no action; 35 items involved actions already being tracked; and 2 items were derogatory comments.

The retitled program, "Tell It To the Vice President," encourages direct communications to the Plant Manager, Project Manager or the Support Manager, as well as to the Vice President. Employees check the appropriate box on the "Tell It To the Vice President" form to indicate which of these four site managers should most appropriately review and respond to their comments, and the Vice President distributes the correspondence to the other managers as appropriate.

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Employee Involvement Program

A second significant action taken by Mr. Smith to change employee attitudes and the PBAPS culture was to invite employees from all station work groups to meet regularly with each other and site management for the purposes of making suggestions to management which would improve physical conditions in the plant and employee morale. Forty volunteers from a cross-section of PBAPS work groups responded to the invitation and met with Mr. Smith to develop the program which they named the PB-TEAM (Peach Bottom-Together Employees and Management). The 40 member PB-TEAM meets monthly and the elected Steering Committee meets weekly. Four subcommittees have been formed to focus on the areas of benefits and morale, safety, team organizational issues and employee communications.

A PB-TEAM bulletin board has been constructed and placed in the main yard at PBAPS and has been augmented by the addition of a telephone answering machine. The PB-TEAM has recently completed a site-wide contest to select a plant logo and motto, and a subcommittee is developing plans for the use of the newly selected motto and logo. Other subcommittees have worked on a design for an employee fitness center, discussed the need for day-care at PBAPS, established a plan for developing a speakers' bureau and a writers' bureau, and conducted a survey of employee awareness of PB-TEAM activities and membership. The entire PB-TEAM recently participated in a full day of "Effective Meeting" training, conducted by PE's Training Division, to improve the effectiveness of their meetings.

The Vice President-PBAPS will continue these successful efforts which have contributed to an atmosphere of open communications at PBAPS. Additional employee involvement program efforts will be considered once the site management team is

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fully in place and a review of other utility employee involvement programs has been completed.

Organizational Survey and Feedback Process

An organizational survey, which looks at organizational and work team performance indicators to identify strengths and improvement areas, was administered at PBAPS during January, 1988. Known as the Productivity/Quality Profile, the survey has been used at more than 400 companies, including other utilities, and provides information about how employees perceive various issues related to their organization, management and work team effectiveness. Since all of these issues relate to employee morale and the organization's culture, conclusions can also be reached about these factors.

The survey was administered to a cross-representative sample of 15 percent of PBAPS managers, first-line supervisors and employees randomly selected to participate in the survey. The results of the survey are currently being reported back to PBAPS management. One encouraging result is that the survey analysis indicates a perceived improvement over the last ten months in management's openness to hearing about problems.

As the survey results are reported back to site management, priority issues will be identified, based on low-scoring performance factors and managers' knowledge of site concerns. Then, managers will develop recommendations which they believe would address these issues and decide on how these recommendations will be tracked for implementation. The same general approach will be used in later sessions to report

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the survey data back to first-line supervisors and obtain their recommendations to improve organization and work team effectiveness.

Survey feedback sessions will also be held at PBAPS for site employees who participated in the survey. At these sessions, the follow-up steps on which managers and first-line supervisors have agreed will also be discussed.

The same survey process was also implemented at LGS, corporate headquarters and the Central Maintenance Facility, and follow-up feedback sessions will be conducted at these sites as well.

4.2.4 Management Policies, Programs and Control Systems to Support Cultural Values

Changes in Personnel Management Policies and Practices

To strengthen the authority and flexibility of Nuclear management's role in the areas of hiring, supervisory promotion, discipline and grievance resolution, PE reviewed its personnel policies and has modified the application of these policies for Nuclear personnel. Significant changes have been made.

Entry hiring and transfer guidelines for Nuclear positions leading to the licensed operator career path have been reviewed and revised as previously described in Chapter 3. Changes to Nuclear personnel hiring and compensation policies have resulted in 31 new hires at PBAPS at other than entry levels for positions ranging from Helper to Manager.

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Written guidelines have been distributed to help managers provide more opportunities for qualified employees to develop and demonstrate their supervisory skills through upgraded training and temporary promotional or developmental assignments. This will assist managers to assess the supervisory abilities of senior employees in determining qualification for promotion to first-line supervisory positions.

The application of the disciplinary policy has been modified to ensure that severity of discipline is commensurate with the high standards of performance required for nuclear safety and excellence and to permit immediate suspension of employees in cases of nuclear operational or procedural infractions.

The grievance process for the Nuclear Group employees has been modified to provide for resolution of grievances at appropriate levels of management on a timely basis. If the written response from the appropriate Employing Officer to an employee's grievance is considered unsatisfactory, a written statement of the grievance may be filed for resolution with the Vice President of the functional organization in which the employee works (for PBAPS employees, the Vice President-PBAPS). Each functional Vice President will thus play a strengthened role in the grievance process with full knowledge of and responsibility for employee grievances within the Vice President's organization. Only in those cases where the Vice President's response is considered unsatisfactory by the employee will the grievance be resubmitted, in accordance with established procedures, to the Vice President-Personnel and Industrial Relations. The Vice President-Personnel and Industrial Relations will overturn the decision of the functional Vice President only in those cases involving significant issues in which company policy has been misapplied.

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A memorandum was issued on July 17, 1987, by the Vice President-Nuclear Operations reminding Nuclear managers of the requirement that yearly face-to-face performance evaluation interviews must be conducted with all employees. To assist management in conducting effective performance evaluation interviews, training or coaching sessions have been conducted, and will continue to be scheduled at various times within the next year for site supervisors who have not previously had this training.

Although Shift Managers have not supervised the operators who report to them for an extended time period, the training they have received in the Managing for Excellence program enables them to more effectively observe day-to-day employee performance and provide feedback on an ongoing basis. One Shift Manager reported favorable reactions from operators to the formal performance evaluations which he has been responsible for conducting thus far, with appreciation expressed for the fact that management was showing interest and concern. In one instance, the Shift Manager noticed immediate improvement in the way an operator made entries in the shift log book after the operator had been told in his performance evaluation that his entries were not complete.

As is apparent in the personnel policy changes described above, PE is committed to returning more accountability and authority for personnel management and relations to line management, and will continue to review its personnel management policies and practices to ensure that this intent is carried out. At the same time, PE recognizes the importance of providing its Nuclear managers with appropriate training and assistance to execute their responsibilities effectively in this regard. Examples of training being supplied for PBAPS managers have been described in this Section.

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To provide additional assistance in this area a site nuclear personnel specialist position, the Personnel Administrator, has been established and staffed to assist line management in the areas of personnel management and human relations. This position works with the Superintendent-Personnel Administration in Nuclear Services and PBAPS managers, supervisors and employees to ensure consistent and equitable implementation of personnel policies, assist supervisors with resolution of employee performance problems, and improve employee relations.

Programs to Support Procedural Compliance

Recognizing the importance of procedural compliance as one component of nuclear safety and excellence, PE has taken a three-pronged approach to improving adherence to procedures at PBAPS. First, the content of station procedures has been evaluated to determine needs for revision or upgrading of current procedures, or for the development of any new procedures. An experienced PE Procedure Coordinator was assigned to develop the evaluation methodology to be used with assistance from plant management personnel and consultants. The evaluation methodology included criteria to distinguish between specific procedure revisions required prior to restart 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.

Criteria for revision requirements prior to restart included: any procedures with technical inaccuracies, or errors in sequence which would result in misoperation; any procedures which would compromise personnel or equipment safety; and any procedures which would impact on compliance with regulations.

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For longer-term upgrade programs, the decision-making criteria included: comparison of existing procedures with INPO guidelines; analysis of human factors considerations to make procedures more easily understood by employees; analysis of the efficiency of operations as prescribed in existing procedures; and analysis of the groupings of procedures for ease of use.

Using this evaluation methodology, assessments of the need to revise and/or upgrade procedures in different categories have been completed. Immediate procedure revision programs are well underway or completed. In revising system (S) operating procedures and administrative (A) procedures which direct operator performance, operator "walk down" and/or technical review and sign-off has been included as part of the process. Operator training in the revised procedures is also required.

General Plant procedures have already been reviewed and revised as necessary and training on revisions is complete. Once the revision process has been completed on Administrative procedures which direct operator performance, operators will be trained on these revisions also. Other procedures which have been reviewed and updated as required are in the areas of health physics, radwaste, maintenance, I&C, and trip procedures. A general upgrade of System procedures will be undertaken over the course of the next two years.

Prior to restart, the Plant Manager and Superintendent-Operations will issue an operations administration manual and a watchstander's manual. These manuals will define, in detail, the organization, requirements, and conduct of operations at PBAPS. The manuals are being developed and will be reviewed against INPO 85-017, "Guideline for the Conduct of Operations at Nuclear Power Stations," prior to issue.

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Second, in addition to improvements to the content of procedures, improvements have also been made in procedures management and control processes. A formal procedure change initiation process is being implemented to provide more timely input to management with respect to problems with procedures. To support this effort, a mechanism has been implemented for operators to report procedure deficiencies or the need for additional procedures to the Operations Support Staff. The Operations Support Staff has been structured so that, in conjunction with the System Engineers and the current procedure re-write effort, sufficient resources will be applied to procedure maintenance to prevent a recurrence of the existing conditions at the time of the Shutdown Order.

A schedule for converting to a two-year procedure review cycle for specified procedures has been established which will also contribute significantly to the effort to keep procedures updated and easily usable.

By mid-1988, a document control center will be established to strengthen the system by which controlled procedures and prints are distributed. Once this system is operational, additional copies of controlled procedures and prints will be routinely distributed to additional work locations throughout the Station. In the interim, a Procedures Control Group, reporting to the Superintendent-Administration, is responsible for managing the procedure control and distribution process and ensuring that all newly revised procedures are appropriately issued and distributed as controlled copies.

The site Quality organization will conduct audits to ensure that only current revisions of procedures and prints are actually being used in quality-related work.

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Responsibilities are being clearly assigned for ensuring that new or revised procedures are incorporated in relevant Nuclear training programs in a timely manner. The way in which these responsibilities will be carried out will be documented in the interface agreements to be developed between the site Training Superintendent and the Nuclear Training Section of the corporate Nuclear Training Division.

Third, in conjunction with these programmatic and administrative changes to support an effective procedures management program, other corrective actions are addressing attitudinal factors which have impacted negatively on procedural compliance. Attitudes toward procedural compliance have been discussed as part of the licensed operator and non-licensed operator training programs. Additional emphasis is being placed on procedural compliance in technical and crafts training. Compliance with station procedures has been added as a performance standard on Nuclear employee evaluation forms and will be included in all Nuclear employee performance appraisals.

The attitudinal training programs, the active involvement of operators in the station procedure revision process and the commitment demonstrated by management to support procedural compliance have already had a positive effect. For example, there have been as many as 50 procedure change requests submitted in a one-month period since the new procedure change request form was initiated. In two recent instances when operators who knew how to perform a plant operating evolution discovered that formally approved written procedures did not exist for the particular evolutions, they immediately reported their concern to management instead of proceeding with the work. In both cases, plant management delayed further work until formal procedures could be written and approved for use.

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Improved Site Work Planning and Management Processes

A major effort is underway to improve work planning and management processes in support of PE's cultural change effort. Significant changes in the methods used to plan and schedule work have been implemented as a result of the new site organizational structure, the reinstatement of daily station work planning meetings, the increased involvement of support groups such as Health Physics in work planning and scheduling, and the general improvements in communications between work groups.

To expedite work activities, several important actions have been taken. A Work Control Group has been established to improve the coordination of work and to direct the preparation of Maintenance Request Forms and permits before these are released or approved by Operations. A memorandum has been issued jointly by the Superintendent-Operations and the Superintendent-Outage Planning to define the functions of the Work Control Group and to clarify their interfaces with Operations and other work groups.

To improve coordination and responsiveness of engineering support for plant operations, Nuclear Engineering has assigned an Engineering Manager for Unit 2 restart. This function will be responsible for the coordination of all mechanical and electrical engineering support related to Unit 2 restart, including both corporate engineering and vendor engineering at site and off-site locations, and involves full-time on-site representation of Nuclear Engineering from both the Project Management and Engineering Divisions.

Selected work management processes will be assessed to identify any needed short-term and long-term improvements. The assessment process uses a team approach

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which combines PE personnel who have extensive knowledge of the specific work management system, consultants who have technical and management process expertise, and information management systems experts. The team will thus be able to identify improvements needed in information management and reporting systems which support the management of work, problem identification, and corrective action tracking, as well as improvements needed in the work management systems themselves.

Four work management processes are currently being assessed to improve their effectiveness: the PBAPS maintenance management process, the plant performance reporting process, the Nuclear configuration management program and the Nuclear commitment management program. This assessment process and the implementation of recommended improvements will require comprehensive effort and is considered to be a long-term effort.

These improvements to work management systems, combined with site management's demonstrated commitment to improving and maintaining the material condition of the plant have, in turn, motivated site employees to be more proactive about identifying problems with plant systems or equipment. This new attitude is demonstrated by the plant system engineers as they perform their system walk-downs. They are carefully ensuring that observable items are identified in a timely manner so that these can be addressed as appropriate while systems or equipment are blocked for other work.

Another important contribution to the improved material condition of the plant is the major upgrade underway on the plant preventive maintenance (PM) program. In support of this effort, a review of PM tasks for key plant systems was recently completed. The results of this review established new requirements for the plant PM program and these requirements for key plant systems are currently being

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incorporated into the PM database. A review of remaining plant systems will be completed by December, 1988. Existing PM tasks for each unit and common equipment will be completed, or an engineering evaluation of the deferral will be performed and approved, prior to restart of Unit 2.

As another aspect of its efforts to improve work management, the PBAPS management team is committed to monitoring site organizational and operational performance closely. Selected performance indicators are reviewed at the monthly Senior Vice President-Nuclear site meetings and corrective actions plans are presented and discussed by the appropriate manager.

An enhanced monthly Nuclear performance reporting program is being established which will involve additional performance indicators, including INFO Quarterly Plant Performance indicators, and improved analysis and presentation of these performance indicators in monthly Nuclear performance reports. Site and senior Nuclear management will thus be able to identify variances from expected performance more effectively so that corrective action can be taken in a timely manner.

Relationships With Regulatory Agencies and Auditors

PE realizes that the establishment and maintenance of open, candid and constructive relationships with regulatory agencies and industry auditors is a key indicator of excellence in Nuclear operations. PE has taken steps to establish and maintain such relationships and to ensure that PBAPS management and employees understand the Company's expectations with respect to regular exchanges of information with resident NRC Inspectors and cooperative assistance to site auditors and visitors.

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A major concern of regulatory agencies and INPO has been the limited capability of PBAPS in the past to identify problems, develop appropriate corrective actions, track the status of corrective action commitments, and evaluate the effectiveness of results. Several of the changes in organizational structure and many of the improvements being made to management systems will enable PE to improve its capability in this regard.

Responsibilities and accountabilities of PBAPS line management for effective implementation of the Commitment Management Program will be clarified and documented in interface agreements with the Commitment Management Program Manager. Commitments which are made will be tracked by the improved commitment tracking system administered corporately by Nuclear Support.

The Superintendent-Technical will be responsible for coordinating with the Plant Manager, the Vice President-PBAPS, and the Commitment Management Program Manager to ensure that an integrated approach is developed, documented and implemented for consulting with appropriate Nuclear management personnel before making commitments to regulatory agencies and industry groups and ascertaining that commitments are included in the tracking system in a timely manner.

While serving as Manager-PBAPS, Mr. Smith met weekly with the NRC Senior Resident to discuss plant status, issues and corrective actions being taken. These meetings have proven to be productive and will be continued by the new Plant Manager, John Franz.

Interface responsibilities for regulatory and industry relationships will also be clarified and documented between relevant PBAPS and off-site managers. These

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interface agreements will include the accountabilities for site coordination, preparation and follow-up on regulatory or industry audits to ensure that site management understands and is committed to implementing corrective actions discussed in PE's response to such audits.

Participation by PBAPS management in relevant INPO and other industry programs, as well as visits to INPO, will provide additional opportunities to develop more collaborative working relationships with the industry.

Site Quality Organization Improvements

The site Quality organization has been improved through organization and staffing changes, strengthening of audit and surveillance programs, development of improved interfaces and reporting practices, and initiation of cultural change activities.

Prior to the reorganization, there were four separate quality organizations at Peach Bottom (Engineering and Research QA, Construction QC, Nuclear Operations QA, and Nuclear Operations QC), each led by separate first-line supervision. These separate organizations reported off-site at relatively low levels of the corporate structure. The new organization is headed by a Manager-PBAPS Quality Division who reports directly to the General Manager-Nuclear QA. The Manager-PBAPS Quality is the single point of accountability for all site QA and QC activities. As such, he is able to focus and coordinate the efforts of the entire site Quality organization and work effectively with the Vice President-PBAPS and his management staff, providing support and cooperation to line management in the execution of their responsibility for assurance of quality in all site activities.

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As shown in Figure 7 on the following page, the PBAPS Quality Manager is supported by three Superintendents (Quality Assurance, Quality Control and Support) and a number of Assistant Superintendents. This structure represents the addition of six managerial and supervisory positions over that which existed previously at the site, with the top four positions being classified at higher management levels than any previous site Quality management positions.

The structure and composition of the site Quality organization was developed through consultation with INPO and a number of nuclear utilities. The Nuclear QA management team also relied on the input of a number of study groups, comprised of knowledgeable personnel from the previously separate quality organizations and consultants. These teams identified functional needs, considered alternative organizational structures and proposed issues for management attention in each of the principal areas of QA activity (i.e., QC, auditing, support).

Considerable effort has been made during the past 18 months to develop a technically based audit program within Nuclear Operations QA. The site operations staff has advised Nuclear QA that the program has contributed to self-assessment efforts during recent months and has identified important areas for improvement. The 1988 Nuclear QA Goals call for expansion of this program.

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 practice is maximized.

Additionally, the new organizational structure has enabled the quality organization to focus site audit and surveillance activities on areas of concern to plant

PBAPS QUALITY ORGANIZATIONAL CHART

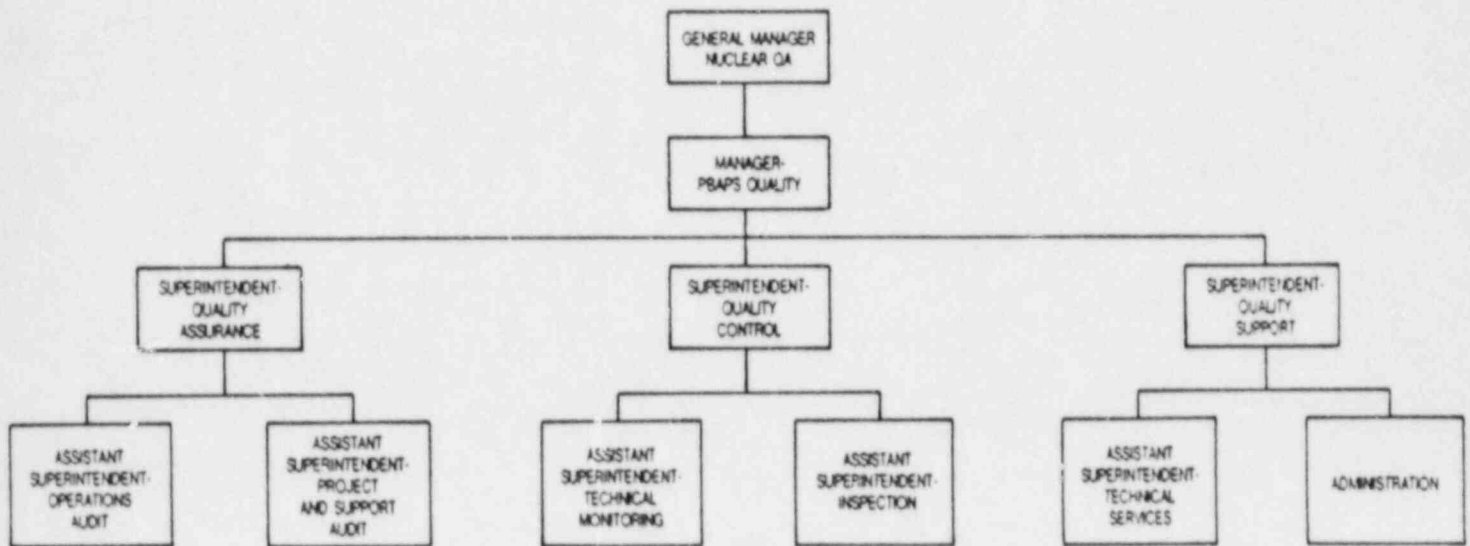


Figure 7. PBAPS Quality Manager: Organizational Chart

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management, the executive Nuclear management team, the NRB, or as warranted by operating experiences at other plants. This has already proven to be effective in a number of instances.

Immediately after the Shutdown Order was received, Operations Monitors were placed in the control room on all shifts to ensure the attentiveness and professional conduct of the operations staff. The Operations Monitors provided continuous control room monitoring from April 10, 1987, until December 21, 1987. Coincident with removal of these Operations Monitors, QC activities were increased to provide thorough monitoring of the effectiveness of shift operations. This increased level of activity will be continued for a period of time and will be reevaluated to determine an appropriate level of QC coverage for ongoing operations.

In order to strengthen the operations experience base of the quality organization, two of the superintendents (one from the new PBAPS quality organization) have been enrolled in a license training program at the LGS simulator. A management commitment has been made to continue to provide operations training to Nuclear QA personnel.

To assist line management in executing their responsibilities for plant performance and support, Nuclear QA has been improving the processes and formats by which it reports independent assessment feedback to site and executive management. Line management's suggestions about how Nuclear QA reporting processes and formats can be improved for more effective management use are being solicited and incorporated into Nuclear QA practices. On a periodic basis, additional recommendations will be solicited for continuing improvement.

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The Manager-PBAPS Quality is establishing specific interface agreements between the site Quality organization and the site line organizations to document appropriate communications, reporting, and coordination relationships. The dialogue required to define and improve these relationships has already been initiated and a number of specific areas for improved working relationships have been identified.

Agreements have already been reached and made operational for reporting on PBAPS quality activities and concerns at the executive level and to the NRB. Since the formation of Nuclear QA, biweekly trend and highlight reports, as well as special executive reports, have been made to the Senior Vice President-Nuclear and each Vice President by the General Manager-Nuclear QA. These reports have proven to be an effective routine means of assuring executive awareness of, and attention to, open QA Findings.

The site Quality organization reports to the NRB at each of its meetings. A standard format and content for these reports has been established through consultation with the NRB Chairman and others.

The major elements of the Nuclear Group program for cultural change and development, described previously, are being applied to Nuclear QA, including the site quality organization. Periodic all-hands meetings have been held at each Nuclear QA work location to convey information regarding the corporate reorganization, the development of the Nuclear QA department, the philosophy and objectives of Nuclear QA management. Special team building and transition planning meetings have been held for the Nuclear QA management team and are planned for all Nuclear QA work groups.

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In order to have a truly effective oversight organization, executive-level management must be committed to a certain way of doing business which includes the following management practices:

- 1) no restrictions placed on the scope of Nuclear QA oversight by management
- 2) a genuine desire on the part of management to be told of developing problems
- 3) timely and effective management responses to identified problems
- 4) sufficient staffing and resources made available by management to maintain effective oversight

PE Corporate and PBAPS management have committed to these principles and this has been clearly communicated to Nuclear QA employees, as well as other site personnel.

4.3 BENEFITS OF CORRECTIVE ACTIONS

Significant efforts are underway to establish a new culture at PBAPS, which will exemplify excellence in Nuclear operations. As emphasized by Mr. Everett in his Open Letter at the beginning of this document, these efforts have not been addressed in isolation from corporate, since changes in a company's culture must begin at the highest levels of corporate management.

PE has taken substantive action to implement this top-down cultural change. The Nuclear Group Vision, Mission and Objectives have been widely communicated and actively supported by all Nuclear managers. The Senior Vice President-Nuclear and his executive management team have defined their commitments to and expectations of employees with respect to assurance of quality. This philosophy for assurance of quality is being communicated by management to every employee in the Nuclear Group. The definition and communication of these corporate values has set the stage for the development of a new culture.

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It is not enough for management to define and communicate cultural values; these values must be translated into action. PE has begun to train, coach, and develop Nuclear managers to live by these values. The six new Shift Managers and three other PBAPS managers successfully completed the Managing for Excellence course as a first step in PE's enhanced management development and training program. Ongoing development efforts to ensure that PE managers have the skills and knowledge to support cultural change will include formal training; individual coaching, meeting management assistance and team-building support from organizational development professionals; modeling of management excellence by the new PBAPS management team; and visits to other well-managed nuclear plants. PE is giving high priority to management development, realizing that enlightened leadership at every level of management is a key element in cultural change.

Aware that employee attitudes toward their work have, in the past, been identified as a major concern at PBAPS, PE has extended maximum effort to provide the opportunity and environment for these attitudes to be changed. The implementation of employee training and communication activities such as the People-The Foundation of Excellence and Personal Effectiveness management training programs, the "Tell It To the Vice President" program, the PB-TEAM activities, the Productivity/Quality Profile survey and feedback process, the Vice President's all-hands meetings, and increased "management-by-walking-around" are beginning to have positive impact on PBAPS employees. Increased employee willingness to talk openly with site management about work-related concerns and suggestions is evidenced by the continuing high level of comments and questions in the "Tell It To the Vice President" program, the increased number of Maintenance Request Forms being submitted, the open and frank discussions held on problems related to completion of maintenance work on Unit 2, the number of Procedure Change Request Forms being submitted, and the constructive

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suggestions made in recent interviews with PBAPS Quality Division personnel. PE believes that the continuation and enhancement of these activities, coupled with the observable dedication of site management to high quality performance, will result, over time, in a work force that is committed to excellence.

Fundamental changes have been made in key policies and programs in order to further support cultural change. Of primary importance in this effort has been the review and modification of the application of personnel policies for Nuclear employees. PE has strengthened the authority and flexibility of Nuclear management's role in the areas of hiring, promotion, discipline and grievance resolution. Major emphasis has been placed upon ensuring the effectiveness of yearly face-to-face performance reviews with every employee. These changes have provided clear behavioral evidence to each employee that the Nuclear cultural change efforts are not only supported by management's words but, more importantly, by their actions.

Recognizing the importance of procedural compliance as one component of nuclear safety and excellence, PE has taken a three-pronged approach to improving adherence to procedures. First, significant improvements have been made to the content of station procedures. Second, the management processes by which they are maintained, controlled and distributed have been strengthened. Third, attitudinal factors which impacted negatively on procedural compliance have been addressed through training. These efforts to strengthen procedural compliance at PBAPS will be reinforced by including compliance with procedures as a performance assessment item in all Nuclear employee performance evaluations.

Work planning and management systems are being improved in a concerted effort to create systems that support improved efficiency and quality of work.

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Key steps have been taken to improve PE's relationships with regulatory agencies and to fulfill PE's commitments to regulatory and industry auditors.

The site QA program has been significantly improved by organizational restructuring, the addition of strong new management, the strengthening of the audit and surveillance programs, and improved reporting processes. The support of PE and PBAPS management for a strengthened QA program has been made clear to Nuclear employees, and Nuclear QA is providing timely and effective independent assessment feedback to Nuclear and PBAPS management.

PE management and employees are firmly convinced that achievement of the four corrective action objectives to address Root Cause 3 will result in establishing a new culture that is committed to nuclear excellence. The Company will support the continued development of this culture over time. Our vision is to be recognized and respected as a leader in the nuclear power industry.

CHAPTER 5

CORRECTIVE ACTIONS
TO
ADDRESS ROOT CAUSES 1, 2, AND 3

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5.0 CORRECTIVE ACTIONS TO ADDRESS ROOT CAUSES 1, 2, AND 3

The corrective action objectives for root causes 1, 2, and 3 and the principal corrective actions PE will take to meet these objectives are presented in the same manner as in the Plan for Restart of Peach Bottom Atomic Power Station: Section I, Corporate Action. The current status of each action item is indicated in the columns to the right of the items as follows:

- Action which has been completed. (A)
- Action which will be implemented before restart. (B)

The corrective action list provides a mechanism for PE to prioritize action items, schedule associated work, and obtain all necessary resources. The corrective action list from Section I and Section II will also enable PE and the NRC to monitor progress toward meeting these objectives.

5.1 ROOT CAUSE 1 AND RELATED CORRECTIVE ACTION OBJECTIVES

As previously stated the first root cause was:

There was a lack of adequate personal leadership and management skills on the part of senior management at the plant.

The two corrective action objectives which PE established to address this root cause are:

- 1) Establish a PBAPS management team with strong leadership and management skills.
- 2) Increase the number of site management positions to ensure effective supervision and accountability for each function.

Section II: PBAPS ACTION

5.1.1 Corrective Actions To Implement Objective 1

To implement Objective 1 ("Establish a PBAPS management team with strong leadership and management skills"), the following actions will be taken:

Identify individuals with strong leadership and management skills to staff each Superintendent-level position and above.

SCHEDULE
A B

- Conduct a search, internal or external as appropriate, to identify and select qualified candidates to staff positions at the Superintendent-level and above. X

5.1.2 Corrective Actions To Implement Objective 2

To implement Objective 2 ("Increase the number of site management positions to ensure effective supervision and accountability for each function"), the following actions will be taken:

Develop an organizational structure to provide increased management direction, control, authority and accountability for site work activities.

SCHEDULE
A B

- Identify work functions which should be removed from the responsibility of the Plant Manager to allow increased Plant Manager focus on day-to-day plant operations, while simultaneously providing additional dedicated management attention to areas such as outage management and station support. X
- Establish a revised site organizational structure based on this analysis. X
- Clarify and document functional accountabilities for each Superintendent-level organization within the revised site organizational structure. X

Section II: PBAPS ACTION

Establish and implement an Operations organization structure which will support effective management and use of shift resources.

	SCHEDULE	
	A	B
• Reorganize control room and floor work activities to provide additional supervisory attention and additional staff coverage to enhance the level of operations; develop an organizational structure to support these changes.		X
• File with the NRC for any required Technical Specifications changes.	X	
• Develop and initiate a plan for staffing the revised Operations organization structure on a phased basis as additional licensed operator personnel become available.	X	
• Establish and implement new shift rotation schedule.		X
• Implement the Shift Manager position.	X	

5.2 ROOT CAUSE 2 AND RELATED CORRECTIVE ACTION OBJECTIVES

As previously stated, the second root cause is:

The Company failed to initiate timely licensed operator replacement programs.

The two corrective action objectives which PE established to address this root cause are:

- 1) Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift.
- 2) Ensure that shift personnel have opportunities to pursue alternate career paths and to have relief from shift work during their career progression at PE.

5.2.1 Corrective Actions To Implement Objective 1

To implement Objective 1 ("Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift"), the following actions will be taken:

Section II: PBAPS ACTION

Ensure availability of sufficient numbers of qualified licensed operators to restart PBAPS.

	<u>SCHEDULE</u>	
	A	B
• Assess the availability of qualified licensed operators and develop and implement a plan to ensure that sufficient licensed operators are available for restart of PBAPS.		X
• Accelerate operator training program to expedite the number of available licensed operators.		X
• Coordinate with PBAPS co-owners and General Electric to supplement current resources of licensed operators until a sufficient number of licensed operators have qualified.	X	
• Provide attitudinal and procedural training as required for licensed operators to ensure that they will be ready to return to duty by restart.	X	

Develop and initiate plans to create and maintain an adequate reserve of licensed personnel ready to fill temporary and permanent vacancies.

	<u>SCHEDULE</u>	
	A	B
• Develop higher entry standards and appropriate compensation schedules for the recruitment and hiring of future candidates for licensed operator positions.	X	
• Develop and initiate a plan for additional operator training programs to provide ongoing reserve of licensed operators.		X

Staff, on a rotating basis, a blocking and support group to reduce the administrative burden on the control room shift.

	<u>SCHEDULE</u>	
	A	B
• Develop a plan to identify and train qualified personnel to staff a blocking and support group.		X
• Clarify and document the responsibilities of the Work Control Group.	X	

Section II: PBAPS ACTION

5.2.2 Corrective Actions To Implement Objective 2

To implement Objective 2 ("Ensure that shift personnel have opportunities to pursue alternate career paths and to have relief from shift work during their career progression at PE"), the following actions will be taken:

Develop additional career path opportunities for shift personnel.

	<u>SCHEDULE</u>	
	<u>A</u>	<u>B</u>
• Develop additional career path and rotational off-shift assignment opportunities within the shift job progression for non-degreed personnel.		X
• Develop additional opportunities for lateral transfers and/or promotions for shift personnel into other functional areas where additional operating experience would be beneficial.		X

Develop educational programs for operator personnel who wish to progress into technical and/or management positions.

	<u>SCHEDULE</u>	
	<u>A</u>	<u>B</u>
• Research and develop a program for licensed operators to obtain a bachelor's degree in engineering.		X
• Research and develop a program for operator personnel which leads to certification in nuclear operations technology.		X

Section II: PBAPS ACTION

5.3 ROOT CAUSE 3 AND RELATED CORRECTIVE ACTION OBJECTIVES

As previously stated root cause three is:

The station culture, which had its roots in fossil and pre-TMI operations, had not adapted to changing nuclear requirements.

The four corrective action objectives which PE established to address this root cause are:

- 1) Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence.
- 2) Provide training and team building support for management to live by these values.
- 3) Provide training and open communication processes which support employee commitment to these values.
- 4) Ensure that management policies, programs and control systems support these cultural values.

5.3.1 Corrective Actions To Implement Objective 1

To implement Objective 1 ("Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence"), the following actions will be taken:

Communicate Nuclear Group management philosophy with respect to excellence, assurance of quality and the vision, mission and objectives.

	<u>SCHEDULE</u>	
	<u>A</u>	<u>B</u>
• Develop and document a statement of the Company's management philosophy for excellence in nuclear operations.	X	
• Develop and document a statement of Nuclear Group management philosophy for the assurance of quality.	X	
• Develop and document the Nuclear Group's vision, mission and objectives.	X	
• Develop and document a PBAPS mission, vision, objectives and goals.		X
• Communicate these statements by publishing them in PE newspapers, displaying them on site bulletin boards, and incorporating them into appropriate site training activities.		X

Section II: PBAPS ACTION

5.3.2 Corrective Actions To Implement Objective 2

To implement Objective 2 ("Provide training and team building support for management to live by these values"), the following actions will be taken:

Identify and address the training and development needs of PBAPS managers and supervisors in a timely and appropriate manner.

	<u>SCHEDULE</u>	
	A	B
• Clarify and document transitional interface agreements with the Nuclear Training organization to be used as interim policies and processes for the development, assessment, evaluation, and upgrading of training programs.		X
• Establish staffing needs and recruit and hire staff for the Management and Professional Development Branch.		X
• Conduct a training needs assessment survey of Nuclear Group managers to determine the training and developmental needs of managers at each level of management.		X
• Provide organizational development professionals to work with the Senior Vice President-Nuclear and Nuclear Group managers.	X	

Improve team building efforts to increase individual investment in, and commitment to, nuclear excellence at PBAPS.

	<u>SCHEDULE</u>	
	A	B
• Conduct the Shift Manager's training course, <u>Managing for Excellence</u>	X	
• Conduct a <u>People-The Foundation of Excellence</u> course for a cross-sectional group of first- and second-line supervisory personnel.		X
• Develop and initiate a plan to provide training and/or coaching for managers and supervisors in conducting face-to-face performance appraisal interviews.		X
• Design and initiate training sessions for PBAPS operating chain from the Plant Manager to the Shift Supervisors in effective implementation of disciplinary policies and work rules.		X

Section II: PBAPS ACTION

SCHEDULE
A B

- Conduct an all-day off-site meeting for Nuclear Group management, including PBAPS managers and superintendents, to discuss progress on the Restart Plan and objectives for cultural change. X
- Discuss specific PBAPS objectives for cultural change with PBAPS management staff after the Nuclear Group off-site meeting has been held on this subject. X

5.3.3 Corrective Actions To Implement Objective 3

To implement Objective 3 ("Provide training and open communication processes which support employee commitment to these values"), the following actions will be taken:

Use independent expertise to assess the potential of current licensed operators for successful attitudinal training and post-course behavioral change.

SCHEDULE
A B

- Conduct individual psychological assessments of current licensed operators to determine their ability to participate in retraining and qualify for return to duty in the control room. X

Develop and conduct an attitudinal training program for current licensed operators focused on providing current operators and other PBAPS control room personnel with the means to change behaviors and attitudes in order to ensure excellent job performance.

SCHEDULE
A B

- Conduct the People-The Foundation of Excellence course for current PBAPS licensed operators and Shift Technical Advisors. X
- Conduct team training for Shift Managers and licensed operators. X

Section II: PBAPS ACTION

Develop and conduct an attitudinal training program for current non-licensed operators focused on providing the means to change behaviors and attitudes in order to ensure excellent job performance.

SCHEDULE
A B

- Conduct the Personal Effectiveness course for all current PBAPS non-licensed operators. X

Develop and conduct follow-up training over the course of the next year for participants from People-The Foundation of Excellence, Managing for Excellence, Personal Effectiveness, and Team Training to reinforce concepts and skills acquired in these courses and to extend these learnings.

SCHEDULE
A B

- Develop a follow-up training program and obtain management approval. X

Provide opportunities for additional exposure to current professional issues, developments, and good practices relevant to nuclear operations.

SCHEDULE
A B

- Provide opportunities for managers and PBAPS personnel to visit other nuclear facilities to learn from and adapt good practices. X

Foster an attitude of professional dedication to the safety and quality of plant operations on the part of PBAPS employees.

SCHEDULE
A B

- Emphasize issues related to professionalism, safety and quality in operator attitudinal training programs, written memoranda to site personnel, and all-hands meetings for site PE and contract employees. X

Section II: PBAPS ACTION

Establish communication processes by which each level of PBAPS management will communicate goals and expectations to employees and obtain timely input from supervisory personnel and employees about concerns and recommendations.

	<u>SCHEDULE</u>	
	A	B
• Continue the "Tell It To the Vice President" program at PBAPS.	X	
• Continue the PB-TEAM program at PBAPS.	X	
• Continue Plant Manager meetings with staff, shift personnel and contractor representatives.		X
• Conduct a survey of a representative sample of PBAPS managers, supervisors and employees to determine concerns with respect to organizational and work team performance and initiate appropriate follow-up processes.		X
• Conduct a series of all-hands meetings to discuss PBAPS Restart Plan, station goals, management philosophy and cultural change objectives.		X

5.3.4 Corrective Actions To Implement Objective 4

To implement Objective 4 ("Ensure that management policies, programs and control systems support these cultural values"), the following actions will be taken:

Modify the application of the disciplinary and grievance policies to provide site management with the appropriate authority to require employee performance standards consistent with nuclear requirements.

	<u>SCHEDULE</u>	
	A	B
• Modify the application of disciplinary guidelines to identify infractions which warrant suspension in the nuclear environment; revise guidelines as necessary; communicate the revisions to PBAPS managers.		X
• Revise the grievance process for Nuclear employees in order to resolve employee complaints at appropriate levels.	X	
• Develop written guidelines with respect to management authority and responsibility in the disciplinary process.		X

Section II: PBAPS ACTION

Ensure that entry-level hiring and promotion policies allow adequate flexibility for site management to recruit, hire or promote personnel with the required nuclear experience, technical knowledge and supervisory qualifications for open Nuclear positions.

	<u>SCHEDULE</u>	
	A	B
• Review and revise, as appropriate, the guidelines for entry and transfer positions leading to the licensed operator career path.	X	
• Review and revise guidelines for qualification for promotion to first-level supervisory positions; include opportunities for employees to develop and demonstrate their skills through temporary or upgraded developmental assignments.		X
• Establish a full-time Personnel Administrator position at PBAPS.	X	

Strengthen the site employee performance appraisal process.

	<u>SCHEDULE</u>	
	A	B
• Establish policy requirement and monitoring mechanism to ensure that each manager down to and including first-line supervisors conducts an annual face-to-face performance review with his reports.	X	

Review and revise station procedures as required to support safe restart and ongoing operation at PBAPS and to improve the procedure management and control process.

	<u>SCHEDULE</u>	
	A	B
• Implement the revised procedure change initiation process.		X
• Establish a schedule for converting to a two-year review cycle for specified procedures.		X
• Support adherence to the appropriate distribution and control of station procedures by providing efficient administrative support systems for procedure reproduction, distribution, maintenance and control.		X
• Document responsibilities for ensuring that new or revised procedures are incorporated in relevant Nuclear training programs in a timely manner.		X

Section II: PBAPS ACTION

	SCHEDULE	
	A	B
• Establish policy requirement and revise the employee performance evaluation form to include procedural compliance as an individual performance standard in performance evaluation.	X	
• Include emphasis on management's commitment to adherence to procedures in Nuclear training programs.	X	
• Review and revise as appropriate the following station procedures:		
▪ Administrative (A) procedures		X
▪ General Plant (GP) procedures		X
▪ System (S) procedures	X	
▪ Health Physics (HP) procedures		X
▪ Radioactive Waste (RW) procedures		X
▪ Maintenance (M) procedures		X
▪ Chemistry (C) procedures		X
▪ Emergency (E) procedures	X	
▪ Emergency Plan (EP) procedures	X	
▪ Pre-Fire Strategy Plan (F) procedures		X
▪ Fuel Handling (FH) procedures	X	
▪ Off-Normal (ON) and Operational Transient (OT) procedures	X	
▪ Protection Plan (PP) procedures		X
▪ Reactor Engineering (RE) procedures		X
▪ Routine Testing (RT) procedures	X	
▪ Special Event (SE) procedures	X	
▪ Surveillance Test (ST) procedures	X	
▪ Surveillance Test/Emergency Plant (ST/EP) procedures	X	
▪ Surveillance Test/Local Leak Rate Test (ST/LLRT) procedures		X

Section II: PBAPS ACTION

	SCHEDULE	
	A	B
• Surveillance Test/Inservice Inspection (ST/ISI) procedures		X
• Security Surveillance Test (SST) procedures		X
• Trip procedures		X
• Trip procedures (EPG-3)	X	
• Alarm Response Cards (AL-CRD) procedures		X

Centralize and strengthen the site QA program.

	SCHEDULE	
	A	B
• Clarify and document the role, responsibilities and reporting relationships of the Manager-Quality, PBAPS with line management and the Vice President-PBAPS.		X
• Increase QC monitoring of shift activities on a trial basis.	X	
• Assess the site QA audit and surveillance programs and develop goals for improving programs during 1988.	X	
• Initiate improved Nuclear QA reporting practices.	X	

Ensure that effective work management processes are established at PBAPS including processes/systems for site accountability for:

- performance monitoring and trending
- safety assessment
- operating experience assessment
- commitment management
- communication among site work groups and off-site support organizations

	SCHEDULE	
	A	B
• Develop and document performance goals for each manager-level organization at PBAPS which support Nuclear and PBAPS objectives.		X
• Document the scope of responsibilities of the PBAPS Planning, Scheduling and Reporting organization for performance monitoring and trending.		X

Section II: PBAPS ACTION

	SCHEDULE	
	A	B
• Develop and document interface responsibilities between the PBAPS Planning, Scheduling and Reporting organization and other groups involved in performance monitoring and trending.		X
• Initiate performance trend reporting at the monthly site status meetings with the Senior Vice President-Nuclear.		X
• Revise PORC membership to increase the emphasis on the roles of operations and maintenance in the performance of safety reviews by PORC while maintaining representation of those technical disciplines required for appropriate review of safety issues.		X
• Clarify and document functional responsibilities of the Superintendent-Technical for site interface with the OEAP and the Commitment Management Program Managers.		X
• Clarify and document interface responsibilities between the Plant, Project, Support and Training organizations for OEAP and Commitment Management Program.		X
• Initiate the Nuclear Performance Management Program at PBAPS, including management communications with site employees, to promote understanding of and commitment to Nuclear and PBAPS objectives and goals.		X

Section II: PBAPS ACTION

SCHEDULE
A B

- Establish written guidelines to ensure timely, interactive communications and problem-solving processes between site and support organizations in support of plant operations in the following areas:
 - regulatory and INPO interface
 - plant chemistry
 - radiological protection
 - radwaste management
 - emergency preparedness
 - fuel management
 - security and safeguards
 - plant systems monitoring
 - Nuclear QA

Foster cooperative, productive communication between site personnel and representatives of regulatory, industry, and governmental groups to ensure timely responsiveness by PBAPS to all regulatory and industry audits.

SCHEDULE
A B

- Continue regular meetings between plant management and resident NRC inspectors to discuss plant status and issues in an open, candid and constructive manner. X
- Establish and document accountability for site coordination and follow-up on regulatory or industry audits. X
- Establish and document the process by which site managers will be involved in the development and review of corrective action plans which involve their organization in response to such audits. X

APPENDIXES

APPENDIXES

Section II: PBAPS ACTION

APPENDIX A. RELATIONSHIP INDEX FOR ROOT CAUSES 1, 2 AND 3

Section II: PBAPS ACTION

This chart, and the following pages, trace the relationships between: Shutdown Issues (SD), Root Causes (RC), Corrective Action Objectives (CAO), Corrective Actions (CA) and Major Activities*. For root causes 1, 2 and 3, the focus of Section II, the entire relationship chain is shown. Root cause 4 relationships were included in Section I.

Overview Chart**

<u>Shutdown Issues</u>	<u>Root Causes</u>	<u>Corrective Action Objectives</u>	<u>Corrective Actions</u>	
SD-1	RC-1: SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, SD-7, SD-8	CA01-1	CA1-1.1	
SD-2				
SD-3				
SD-4				
SD-5			CA01-2	CA1-2.1
SD-6			CA1-2.2	
SD-7				
SD-8				
SD-9				
	RC-2: SD-1, SD-2	CA02-1	CA2-1.1	
			CA2-1.2	
			CA2-1.3	
		CA02-2	CA2-2.1	
			CA2-2.2	

* Major Activities support each Corrective Action and therefore have the same relationship to Objectives, Root Causes and Shutdown Issues as the Corrective Action they support. They are identified by code numbers to their Corrective Action.

** Numbering system and text presented in the following pages.

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<u>Shutdown Issues</u>	<u>Root Causes</u>	<u>Corrective Action Objectives</u>	<u>Corrective Actions</u>
	RC-3: SD-1, SD-2, SD-3 SD-4, SD-5, SD-6, SD-7 SD-8, SD-9,	CA03-1	CA3-1.1
		CA03-2	CA3-2.1 CA3-2.2
		CA03-3	CA3-3.1 CA3-3.2 CA3-3.3 CA3-3.4 CA3-3.5 CA3-3.6 CA3-3.7
		CA03-4	CA3-4.1 CA3-4.2 CA3-4.3 CA3-4.4 CA3-4.5 CA3-4.6 CA3-4.7

Section II: PBAPS ACTION

Shutdown Issues

- SD-1. Operations Control Room staff periodically slept or have otherwise been inattentive to licensed duties.
- SD-2. Pattern of inattention to detail, failure to adhere to procedural requirements, and a generally complacent attitude by the operations staff toward performance of their duties.
- SD-3. Management at the Shift Supervisor and Shift Superintendent level have either known and condoned the facts (SD-1), or should have known of these facts.
- SD-4. Plant management above the Shift Superintendent position either knew or should have known the facts (in SD-1) and either took no action or inadequate action to correct this situation.
- SD-5. The licensee must have and implement procedures to ensure that activities affecting quality, including operations of the facility, are satisfactorily accomplished. The Peach Bottom quality assurance program has failed to identify this condition adverse to safety.
- SD-6. The licensee, through its enforcement history and from what has been developed by the ongoing investigation, knew or should have known of the unwillingness or inability of its operations staff to comply with Commission requirements, and has been unable to implement effective corrective action.
- SD-7. Lack of adequate management involvement: poor dissemination of management goals and policies.
- SD-8. Lack of adequate management involvement: poor communications between different departments and divisions.
- SD-9. Lack of adequate management involvement: focus on compliance rather than acknowledgement and correction of the root causes of problems.

Section II: PBAPS ACTION

Root Causes

- RC-1. There was a lack of adequate personal leadership and management skills on the part of senior management at the plant.
- RC-2. The Company failed to initiate timely licensed operator replacement training programs.
- RC-3. The station culture, which had its roots in fossil and pre-TMI operations, had not adapted to changing nuclear requirements.
- RC-4. Corporate management failed to recognize the developing severity of the problems at PBAPS and thus, did not take sufficient corrective actions.

Section II: PBAPS ACTION

Corrective Action Objectives to Address Root Cause 1 (RC-1)

CA01-1. Establish a PBAPS management team with
 strong leadership and management skills.

CA01-2. Increase the number of site management
 positions to ensure effective supervision
 and accountability for each function.

Section II: PBAPS ACTION

Corrective Actions to Address Objective CA01-1

- CA1-1.1 Identify individuals with strong leadership and management skills to staff each Superintendent-level position and above.

Corrective Actions to Address Objective CA01-2

- CA1-2.1 Develop an organizational structure to provide increased management direction, control, authority and accountability for site work activities.
- CA1-2.2 Establish and implement an Operations organization structure which will support effective management and use of shift resources.

Section II: PBAPS ACTION

Major Activities to Support Corrective Action CA1-1.1

- CA1-1.1.1 Conduct a search, internal or external as appropriate, to identify and select qualified candidates to staff positions at the Superintendent-level and above. (SD-8)

Major Activities to Support Corrective Action CA1-2.1

- CA1-2.1.1 Identify work functions which should be removed from the responsibility of the Plant Manager to allow increased Plant Manager focus on day-to-day plant operations, while simultaneously providing additional dedicated management attention to areas such as outage management and station support. (SD1, SD-2, SD-4, SD-7, SD-8)
- CA1-2.1.2 Establish a revised site organizational structure based on this analysis. (SD-8)
- CA1-2.1.3 Clarify and document functional accountabilities for each Superintendent-level organization within the revised site organizational structure. (SD-7, SD-8)

Major Activities to Support Corrective Action CA1-2.2

- CA1-2.2.1 Reorganize control room and floor work activities to provide additional supervisory attention and additional staff coverage to enhance the level of operations; develop an organizational structure to support these changes. (SD-7, SD-8)
- CA1-2.2.2 File with the NRC for any required Technical Specifications changes. (SD-8)
- CA1-2.2.3 Develop and initiate a plan for staffing the revised Operations organization structure on a phased basis as additional licensed operator personnel become available. (SD-8)
- CA1-2.2.4 Establish and implement new shift rotation schedule. (SD-1, SD-2)
- CA1-2.2.5 Implement the Shift Manager position. (SD-1, SD-2, SD-3, SD-4, SD-7, SD-8)

Section II: PBAPS ACTION

Corrective Action Objectives to Address Root Cause 2 (RC-2)

- CA02-1 Ensure an adequate reserve of licensed operators to provide flexibility for relief and rotational assignments and add additional supervisory and reactor operator coverage beyond the safety requirements on each shift.
- CA02-2 Ensure that shift personnel have opportunities to pursue alternate career paths and to have relief from shift work during their career progression at PE.

Section II: PBAPS ACTION

Corrective Actions to Implement Objective CA02-1

- CA2-1.1 Ensure availability of sufficient numbers of qualified licensed operators to restart PBAPS.
- CA2-1.2 Develop and initiate plans to create and maintain an adequate reserve of licensed personnel ready to fill temporary and permanent vacancies.
- CA2-1.3 Staff, on a rotating basis, a blocking and support group to reduce the administrative burden on the control room shift.

Corrective Actions to Implement Objective CA02-2

- CA2-2.1 Develop additional career paths for shift personnel.
- CA2-2.2 Develop educational programs for operator personnel who wish to progress into technical and/or management positions.

Section II: PBAPS ACTION

Major Activities to Support Corrective Action CA2-1.1

- CA2-1.1.1 Assess the availability of qualified licensed operators and develop and implement a plan to ensure that sufficient licensed operators are available for restart of PBAPS. (SD-1, SD-2)
- CA2-1.1.2 Accelerate operator training program to expedite the number of available licensed operators. (SD-1, SD-2)
- CA2-1.1.3 Coordinate with PBAPS co-owners and General Electric to supplement current resources of licensed operators until a sufficient number of licensed operators have qualified. (SD-1, SD-2)
- CA2-1.1.4 Provide attitudinal and procedural training as required for licensed operators to ensure that they will be ready to return to duty by restart. (SD-1, SD-2)

Major Activities to Support Corrective Action CA2-1.2

- CA2-1.2.1 Develop higher entry standards and appropriate compensation schedules for the recruitment and hiring of future candidates for licensed operator positions. (SD-1, SD-2)
- CA2-1.2.2 Develop and initiate a plan for additional operator training programs to provide ongoing reserve of licensed operators. (SD-1, SD-2)

Major Activities to Support Corrective Action CA2-1.3

- CA2-1.3.1 Develop a plan to identify and train qualified personnel to staff a blocking and support group. (SD-1, SD-2)
- CA2-1.3.2 Clarify and document the responsibilities of the Work Control Group. (SD-1, SD-2, SD-8)

Section II: PBAPS ACTION

Major Activities to Support Corrective Action CA2-2.1

- CA2-2.1.1 Develop additional career path and rotational off-shift assignment opportunities within the shift job progression for non-degreed personnel. (SD-1, SD-2)

- CA2-2.1.2 Develop additional opportunities for lateral transfers and/or promotions for shift personnel into other functional areas where additional operating experience would be beneficial. (SD-1, SD-2)

Major Activities to Support Corrective Action CA2-2.2

- CA2-2.2.1 Research and develop a program for licensed operators to obtain a bachelor's degree in engineering. (SD-1, SD-2)

- CA2-2.2.2 Research and develop a program for operator personnel which leads to certification in nuclear operations technology. (SD-1, SD-2)

Section II: PBAPS ACTION

Corrective Action Objectives to Address Root Cause 3 (RC-3)

- CA03-1 Identify and communicate the cultural values which PE and PBAPS management are committed to supporting in the pursuit of nuclear excellence.
- CA03-2 Provide training and team building support for management to live by those values.
- CA03-3 Provide training and open communication processes which support employee commitment to these values.
- CA03-4 Ensure that management policies, programs and control systems support these cultural values.

Section II: PBAPS ACTION

Corrective Actions to Address Objective CA03-1

- CA3-1.1 Communicate Nuclear Group management philosophy with respect to excellence, assurance of quality and the vision, mission and objectives.

Corrective Actions to Address Objective CA03-2

- CA3-2.1 Identify and address the training and development needs of PBAPS managers and supervisors in a timely and appropriate manner.
- CA3-2.2 Improve team building efforts to increase individual investment in, and commitment to, nuclear excellence at PBAPS.

Corrective Actions to Address Objective CA03-3

- CA3-3.1 Use independent expertise to assess the potential of current licensed operators for successful attitudinal training and post-course behavioral change.
- CA3-3.2 Develop and conduct an attitudinal training program for current licensed operators focused on providing current operators and other PBAPS control room personnel with the means to change behaviors and attitudes in order to ensure excellent job performance.
- CA3-3.3 Develop and conduct an attitudinal training program for current non-licensed operators focused on providing the means to change behaviors and attitudes in order to ensure excellent job performance.

Section II: PBAPS ACTION

- CA3-3.4 Develop and conduct follow-up training over the course of the next year for participants from People-The Foundation of Excellence, Managing for Excellence, Personal Effectiveness, and Team Training to reinforce concepts and skills acquired in these courses and to extend these learnings.
- CA3-3.5 Provide opportunities for additional exposure to current professional issues, developments, and good practices relevant to nuclear operations.
- CA3-3.6 Foster an attitude of professional dedication to the safety and quality of plant operations on the part of PBAPS employees.
- CA3-3.7 Establish communication processes by which each level of PBAPS management will communicate goals and expectations to employees and obtain timely input from supervisory personnel and employees about concerns and recommendations.

Corrective Actions to Address Objective CA03-4

- CA3-4.1 Modify the application of the disciplinary and grievance policies to provide site management with the appropriate authority to require employee performance standards consistent with nuclear requirements.
- CA3-4.2 Ensure that entry-level hiring and promotion policies allow adequate flexibility for site management to recruit, hire or promote personnel with the required nuclear experience, technical knowledge and supervisory qualifications for open Nuclear positions.
- CA3-4.3 Strengthen the site employee performance appraisal process.

Section II: PBAPS ACTION

- CA3-4.4 Review and revise station procedures as required to support safe restart and ongoing operation at PBAPS and to improve the procedure management and control process.
- CA3-4.5 Centralize and strengthen the site QA program.
- CA3-4.6 Ensure that effective work management processes are established at PBAPS including processes/systems for site accountability for:
- performance monitoring and trending
 - safety assessment
 - operating experience assessment
 - commitment management
 - communication among site work groups and off-site support organizations
- CA3-4.7 Foster cooperative, productive communications between site personnel and representatives of regulatory, industry, and governmental groups to ensure timely responsiveness by PBAPS to all regulatory and industry audits.

Section II: PBAPS ACTION

Major Activities to Support Corrective Action CA3-1.1

- CA3-1.1.1 Develop and document a statement of the Company's management philosophy for excellence in nuclear operations. (SD-5, SD-9)

- CA3-1.1.2 Develop and document a statement of the Nuclear Group management philosophy for the assurance of quality. (SD-5, SD-9)

- CA3-1.1.3 Develop and document the Nuclear Group's vision, mission and objectives. (SD-5, SD-9)

- CA3-1.1.4 Develop and document PBAPS mission, vision objectives and goals. (SD-4, SD-9)

- CA3-1.1.5 Communicate these statements by publishing them in PE newspapers, displaying them on site bulletin boards, and incorporating them into appropriate site training activities. (SD-8)

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Major Activities to Support Corrective Action CA3-2.1

- CA3-2.1.1 Clarify and document transitional interface agreements with the Nuclear Training organization to be used as interim policies and processes for the development, assessment, evaluation, and upgrading of training programs. (SD-7, SD-8)
- CA3-2.1.2 Establish staffing needs and recruit and hire staff for the Management and Professional Development Branch. (SD-7, SD-8)
- CA3-2.1.3 Conduct a training needs assessment survey of Nuclear Group managers to determine the training and developmental needs of managers at each level of management. (SD-7, SD-8)
- CA3-2.1.4 Provide organizational development professionals to work with the Senior Vice President-Nuclear and Nuclear Group managers. (SD-7, SD-8)

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Major Activities to Support Corrective Action 3-2.2

- CA3-2.2.1 Conduct the Shift Manager's training course, Managing for Excellence. (SD-7, SD-8)
- CA3-2.2.2 Conduct a People-The Foundation of Excellence course for a cross-sectional group of first- and second-line supervisory personnel. (SD-7, SD-8, SD-9)
- CA3-2.2.3 Develop and initiate a plan to provide training and/or coaching for managers and supervisors in conducting face-to-face performance appraisal interviews. (SD-6, SD-7)
- CA3-2.2.4 Design and initiate training sessions for PBAPS operating chain from the Plant Manager to the Shift Supervisors in effective implementation of disciplinary policies and work rules. (SD-7, SD-8)
- CA3-2.2.5 Conduct all-day off-site meeting for Nuclear Group management, including PBAPS managers and superintendents to discuss progress on the Restart Plan and objectives for cultural change. (SD-7, SD-9)
- CA3-2.2.6 Discuss specific PBAPS objectives for cultural change with PBAPS management staff after the Nuclear Group off-site meeting has been held on this subject. (SD-7, SD-9)

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Major Activities to Support Corrective Action CA3-3.1

- CA3-3.1.1 Conduct individual psychological assessments of current licensed operators to determine their ability to participate in retraining and qualify for return to duty in the control room. (SD-1, SD-2)

Major Activities to Support Corrective Action CA3-3.2

- CA3-3.2.1 Conduct the People-The Foundation of Excellence course for current PBAPS licensed operators and Shift Technical Advisors. (SD-1, SD-2, SD-3, SD-9)
- CA3-3.2.2 Conduct team training for Shift Managers and licensed operators. (SD-1, SD-2, SD-3, SD-9)

Major Activities to Support Corrective Action CA3-3.3

- CA3-3.3.1 Conduct the Personal Effectiveness course for all current PBAPS non-licensed operators. (SD-1, SD-2, SD-9)

Major Activities to Support Corrective Action CA3-3.4

- CA3-3.4.1 Develop a follow-up training program and obtain management approval. (SD-1, SD-2, SD-3, SD-9)

Major Activities to Support Corrective Action CA3-3.5

- CA3-3.5.1 Provide opportunities for managers and PBAPS personnel to visit other nuclear facilities to learn from and adapt good practices. (SD-7, SD-9)

Major Activities to Support Corrective Action CA3-3.6

- CA3-3.6.1 Emphasize issues related to professionalism, safety and quality in operator attitudinal training programs, written memoranda to site personnel, and all-hands meetings for site PE and contract employees. (SD-7, SD-8, SD-9)

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Major Activities to Support Corrective Action CA3-3.7

- CA3-3.7.1 Continue the "Tell It To the Vice President" program at PBAPS. (SD-8)
- CA3-3.7.2 Continue the PB-TEAM program at PBAPS. (SD-8)
- CA3-3.7.3 Continue Plant Manager meetings with staff, shift personnel and contractor representatives. (SD-8)
- CA3-3.7.4 Conduct a survey of a representative sample of PBAPS managers, supervisors and employees to determine concerns with respect to organizational and work team performance and initiate appropriate follow-up processes. (SD-8)
- CA3-3.7.5 Conduct a series of all-hands meetings to discuss PBAPS Restart Plan, station goals, management philosophy and cultural change objectives. (SD-7, SD-9)

Major Activities to Support Corrective Action CA3-4.1

- CA3-4.1.1 Modify the application of disciplinary guidelines to identify infractions which warrant suspension in the nuclear environment; revise guidelines as necessary; communicate the revisions to PBAPS managers. (SD-7, SD-8)
- CA3-4.1.2 Revise the grievance process for Nuclear employees in order to resolve employee complaints at appropriate levels. (SD-7, SD-8)
- CA3-4.1.3 Develop written guidelines with respect to management authority and responsibility in the disciplinary process. (SD-7, SD-8)

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Major Activities to Support Corrective Action CA3-4.2

- CA3-4.2.1 Review and revise, as appropriate, the guidelines for entry and transfer positions leading to the licensed operator career path. (SD-1, SD-2)
- CA3-4.2.2 Review and revise guidelines for qualification for promotion to first-level supervisory positions; include opportunities for employees to develop and demonstrate their skills through temporary or upgraded developmental assignments. (SD-1, SD-2)
- CA3-4.2.3 Establish a full-time Personnel Administrator position at PBAPS. (SD-7, SD-8)

Major Activities to Support Corrective Action CA3-4.3

- CA3-4.3.1 Establish policy requirement and monitoring mechanism to ensure that each manager down to and including first-line supervisors conducts an annual face-to-face performance review with his reports. (SD-1, SD-2, SD-3, SD-4, SD-7)

Major Activities to Support Corrective Action CA3-4.4

- CA3-4.4.1 Implement the revised procedure change initiation process. (SD-2, SD-5)
- CA3-4.4.2 Establish a schedule for converting to a two-year review cycle for specified procedures. (SD-5)
- CA3-4.4.3 Support adherence to the appropriate distribution and control of station procedures by providing efficient administrative support systems for procedure reproduction, distribution, maintenance and control. (SD-2, SD-5)
- CA3-4.4.4 Document responsibilities for ensuring that new or revised procedures are incorporated in relevant Nuclear training programs in a timely manner. (SD-2, SD-5)

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- CA3-4.4.5 Establish policy requirement and revise the employee performance evaluation form to include procedural compliance as an individual performance standard in performance evaluation. (SD-2, SD-5)
- CA3-4.4.6 Include emphasis on management's commitment to adherence to procedures in Nuclear training programs (SD-2, SD-5, SD-7)
- CA3-4.4.7 Review and revise as appropriate the following station procedures: (SD-2, SD-5)
- Administrative (A) procedures.
 - General Plant (GP) procedures
 - System (S) procedures
 - Health Physics (HP) procedures
 - Radioactive Waste (RW) procedures
 - Maintenance (M) procedures
 - Chemistry (C) procedures
 - Emergency (E) procedures
 - Emergency Plan (EP) Procedures
 - Pre-Fire Strategy Plan (F) procedures
 - Fuel Handling (FH) procedures
 - Off-Normal (ON) and Operational Transient (OT) procedures
 - Protection Plan (PP) procedures
 - Reactor Engineering (RE) procedures
 - Routine Testing (RT) procedures
 - Special Event (SE) procedures
 - Surveillance Test (ST) procedures
 - Surveillance Test/Emergency Plant (ST/EP) procedures
 - Surveillance Test/Local Leak Rate Test (ST/LLRT) procedures
 - Surveillance Test/Inservice Inspection (ST/ISI) procedures
 - Security Surveillance Test (SST) procedures
 - Trip procedures
 - Trip procedures (EPG-3)
 - Alarm Response Card (AL-CRD) procedures

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Major Activities to Support Corrective Action CA3-4.5

- CA3-4.5.1 Clarify and document the role, responsibilities and reporting relationships of the Manager-Quality, PBAPS with line management and the Vice President-PBAPS. (SD-5, SD-8)
- CA3-4.5.2 Increase QC monitoring of shift activities on a trial basis. (SD-5, SD-6)
- CA3-4.5.3 Assess the site QA audit and surveillance programs and develop goals for improving programs during 1988. (SD-5, SD-6)
- CA3-4.5.4 Initiate improved Nuclear QA reporting practices. (SD-5, SD-6)

Major Activities to Support Corrective Action CA3-4.6

- CA3-4.6.1 Develop and document performance goals for each manager-level organization at PBAPS which support Nuclear and PBAPS objectives. (SD-5, SD-7)
- CA3-4.6.2 Document the scope of responsibilities of the PBAPS Planning, Scheduling and Reporting organization for performance monitoring and trending. (SD-8)
- CA3-4.6.3 Develop and document interface responsibilities between the PBAPS Planning, Scheduling and Reporting organization and other groups involved in performance monitoring and trending. (SD-8)
- CA3-4.6.4 Initiate performance trend reporting at the monthly site status meetings with the Senior Vice President-Nuclear. (SD-6)
- CA3-4.6.5 Revise PORC membership to increase the emphasis on the roles of operations and maintenance in the performance of safety reviews by PORC while maintaining representation of those technical disciplines required for appropriate review of safety issues. (SD-5, SD-9)
- CA3-4.6.6 Clarify and document functional responsibilities of the Superintendent-Technical for site interface with the OEAP and the Commitment Management Program managers. (SD-7, SD-8)

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- CA3-4.6.7 Clarify and document interface responsibilities between the Plant, Project, Support and Training organizations for DEAP and Commitment Management Program. (SD-7, SD-8)
- CA3-4.6.8 Initiate the Nuclear Performance Management Program at PBAPS, including management communications with site employees to promote understanding of and commitment to Nuclear and PBAPS objectives and goals. (SD-5, SD-7)
- CA3-4.6.9 Establish written guidelines to ensure timely, interactive communications and problem-solving processes between site and support organizations in support of plant operations in the following areas: (SD-8)
- regulatory and INPO interface
 - plant chemistry
 - radiological protection
 - radwaste management
 - emergency preparedness
 - fuel management
 - security and safeguards
 - plant systems monitoring
 - Nuclear QA

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Major Activities to Support Corrective Action CA3-4.7

- CA3-4.7.1 Continue regular meetings between plant management and resident NRC inspectors to discuss plant status and issues in an open, candid and constructive manner. (SD-7, SD-8)
- CA3-4.7.2 Establish and document accountability for site coordination and follow-up on regulatory or industry audits. (SD-7, SD-8)
- CA3-4.7.3 Establish and document the process by which site managers will be involved in the development and review of corrective action plans which involve their organization in response to such audits. (SD-7, SD-8)

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APPENDIX B. BIOGRAPHICAL DATA FOR PBAPS MANAGERS

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Dickinson M. Smith, Vice President-PBAPS, a retired Rear Admiral, United States Navy, brought over 25 years of nuclear experience to the position of Plant Manager-PBAPS, when he joined PE in May, 1987. At the time of his retirement from the Navy in 1986, Mr. Smith served as Chief of Staff, Allied Command Atlantic, where he directed an international military staff of 450 from 11 NATO nations. Prior to that, Mr. Smith was Senior Military Commander in the Philippines, managing the largest U. S. Naval installation overseas with a total military and civilian work force of 35,000.

Mr. Smith's nuclear responsibilities with the Navy began in 1959. Over the next 14 years, he served on, or commanded, several nuclear submarines. Between 1973 and 1979, Mr. Smith held a number of senior military positions, which included the training for and operation of nuclear submarines. He also served as senior military staff assistant to Admiral H. G. Rickover.

Mr. Smith was graduated from the U. S. Naval Academy in 1955 with a B.S. degree. He also holds a Master of Public Administration degree from The American University.

Hugh J. Diamond, Commitment to Excellence Site Program Manager, joined PE as a Test Engineer in the Electric Production Department following his graduation in 1968 from St. Joseph's University with a B.S. in Engineering Physics. Mr. Diamond's 20-year career with PE includes 17 years in nuclear engineering and management positions. In 1971, he was transferred to PBAPS where he served as Start-up Engineer and Assistant Reactor Engineer. During this period he received his M.S. in Environmental Engineering (Radiological) from Drexel University. From 1977 to his present assignment, Mr. Diamond served as Engineer-Supervisory and Senior Engineer (Nuclear Plant Support Branch Head) in the Nuclear Fuel Management Section at PE

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Headquarters. He received his M.B.A. from the Wharton School (Executive Program) of the University of Pennsylvania in 1986. He has taken company-sponsored management and technical courses, nine mechanical and nuclear engineering courses toward an M.S. in Mechanical Engineering at the University of Pennsylvania and is a Registered Professional Engineer in the Commonwealth of Pennsylvania.

Jack Winzenried, Staff Engineer, attended the University of Tennessee and was graduated from Tri-State College in 1960 with a B.S. in Electrical Engineering. He was Chief Engineer for a radio station for two years before joining the U.S. Navy in 1962. He served in the Navy for six years in the Nuclear Power Program. Mr. Winzenried joined PE as a Test Engineer following his Navy service and served three years in that role before transferring to Peach Bottom. He initiated a number of new functions at PBAPS including serving as the first I&C Engineer, the first Start-up Coordinator for Unit 3, the first Administrative Engineer, the first Operations Engineer and the first Superintendent of Plant Services. In April, 1986, he assumed the position of Staff Engineer at PBAPS. In that role, Mr. Winzenried administered the Peach Bottom Enhancement Program which was developed in response to the 1986 SALP report. He developed the action plan, tracking and reporting mechanisms and other management tools to support the program. He is currently performing the same function in response to the 1987 INPO Evaluation. Mr. Winzenried has been actively involved in professional organizations, serving on the Institute of Electronic and Electrical Engineers' subcommittee which developed the standard for testing Reactor Protection Systems (IEEE-338) and the BWR Standardized Technical Specification Committee. He is presently a member of the BWR Owners' Group where he serves on the Emergency Procedures Guidelines Committee.

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John F. Franz, Plant Manager-PBAPS, joined PE in 1962. Beginning in 1963, he served in supervisory positions at PBAPS Unit 1 and, later, at Units 2 and 3. In February, 1976, he was named Assistant Superintendent of LGS, and remained in that position through March, 1985, when he was assigned as Superintendent-Operations. In April, 1986, he was appointed Plant Manager of LGS where he served until December, 1987, when he accepted the Plant Manager-PBAPS position. He received a B.S. in Mechanical Engineering from Drexel University and participated in the G.E. Station Nuclear Management School. He is a Registered Professional Engineer in the Commonwealth of Pennsylvania and has held an NRC Senior Reactor Operator License on PBAPS Units 1, 2 and 3, and LGS Unit 1.

Gerald R. Rainey, Superintendent-Maintenance and I&C, has had 19 years of PE experience. He was graduated from Widener University with a B.S. in Engineering. He held engineering and other technical positions at three PE fossil plants. His nuclear experience has included serving as Instrument and Controls Engineer and Branch Engineer, Testing and Laboratories Division of Engineering at Limerick Generating Station where he held an SRO license. In addition, he served as Maintenance Department Vendor Coordinating Engineer and Superintendent-Plant Services at PBAPS. Mr. Rainey has taken numerous technical and management courses and is a member of the American Nuclear Society, Senior Member and Senior Instructor (BWR Instrumentation) of the Instrument Society of America, and a charter member Mid-Atlantic Instrument and Controls Engineers Association.

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John K. Davenport, Assistant Superintendent Maintenance, graduated from Pennsylvania State University in 1968 with a B.S. in Mechanical Engineering. He joined PE in 1968 as a Test Engineer in the Electric Production Department. In 1970, he transferred to PBAPS where he was involved in a variety of assignments including the investigation, planning, writing and monitoring of maintenance projects on the nuclear portion of the plant. In 1972, he was assigned to PBAPS Unit 2 in the Test Engineering Group where he wrote operating procedures, performed tests and was responsible for supervising and coordinating the pre-operational test program for the heating and ventilation systems. In 1975, he organized and established the mechanism for identifying and updating outage items for planned outages. Since 1977, he has held several engineering positions of increasing responsibility becoming a Supervising Engineer in Maintenance in 1985. Mr. Davenport completed the two-week executive program at Pennsylvania State in 1986 and has taken other PE-sponsored management courses.

Genffrey F. Dawson, Maintenance Engineer, was graduated from the University of Delaware in 1972 with a B.S. in Electrical Engineering. Prior to joining PE he gained nuclear operation and maintenance experience in the Navy Nuclear Power Program. During his 15 years of experience with PE, he has served as Test Engineer, Maintenance Engineer, Assistant Outage Planning Engineer, I&C Engineer and Performance/Project Engineer in the Technical Group. He has participated in numerous company-sponsored management training courses and has a Senior Reactor Operator License. He is a member of the Institute of Electronic and Electrical Engineers.

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Charles E. Andersen, Assistant Superintendent-I&C, joined PE two years after receiving his B.S. in Mechanical Engineering from Drexel University. In his 22 years of experience with PE, he has served as Test Engineer, Results Engineer, and Operations Engineer at PBAPS. Additionally, he served as Branch Engineer for the Susquehanna Branch of the Engineering and Research Department. He has taken company-sponsored management courses and a two-week management course at Pennsylvania State University. Mr. Anderson is a member of the Instrument Society of America and chaired its SP 67.11 Nuclear Standards Committee.

Darryl P. LeQuia, Superintendent-Plant Services, has a Bachelor of Professional Studies in Applied Science from Elizabethtown College and is pursuing a Master of Science degree in Nuclear Engineering at the Georgia Institute of Technology's external program. He also attended a professional radiation protection training course at Georgia Institute of Technology as well as specialized health physics training with the Nuclear Regulatory Commission. A recent hire at PE, Mr. LeQuia brings over 13 years of experience as a Radiation Specialist for the Nuclear Regulatory Commission to his new position. Additional experience includes three years as the applied health physics supervisor at Point Beach Nuclear Plant and three years of health physics/chemistry experience at Three Mile Island Nuclear Station. Prior to that assignment, he was qualified as an Engineering Watch Supervisor and Leading Engineering Laboratory Technician in the Navy Nuclear Power Program.

Dennis L. Oltmans, Senior Chemist, has 15 years of experience first as a Start-up Engineer with General Electric, then beginning with PE in 1984 as a Senior Chemist. He holds a B.A. from Gustavus Adolphus College, and an M.S. from Iowa State

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University. He completed General Electric's specialist course in BWR Chemistry, and has participated in company-sponsored management courses.

David P. Potocik, Senior Health Physicist, received his B.S. in Zoology from Clemson University in 1973 and an M.S. in Civil Engineering from Northwestern University in 1976. He joined PE in 1987 as Senior Health Physicist at PBAPS. Prior to accepting the position at PE, he had extensive experience as Health Physics Operations Supervisor at Georgia Power Company. He consulted as a Senior Health Physicist for two years (1982-1984), and served as a Radiological Support Supervisor and Chemist/Health Physicist for Pennsylvania Power and Light at the Susquehanna Steam Electric Station. He has taken several company-sponsored management courses. He is a member of the Health Physics Society and the American Nuclear Society.

James F. Mitman, Radwaste Engineer, has 16 years of fossil and nuclear experience with PE. He was graduated from Lehigh University in 1971 with a B.S. in Mechanical Engineering. He has served as Test Engineer at both Delaware Station and PBAPS. At PBAPS he has also served as Supervisor of the Plant Maintenance Staff and of the Plant Test Engineers and as Senior Engineer-Plant Maintenance. Mr. Mitman was SRO licensed in 1979 and qualified as a Shift Technical Advisor in 1980. He has completed a variety of company-sponsored management courses.

George F. Daebeler, Superintendent-Technical, brings 21 years of technical and management experience to this position. He was graduated in 1962 from Rensselaer Polytechnical Institute, received an M.S. in Nuclear Engineering from Pennsylvania State University in 1966, and an M.B.A. from LaSalle University in 1987. At PE, he has held increasingly responsible positions in the Power Plant Design and Nuclear and Environmental Sections of the Engineering and Research Department. He was a

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Branch Head in the Safety and Licensing, Fuel and Nuclear Steam Supply Branches and has served as Supervising Buyer, Fuel Procurement. Most recently, he served as CTE Site Program Manager at PBAPS. Mr. Daebeler has taken company-sponsored management courses, is a Registered Professional Engineer in the Commonwealth of Pennsylvania, has been a member of the Safety and Analysis Task Force of the Electric Power Research Institute, the Probability Risk Assessment Subcommittee of the Atomic Industrial Forum, and Leader, Task 23, Industry Degraded Core Rulemaking Group. He is also a past Chairman of the American Society of Mechanical Engineers (Philadelphia Section) and past President of the American Nuclear Society (Delaware Valley Section).

Terrel B. Cribbe, Regulatory Engineer, was graduated from the University of South Carolina with a B.S. in Electrical Engineering in 1975. Currently he is on contract to PE from Associated Projects Analysts and brings 12 years of experience in engineering and licensing to his position. Joining Duke Power Company in 1976 as a junior engineer in the Performance Test Group, he held increasingly responsible positions becoming Licensing Engineer for Oconee Nuclear Power Station in 1980, chaired the Oconee Plant Technical Review Committee from 1980-1982, and also chaired the on-site Safety Review Group at Oconee in 1982. In 1983, after joining United Energy Services as a Supervising Engineer at Carolina Power and Light's Brunswick Steam Electric Plant, he provided staff assistance to the Manager, Plant Engineering, and the Director of Regulatory Compliance. He then served as a Lead Licensing Engineer for United Energy Services at the Sacramento Municipal Utility District's Rancho Seco Nuclear Power Plant. In June of 1985, Mr. Cribbe joined New South Energy Services where he provided technical services to Carolina Power and Light at the Brunswick Steam Electric Plant. Since 1987, he has been a Project Engineer for Associated Project Analysts where he was assigned to Sequoyah Nuclear

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Plant providing licensing support to the on-site Compliance Licensing Group. He is a licensed Professional Engineer in the state of South Carolina and a member of the American Nuclear Society and the American Society of Mechanical Engineers.

Albert A. Fulvio, Technical Engineer, was graduated from Pennsylvania State University in 1971 with a B.S. in Mechanical Engineering. He has 16 years of experience with PE, serving as a Test Engineer, Assistant Outage Manager, Instrumentation and Controls Engineer, Results Engineer, Assistant Maintenance Engineer, Compliance Engineer, Independent Safety Evaluation Group Engineer and Technical Engineer since 1985. He has an Engineer In Training Certificate (PA), is a member of the American Society of Mechanical Engineers, and has held an SR0 license since 1978. He has completed a variety of company-sponsored management courses.

John B. Cotton, Superintendent-Operations, was graduated from the U.S. Naval Academy in 1967 with a B.S. in Engineering. From 1967 to 1972 he served as a U.S. Naval Officer, where he completed Navy Nuclear Power Training. He was a qualified Engineering Officer of the Watch and Officer of the Deck on nuclear submarines. He joined PE in 1972 as a Quality Assurance Engineer. In 1978, he was assigned to Limerick Generating Station as a Test Engineer and was responsible for developing the post-TMI era emergency plan. As Engineer-Maintenance at LGS, he developed and supervised a 50-person organization. In 1986, he became Superintendent-Plant Services, PBAPS, where he served until 1987, when he was asked to accept the position he now holds, Superintendent-Operations, PBAPS. Mr. Cotton has taken numerous management courses sponsored by PE including participating in the Managing for Excellence course and was a member of the Delaware Valley Chapter of the Health

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Physics Society. He held an SRO license at LGS and recently passed his SRO examination at PBAPS.

Frederick W. Polaski, Assistant Superintendent-Operations, received his B.S. in Mechanical Engineering from the University of Delaware in 1971. He joined PE in 1972 as an Assistant Maintenance Engineer and has held a variety of positions of increasing responsibility, including Test Engineer, Reactor Engineer, Lead Reactor Engineer, Assistant Outage Manager, Outage Manager and Operations Engineer. When PE created the Nuclear Group, Mr. Polaski was asked to become the Assistant Superintendent-Operations. He has taken a variety of PE-sponsored management courses including Managing for Excellence, as well as General Electric's Station Nuclear Engineer Course. Mr. Polaski is a member of the American Nuclear Society and is SRO qualified at PBAPS.

Thomas N. Mitchell, Operations Support Engineer, was graduated from Cornell University in 1977 with a B.S. in Nuclear Engineering and received his M.S. in Mechanical Engineering from George Washington University. Mr. Mitchell is on loan to PE from the Institute of Nuclear Power Operations where he served as Assistant Manager and Manager, Radiological Protection Department, and, most recently, as Secretary of The Corporation and Staff Assistant to the President. Mr. Mitchell participated in The National Academy of Nuclear Training's Senior Nuclear Plant Management course, received his Engineering in Training Certificate, New York, is a certified Health Physicist (Power Reactors), American Board of Health Physicists, was an Executive Committee member of the Atlanta Section of the American Nuclear Society, and is a member of the Health Physics Society. He completed the Managing for Excellence course at PE.

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Joseph L. Clupp, Shift Manager, was graduated from Drexel University (Cooperative Work Program) with a B.S. in Electrical Engineering in 1977. As part of the Cooperative Work Program, he was assigned to work at PBAPS in the Instrumentation and Controls section as a Junior Technical Assistant. He joined PE in 1977 as an engineer and served as a test engineer, Assistant I&C Engineer, Shift Technical Advisor and as assistant to the Technical Engineer. In 1983, Mr. Clupp trained for and received his NRC SRO license. He was promoted to Engineer-Supervisory and served as I&C Results Engineer from 1984 to 1987. He served briefly as a Shift Supervisor before his appointment as a Shift Manager. In addition, Mr. Clupp has taken company-sponsored management courses, including Managing for Excellence. He is a registered Professional Engineer in the Commonwealth of Pennsylvania and a charter member of the Mid-Atlantic Instrument Society (Nuclear BWR Instrument Group). In 1986, under Mr. Clupp's leadership, PBAPS received an INPD Good Practice Finding for predictive I&C maintenance.

George L. Gellrich, Shift Manager, joined PE in 1981 after receiving his B.S. in Mechanical Engineering from the University of Maryland. His first PE assignment was as a Test Engineer at the Southwark Fossil Station where he served for five months and was transferred to PBAPS, where he was also assigned as a Test Engineer. He served as site Emergency Coordinator at PBAPS for ten months, completed his Shift Technical Advisor training and served as a Shift Technical Advisor for two years. After successfully completing his SRO license training, he served as Assistant Results Engineer in Test Engineering for a year, was transferred briefly to Limerick Generating Station as a Shift Monitor and returned to PBAPS in the same role, where he served until he became a Shift Manager. Mr. Gellrich has taken numerous company-sponsored management courses including Managing For Excellence.

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Steven J. Mannix, Shift Manager, was graduated in 1979 from Drexel University (Cooperative Work Program) with a B.S. in Electrical Engineering. As part of the Cooperative Work Program, he was assigned to PBAPS in the station Test Engineering and Maintenance Engineering sections as a Junior Technical Assistant. Joining PE in 1979 as an engineer, Mr. Mannix served as Modification Coordinator and Shift Technical Advisor until his promotion in 1984 to Engineer-Supervisory. He subsequently served as site Training Coordinator and Assistant Operations Engineer until his present assignment as Shift Manager. He was certified as a Shift Technical Advisor in 1981, received his certification as an NRC SRO Instructor in 1984, and an SRO NRC Fuel Handling License in 1985. He received his NRC SRO License in early 1986. In addition, he has taken several company-sponsored management courses including Managing for Excellence. Mr. Mannix served as an INPO PEER Evaluator for BWR Accreditation in 1985.

Thomas J. Niessen, Shift Manager, has 10 years of experience with P.E. He was graduated from Drexel University (Cooperative Work Program) in 1977 with a B.S. in Electrical Engineering and joined PE as a Test Engineer at Delaware Station. Since then, he has served at PBAPS as a Test Engineer, Assistant Instrumentation and Controls Engineer, Assistant Operations Maintenance Engineer, Area Coordinator-Outage Planning, Assistant Outage Planning Engineer and Assistant Operations Engineer. Mr. Niessen has taken company-sponsored management courses including Managing for Excellence, received an Engineer-In-Training Certificate, is SRO-licensed at PBAPS, and qualified Shift Technical Advisor. He is a member of the Power Engineering and Nuclear and Plasma Science Societies of the Institute of Electrical and Electronic Engineers.

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Donald B. Warfel, Shift Manager, graduated from Drexel University (Cooperative Work Program) in 1974 with a B.S. in Electrical Engineering and has taken three graduate-level courses in nuclear engineering since that time. He joined PE as a Test Engineer in 1974 after completing his degree which included work as a Junior Technical Assistant (Cooperative Work Assignment) in Nuclear Fuel Management at PE. His first PE assignment as a Test Engineer was at Delaware Station and subsequently at PBAPS. At PBAPS, he served as Assistant Maintenance Engineer, Modifications Engineer and Assistant I&C Engineer. He was promoted to Maintenance Engineer four years ago and held that position until he became a Shift Manager. Mr. Warfel is a qualified Shift Technical Advisor, has held his SRO license for seven years, and has taken numerous company-sponsored management courses including Managing for Excellence.

Anthony J. Wasong, Shift Manager, graduated from Drexel University Cooperative Work Program with a B.S. in Electrical Engineering in 1974. As part of his Cooperative Work Program, he worked over 18 months for Philadelphia Electric at various assignments with the Maintenance Department, at Eddystone Generating Station, at Peach Bottom Units 1, 2 and 3, and with the Testing and Apparatus Branch of the Engineering and Research Department. Following graduation, he joined PE as a Test Engineer at Southwark Generating Station and transferred to Peach Bottom in 1975. During his first eight years at Peach Bottom, he served as a Test Engineer, Assistant I&C Engineer, and an interim Shift Technical Advisor. During this period, he was responsible for writing Peach Bottom's Emergency Operating Procedures based on the BHR Owners Group Emergency Procedure Guidelines. He also trained licensed personnel on these procedures at the Limerick simulator. In 1983, he was promoted to Engineer Supervisory-Reactor Engineering and was later appointed to the same position in the Project Engineer Group. He served briefly as Shift Supervisor

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before his appointment as Shift Manager. Mr. Wasong has held an NRC SRO license since 1979 and holds an Engineer in Training Certificate from the Commonwealth of Pennsylvania. He served as a member of the BWR Owners Group Emergency Procedure Committee from 1980 through 1985. He has taken a variety of PE-sponsored management courses, including Managing for Excellence as well as General Electric's Station Nuclear Engineering Course.

Kenneth P. Powers, Project Manager-PBAPS, recently joined PE, bringing over 20 years of experience in engineering, craft supervision, quality control cost engineering, scheduling, and Navy nuclear shipyard duty to his new position. He was the Project Field Engineer at LGS for over four years leading organizations of 700-1000 professional personnel through construction and startup phases. In 1985, he was Project Engineering Manager at Seabrook Nuclear Power Station for United Engineers and Constructors, from Pre-RPV Hydrostatic Testing through hot functional testing. He worked for Bechtel from 1978 to 1982 in a variety of supervisory and management positions: Cost/Schedule Supervisor at LGS through fuel loading and initial operations and in Ann Arbor, MI., as Technical Services Manager, and Project Field Engineer at LGS. He was previously Lead Planner for Westinghouse/Tenneco's floating nuclear plant, Lead Cost Engineer and Piping Superintendent of Refinery Projects for Fluor Corporation, and Chief Planning Engineer at Laguna Verde, WNP-2 and the Clinch River Breeder Reactor in Oak Ridge. He is a qualified Nuclear Senior Ship Superintendent, United States Navy, and a Certified Cost Engineer, American Association of Cost Engineers.

James P. Wilson, Superintendent-Outages, was graduated from the U. S. Naval Academy in 1959 with a B.S. in Engineering, received a Master of Science degree from American University in 1971, and has completed the Carnegie Mellon Program for

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Executives. With the U. S. Navy, as assistant Repair Superintendent and Planning Superintendent at the Norfolk Naval Shipyard, he was the principal point of contact for Fleet Commanders and the Naval Sea System Command for scheduling and planning major nuclear ship overhaul and modification. He is qualified for command in nuclear submarines and served as the Executive Officer and Engineering Officer on nuclear submarines. Upon retiring from the Navy in 1980, he joined NUS Corporation as Assistant General Manager, Field Operations, Maintenance Division, managing site consulting and providing personal consulting in the areas of operations, maintenance, training and chemistry. Mr. Wilson joined PE in 1987.

J. Terry Netzer, Superintendent-Planning, Scheduling and Reporting, brings over 20 years of experience to this position. He was graduated in 1967 from the University of Missouri, Rolla, with a B.S. in Civil Engineering and joined Bechtel. In Bechtel's Mining and Metals division, Mr. Netzer was responsible for cost engineering, quantity take-off and reporting, and historical reporting. With the Bechtel Power Corporation at both fossil and nuclear stations, Mr. Netzer served in increasingly responsible positions: Cost and Scheduling Supervisor, Start-up Coordinator, Piping and Hydro Superintendent, Superintendent in charge of start-up, Start-up work list manager, Assistant Project Field Engineer, Project Systems Superintendent, Start-up Systems Manager, Large Pipe Hanger Program Superintendent, Team Manager for an Outage Feedwater piping replacement, Turbine Building Lead Mechanical Superintendent and BOP System Superintendent. In these positions, his responsibilities have included cost engineering and forecasting, schedule development and tracking, start-up coordination, resource loading, and cost and schedule analysis. Additionally, Mr. Netzer has completed Bechtel-sponsored management courses.

Section II: PBAPS ACTION

John W. Austin, Superintendent-Modifications, has 20 years of both fossil and nuclear experience with PE, having served as Construction Project Engineer at the Eddystone SO₂ Scrubber facility, and since 1982 as Supervising Engineer, then as Superintendent, Peach Bottom Section of the Construction Division. He received his B.S. in Civil Engineering from the University of Delaware in 1968, attended the Executive Education Course of the Fuqua School of Business, Duke University, and is a Registered Professional Engineer in the Commonwealth of Pennsylvania.

D. G. Brown, Superintendent-Materials, has been involved for 24 years in project materials management and procurement management for engineering, construction and operations of major industrial projects. His primary experience in this area has been with nuclear power stations, cogeneration and airport construction. In 1966, Mr. Brown worked with the Bechtel Group expediting materials and equipment for the Monticello, Palisades and Arkansas-1 Nuclear Power Stations. He served as the Resident Material Coordinator during construction of Peach Bottom Units 2 and 3. In 1979, after completing an assignment as Project Procurement Manager for a major international airport project, he served in the same role during construction and startup of LGS Unit 1 and restart of LGS Unit 2. During this period, he assumed responsibility for all cogeneration and Operating Plant Services for Bechtel's San Francisco office. In April, 1986, Mr. Brown became Material Manager/Assistant Project Manager for LGS Unit 2 construction completion and startup. He received a B.S. in Business and Industrial Management from San Jose State College, San Jose, California in 1963.

David R. Meyers, Support Manager, received a B.S. in Mechanical Engineering from the University of Delaware in 1964 and an M.S. in Mechanical Engineering from Drexel University in 1970. In 1979, he earned an MBA from Drexel University. During his

Section II: PBAPS ACTION

23 years of experience with PE, he has progressed from Junior Engineer in Training to Engineer-Plant Tests, Engineer-Economy Division and System Operation, Results Engineer for the Chester and Cromby Stations and Senior Engineer in the System Operation Division. Most recently, he served as Assistant Superintendent, Delaware Station, where he initiated and successfully completed several cost-saving programs. He has taken company-sponsored management courses and is a past Vice-Chairman and Chairman of the Pennsylvania Electric Association's System Operation Committee. A recognized leader in his community, he has been a member of the School Board for the Centennial School District for eight years, serving two years as Vice President and two years as President.

Joseph C. Oddo, Nuclear Security Specialist, received a B.S. in Criminal Justice in 1976 from the New York Institute of Technology. He has had extensive training in the area of criminal justice in New York State, has taken courses offered by the Federal Bureau of Investigation and the Federal Bureau of Alcohol, Tobacco and Firearms. Since Mr. Oddo joined PE, he has has been a part of the Security organization. Prior to joining PE he served as Shift Section Supervisor at the Shoreham Nuclear Power Station, and as Law Enforcement Supervisor for the Suffolk County Police Department in Yaphank, NY. While at Shoreham Nuclear Power Station, Mr. Oddo assisted in the development of the initial security training program where he trained and qualified the first security contract hires and established the first nuclear security operation at LILCO. He served as Vice President of the Suffolk County Police Benevolent Association, and is a member of the International Association of Bomb Technicians and Investigators and The National Association of Chiefs of Police.

Section II: PBAPS ACTION

Bruce L. Clark, Superintendent-Administration, brings 21 years of experience to this position; 14 of which have been at Peach Bottom in various capacities. He has served there as an engineer on the High Temperature Gas-cooled Reactor, and as startup engineer, I&C Engineer, Assistant Engineer-Maintenance and Engineer-Administration on the BWR units. He also held a senior operator's license on the Peach Bottom BWR units. Following TMI, he spent seven years at the PE corporate office as Senior Engineer-Special Projects Nuclear. During this time, he developed and chaired the Operating Experience Assessment Committee for Peach Bottom and Limerick from 1980 through 1984; coordinated efforts at upgrading the modifications activity through emphasis on priorities, planning and scheduling; organized and managed the successful Unit 2 Pipe Replacement restoration and restart (MORE) program; and developed and managed the Peach Bottom Improvement Program based upon the 1985 INPO findings. He developed the action plan and milestone concepts that were used in that and subsequent programs. He holds a B.S. in Industrial Engineering from the Pennsylvania State University, has completed many company-sponsored and AMA management courses including People-The Foundation of Excellence and Planning and Control For Managers, and is an active member of the American Management Association.

Stephen S. Grosh, Personnel Administrator, has 20 years of experience at PE as Labor Relations Specialist and Technical Assistant, Radiation Engineering Department. He has taken labor relations and Collective Bargaining and Negotiation courses at Cornell University and company-sponsored management courses. Mr. Grosh has satisfactorily completed the Electric Production Departments Radiation Protection/Chemistry Training course deemed equivalent to a 2-year Associate Degree in Technology. He is a member of the American Management Association and the Health Physics Society.

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Ernest A. Till, Site Training Superintendent, who retired from the U.S. Navy in 1984 after 33 years of service, brings to his position at PE a varied background in nuclear training in the industry. As a career Naval Officer, he was involved in the management of technical facilities serving as Staff and Action Officer, Office of the Chief of Naval Operations at the Pentagon; as Chief of Staff, Submarines Mediterranean in Naples, Italy; as Commanding Officer of the nuclear submarine, the USS Woodrow Wilson; and Chief Engineer of the USS Lafayette. Mr. Till was Director of the Mathematics and Science faculty at the U.S. Naval Academy in Annapolis, Maryland from 1974-77, where he administered the academic affairs of five technical departments. He most recently served (1986-87) at Illinois Power Company's only nuclear generating station, where he instituted major changes in the training department organization to ensure success of operational, maintenance, and general training programs, including maintaining INPO accreditation. At Clinton Power Station, he also served as head of the Emergency Planning organization. Mr. Till graduated from the Norwegian Defense College in Oslo, Norway, attended Defense Attache Training in Washington, D.C., the Nuclear Power School in New London, Connecticut, completed the Atomic Energy Commission Training Program on Nuclear Power Plant Operations and received a B.S. from the University of Pennsylvania.

PBAPS Quality Managers

J. Michael Pratt, Manager-PBAPS Quality Division, has over 30 years of engineering and management experience in power generation including 21 years in nuclear power. His experience includes 23 years with the Royal Navy, retiring as Manager of Nuclear Repair at Britain's premier nuclear base; 3 years with the South African Electricity Supply Commission in the senior management position in nuclear operations and quality assurance; and 10 years in management and consulting positions in the

Section II: PBAPS ACTION

domestic nuclear power industry primarily in the areas of QA and QC. During a one year loaned assignment to INPO, Mr. Pratt was Program Manager for the development of evaluation performance objectives. Mr. Pratt is currently chairman of the ASQC Working Committee on Operations QA Surveillance.

J. Thomas Wilson, Superintendent-PBAPS Quality Support, has 19 years of technical and management experience in the PE Electric Production and Nuclear Operations Department. He graduated from the University of Pennsylvania in 1969 with a B.S. in Electrical Engineering. He served six years at PBAPS as a Maintenance Engineer during the startup and operation of Units 2 and 3. Mr. Wilson served four years as the Site QA Audit Supervisor at PBAPS and one year as Corporate Supervisor of the PBAPS and LGS QA Audit Groups. He is currently enrolled in an accelerated BWR Licensing Program.

Donald E. McGarrigan, Superintendent-PBAPS QC, has 23 years of technical and management experience with equipment suppliers, academia, and architect-engineers. For the past 17 years he has been with United Engineers and Constructors in QA engineering and management positions. As Manager-Project QA, he has been responsible for the development, staffing and operations of a number of home office and site QA/QC organizations.

John M. Cockroft, Superintendent-PBAPS QA, has over 17 years of operations, QA and management experience in the nuclear power industry with Gilbert Associates, General Electric Co. and PE. During his four years with Gilbert and his 11 years with GE, Mr. Cockroft held various QA inspection, auditing, engineering and management positions. His assignments have included QA activities during design, fabrication

Section II: PBAPS ACTION

startup, and operation of BWRs. He has been employed by PE in the Engineering and Research Quality Assurance organization since 1986.

Section II: PBAPS ACTION

Staffing of PBAPS Management Positions

The positions filled thus far are as follows:

Vice President-PBAPS: D. M. Smith

CTE Program Manager: H. J. Diamond

Plant Manager-PBAPS: J. F. Franz

Staff Engineer: J. E. Winzenried

Superintendent-Maintenance and I&C: G. R. Rainey

Assistant Superintendent Maintenance: J. K. Davenport

Maintenance Engineer: G. F. Dawson

Assistant Superintendent-I&C: C. E. Anderson

Superintendent-Plant Services: D. P. LeQuia

Senior Chemist: D. L. Oltmans

Senior Health Physicist: D. P. Potocik

Radwaste Engineer: J. F. Mitman

Superintendent-Technical: G. F. Daebeler

Technical Engineer: A. A. Fulvio

Regulatory Engineer: T. E. Cribbe

Superintendent-Operations: J. B. Cotton

Assistant Superintendent Operations: F. W. Polaski

Operations Support Engineer: T. N. Mitchell

Shift Managers, J. L. Clupp: G. H. Gellrich, S. J. Mannix, T. J.

Niessen, D. B. Warfel, A. J. Wasong

Section II: PBAPS ACTION

Project Manager: K. P. Powers

Superintendent Outages: J. P. Wilson
Superintendent-Planning, Scheduling and Reporting: J. T. Netzer
Superintendent-Modifications: J. W. Austin
Superintendent-Materials Management: O. G. Brown

Support Manager: D. R. Meyers

Nuclear Security Specialist: J. C. Oddo
Superintendent-Administration: B. L. Clark
Personnel Administrator: S. Grosh

Superintendent Training: E. A. Till

Staffing of PBAPS Quality Management Positions

Manager-PBAPS Quality: J. M. Pratt

Superintendent-PBAPS Quality Control: D. E. McGarrigan

Assistant Superintendent-Inspection: J. P. McElwain
Assistant Superintendent-Technical Monitoring: R. Hirzel

Superintendent-PBAPS Quality Assurance: J. M. Cockroft

Assistant Superintendent-Project Support/Audit: R. C. Lesnefsky
Assistant Superintendent-Operations/Audit: A. B. Donell

Superintendent-PBAPS Quality Support: J. T. Wilson

APPENDIX C. CORPORATE ACCOUNTABILITIES

Section II: PBAPS ACTION

The Senior Vice President-Nuclear is accountable to the President and Chief Operating Officer for:

- Providing leadership and unified management direction to achieve and maintain excellence in all aspects of PE's nuclear operations, in accordance with the principles outlined in the corporate nuclear management philosophy.
- Proactively managing a cultural change effort to establish an orientation to nuclear excellence within the Nuclear organization.
- Providing management oversight and control of the design, construction, maintenance, and operation of PE's nuclear power plants. This includes all planning, scheduling, engineering, construction, operational, maintenance, quality assurance, regulatory, licensing, training, personnel and other technical or organizational matters relevant to the PE Nuclear organization.
- Establishing management, quality assurance and operating policies and procedures for governance of the PE Nuclear organization.
- Establishing the mission, objectives and goals for the Nuclear organization and ensuring that the appropriate performance measurement programs are in place to monitor organizational performance effectively.
- Determining the need for, and ensuring the appropriate requisition, technical evaluation and receipt of all materials and services required for the Nuclear organization.
- Developing and managing the approved capital and operating budget for the entire Nuclear organization.
- Ensuring coordination of activities and functions of the Nuclear organization with those of other PE organizations.
- Ensuring full cooperation by PE in collaboration with Corporate Communications with the Nuclear Regulatory Commission, the Institute of Nuclear Power Operations, American Nuclear Insurers and other regulatory, industry or public agencies with jurisdiction over or interest in the safe, reliable and efficient design, construction, operation and maintenance of PE's nuclear facilities.
- Maintaining open and regular communications between all Nuclear line and staff organizations, between Nuclear management and employees, and between the Nuclear organization and other Company functions.
- Reporting regularly to the Board of Directors and the Nuclear Committee of the Board.

Section II: PBAPS ACTION

The site Vice Presidents are accountable to the Senior Vice President-Nuclear for:

- Ensuring that the company's nuclear units are operated safely, reliably and efficiently, and in accordance with the highest standards of excellence.
- Ensuring that site work activities are conducted in a manner which promotes nuclear, employee, and public safety.
- Providing site leadership for assurance of quality and ensuring compliance with all regulatory, quality assurance, industry and corporate standards for nuclear operations.
- Fulfilling site-related nuclear and environmental regulatory requirements and commitments.
- Directing the planning and scheduling of all site work activities to ensure timely, high quality, and cost-effective integration of plant operations, maintenance, modification, and outage work activities.
- Coordinating major modifications with Nuclear Engineering.
- Coordinating configuration control with Nuclear Engineering.
- Ensuring that site personnel fulfill their responsibilities as specified in the Emergency Plan for both normal and emergency conditions.
- Establishing site objectives and goals to support overall Nuclear objectives for excellence, and ensuring that the appropriate performance measurement programs are in place to monitor organizational and operational performance effectively.
- Developing the site capital budget (excluding nuclear fuel) in coordination with other Nuclear organizations and managing it effectively.
- Developing and managing an approved operating budget for the site.
- Ensuring that site staffing requirements, training needs, and employee concerns are addressed in a timely and effective manner.
- Maintaining open and regular communications among all site organizations, including independent assessment groups; between site organizations and off-site Nuclear support organizations and other Company functions; and between site management and employees.
- Maintaining an open, cooperative stance with site NRC Resident Inspectors and with other regulatory and industry auditors or representatives.
- Serving as PE's official site representative in all matters related to public interface and relations.

Section II: PBAPS ACTION

The Vice President-Nuclear Engineering is accountable to the Senior Vice President-Nuclear for:

- Ensuring the design integrity of the nuclear plants.
- Maintaining configuration control of the nuclear plants.
- Providing high quality, timely, and cost-effective engineering of plant modifications at the nuclear sites.
- Providing timely, high quality, cost-effective engineering of LGS Unit 2 until fuel load.
- Providing technical support as requested by any Nuclear organization.
- Establishing Nuclear Engineering objectives and goals to support overall Nuclear objectives for excellence, and ensuring that the appropriate performance measurement programs are in place to monitor organizational performance effectively.
- Coordinating the development of the Integrated Living Schedule and managing it for the Nuclear organization.
- Developing and managing the approved operating budget for Nuclear Engineering.
- Ensuring that Nuclear Engineering staffing requirements, training needs, and employee concerns are addressed in a timely and effective manner.
- Maintaining open and regular communications among Nuclear Engineering divisions, between Nuclear Engineering and other Nuclear and Company functions; and between Nuclear Engineering management and employees.

Section II: PBAPS ACTION

The Vice President-Nuclear Services is accountable to the Senior Vice

President-Nuclear for:

- Identifying all licensing conditions and monitoring to ensure that they are met.
- Establishing and maintaining an effective commitment management program.
- Serving as the corporate focal point for regulatory and INPO interfaces with respect to receiving, analyzing, and distributing correspondence and information; following up with the relevant Nuclear organizations to ensure that appropriate and timely actions are taken in response; coordinating preparations for all corporate audits, evaluations or assist visits; coordinating management responses, as required, to audits and evaluations; and preparing Technical Specification Amendments and other license-related documents for submittal.
- Ensuring that an effective Operating Experience Assessment Program is in place to analyze industry and plant operating experience; communicate the information in a timely manner to the sites, other Nuclear groups and the NRB; and monitor the effectiveness of line management's follow-up on the information to achieve the desired results.
- Establishing corporate direction and technical performance standards for radiation protection, radwaste management, plant chemistry, emergency preparedness, security and safeguards, and nuclear training programs; providing periodic programmatic assessments to ensure compliance with industry and corporate standards; identifying root causes for any problem areas; and working with site management to develop effective corrective action programs.
- Ensuring that effective processes are in place to identify Nuclear organization training and development needs, scheduling and implementing appropriate programs to address these needs, and monitoring timely participation in programs by Nuclear personnel.
- Providing timely, high quality, cost effective services in the areas of specialized maintenance work, plant security, fuel management, plant chemistry analysis, emergency preparedness training, and craft training to both nuclear plants.
- Preparing final Nuclear capital (excluding nuclear fuel), O&M and personnel budgets for the Senior Vice President-Nuclear's approval, incorporating budgets submitted by PBAPS, LGS, Nuclear Engineering, Nuclear QA, and Nuclear Services.
- Overall cost tracking, monitoring and reporting for the Nuclear organization to the Senior Vice President-Nuclear.
- Serving as the Nuclear coordinator with joint owners of PBAPS.
- Coordinating the development and application of personnel policies for the Nuclear organization.

Section II: PBAPS ACTION

- Establishing Nuclear Services objectives and goals to support overall Nuclear objectives for excellence, and ensuring that the appropriate performance measurement programs are in place to monitor organizational performance effectively.
- Developing and managing the approved operating budget for Nuclear Services.
- Ensuring that Nuclear Services staffing requirements, training needs, and employee concerns are addressed in a timely and effective manner.
- Maintaining open and regular communications among Nuclear Services divisions, between Nuclear Services and other Nuclear and company functions; and between Nuclear Services management and employees.

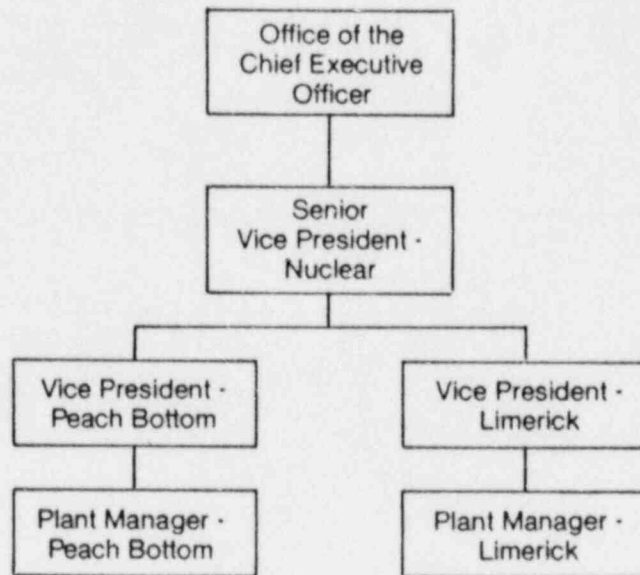
Section II: PBAPS ACTION

The General Manager-Nuclear Quality Assurance (QA) is accountable to the Senior Vice President-Nuclear for:

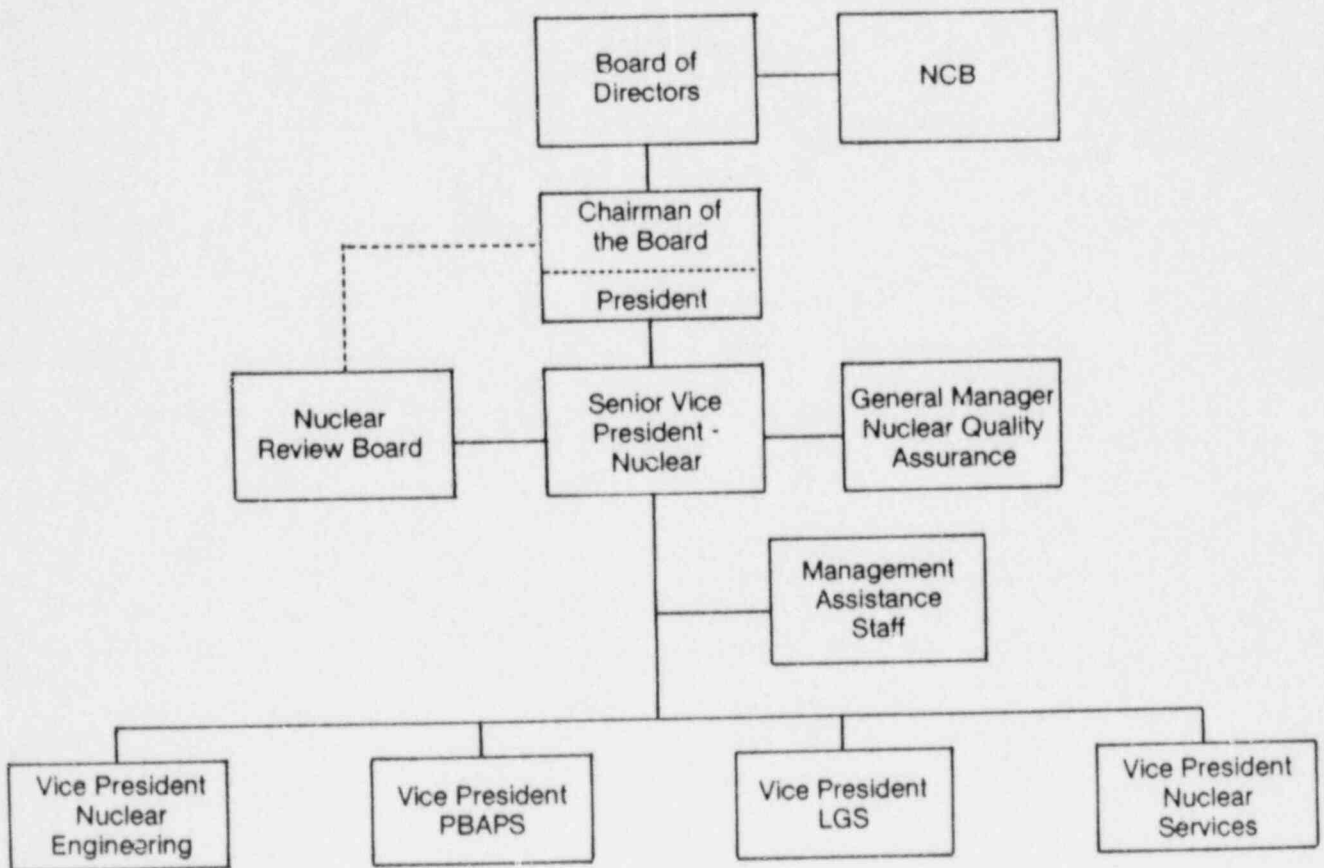
- Establishing and implementing a centralized organization to effectively implement the Nuclear QA Program.
- Conducting independent safety reviews of plant events and planned activities.
- Conducting audits to ensure effective implementation of the Nuclear QA Program.
- Providing quality control surveillance and monitoring to ensure the safety and quality of work performed.
- Identifying safety-related quality problems and ensuring that they receive prompt line and senior management attention.
- Providing input to the Operating Experience Assessment Program (OEAP) in a timely manner; maintaining independent oversight of the adequacy and timeliness of actions taken by line management in response to OEAP items.
- Monitoring and assessing the effectiveness of the Nuclear Performance Management Program for Excellence and providing independent feedback to line management and the Senior Vice President-Nuclear.
- Conducting independent evaluations of the effectiveness of the Company's nuclear performance and providing feedback for line and senior Nuclear management's use.
- Providing technical support to the Nuclear Review Board.
- Establishing Nuclear QA objectives and goals to support overall Nuclear objectives for excellence, and ensuring that the appropriate performance measurements are in place to monitor organizational performance effectively.
- Developing and managing the approved operating budget for Nuclear QA.
- Ensuring that Nuclear QA staffing requirements, training needs and employee concerns are addressed in a timely and effective manner.
- Maintaining open and regular communications among Nuclear QA sections; between Nuclear QA and other Nuclear and Company functions; and between Nuclear QA management and employees.
- Reporting on a regular basis to the NRB, with direct access to the Office of the Chief Executive Officer as required, and communicating with the Nuclear Committee of the Board of Directors as requested.

APPENDIX D. NUCLEAR GROUP ORGANIZATIONAL CHARTS

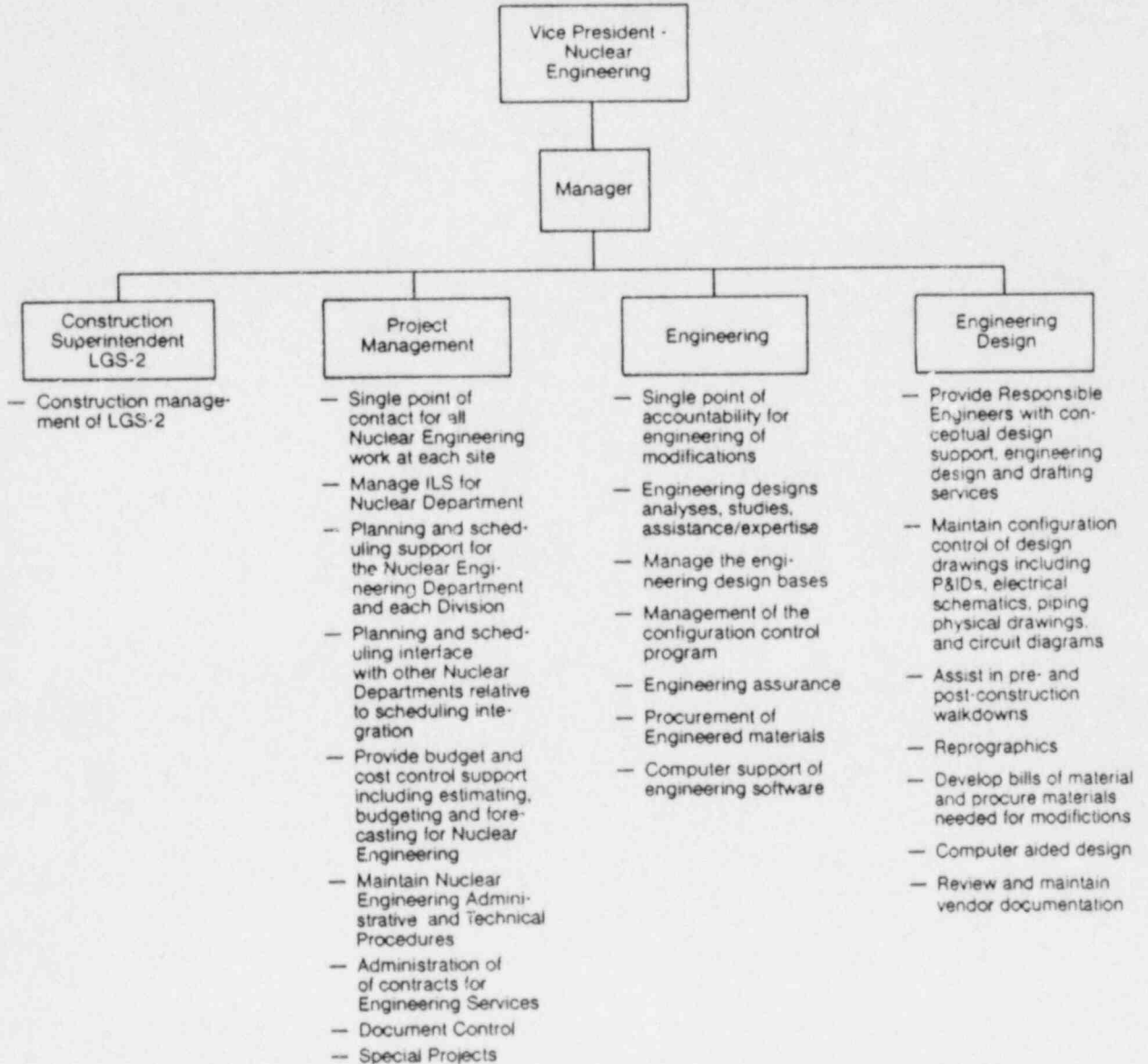
CHAIN OF COMMAND AND CONTROL FOR OPERATIONS



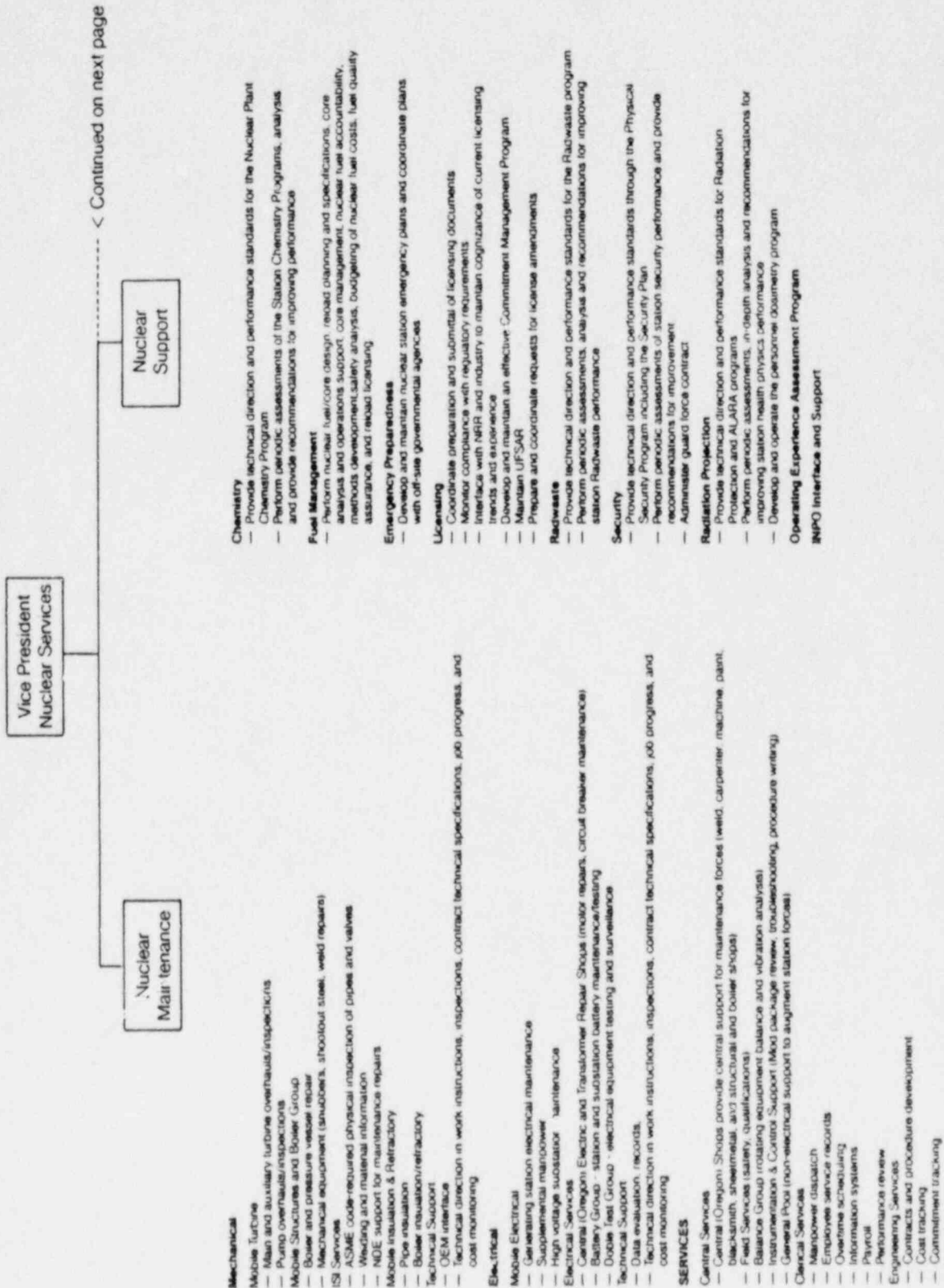
REPORTING STRUCTURE FOR THE TOP LEVEL OF THE NUCLEAR ORGANIZATION



FUNCTIONAL ORGANIZATIONAL CHART FOR NUCLEAR ENGINEERING



FUNCTIONAL ORGANIZATIONAL CHART FOR NUCLEAR SERVICES



Vice President
Nuclear Services

Nuclear
Maintenance

Nuclear
Support

Mechanical

- Mobile Turbine
- Main and auxiliary turbine overhauls/inspections
- Pumps overhauls/inspections
- Mobile Structures and Boiler Group
- Boiler and pressure vessel repair
- Mechanical equipment (shutboilers, shutdown steel, weld repairs)
- ISI Services
- ASME code-required physical inspection of pipes and valves
- Welding and material information
- NDE support for maintenance repairs
- Mobile Insulation & Refractory
- Pipe insulation
- Boiler insulation/refractory
- Technical Support
- OEM interface
- Technical direction in work instructions, inspections, contract technical specifications, job progress, and cost monitoring

Electrical

- Mobile Electrical
- Generating station electrical maintenance
- Supplemental mainpower
- High voltage sustainer maintenance
- Electrical Services
- Central (Oregon) Electric and Transformer Repair Shops (motor repairs, circuit breaker maintenance)
- Battery Group - station and substation battery maintenance/testing
- Double Test Group - electrical equipment testing and surveillance
- Technical Support
- Data evaluation records
- Technical direction in work instructions, inspections, contract technical specifications, job progress, and cost monitoring

SERVICES

- Central Services
- Central (Oregon) Shops provide central support for maintenance forces (weld, carpenter, machine, paint, blacksmith, structural, and structural and boiler shops)
- Field Services (station, qualifications)
- Balance Group (rotating equipment balance and vibration analysis)
- Instrumentation & Control Support (MCD package review, troubleshooting, procedure writing)
- General Pool (non-electrical support to alignment station forces)
- Central Services
- Manpower dispatch
- Employee service records
- Overtime scheduling
- Information systems
- Payroll
- Performance review
- Engineering Services
- Contracts and procedure development
- Cost tracking
- Commitment tracking

- Chemistry**
- Provide technical direction and performance standards for the Nuclear Plant Chemistry Program
- Perform periodic assessments of the Station Chemistry Programs, analysis and provide recommendations for improving performance

- Fuel Management**
- Perform nuclear fuel/core design reload planning and specifications, core analysis and operations support, core management, nuclear fuel accountability, methods development, safety analysis, budgeting of nuclear fuel costs, fuel quality assurance, and reload licensing

- Emergency Preparedness**
- Develop and maintain nuclear station emergency plans and coordinate plans with off-site governmental agencies

- Licensing**
- Coordinate preparation and submittal of licensing documents
- Monitor compliance with regulatory requirements
- Interface with NRR and industry to maintain cognizance of current licensing trends and experience
- Develop and maintain an effective Commitment Management Program
- Maintain UFSAR
- Prepare and coordinate requests for license amendments

- Radwaste**
- Provide technical direction and performance standards for the Radwaste program
- Perform periodic assessments, analysis and recommendations for improving station Radwaste performance

- Security**
- Provide technical direction and performance standards through the Physical Security Program including the Security Plan
- Perform periodic assessments of station security performance and provide recommendations for improvement
- Administer guard force contract

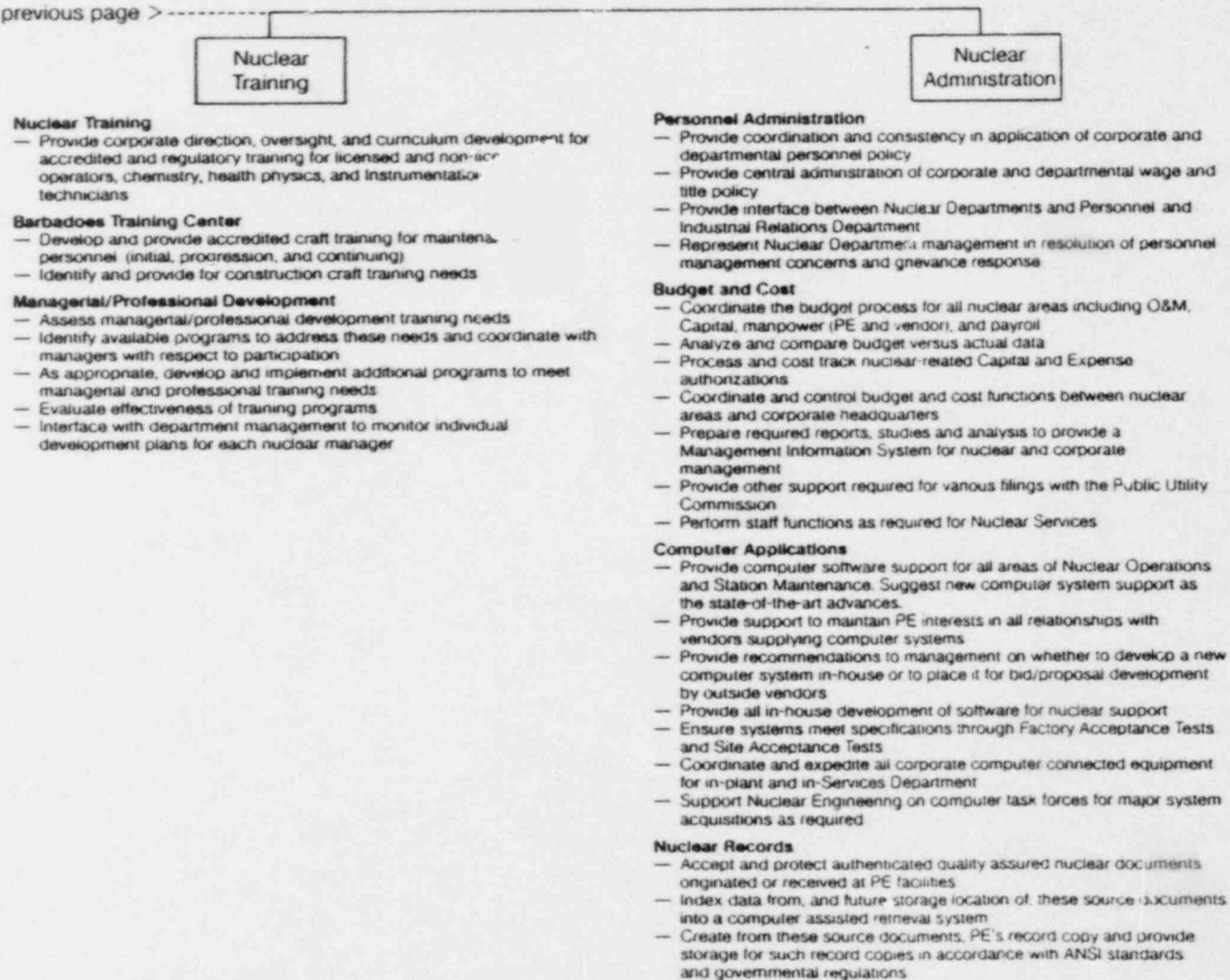
- Radiation Protection**
- Provide technical direction and performance standards for Radiation Protection and ALARA programs
- Perform periodic assessments, in-depth analysis and recommendations for improving station health physics performance
- Develop and operate the personnel dosimetry program

- Operating Experience Assessment Program**
- INPO Interface and Support

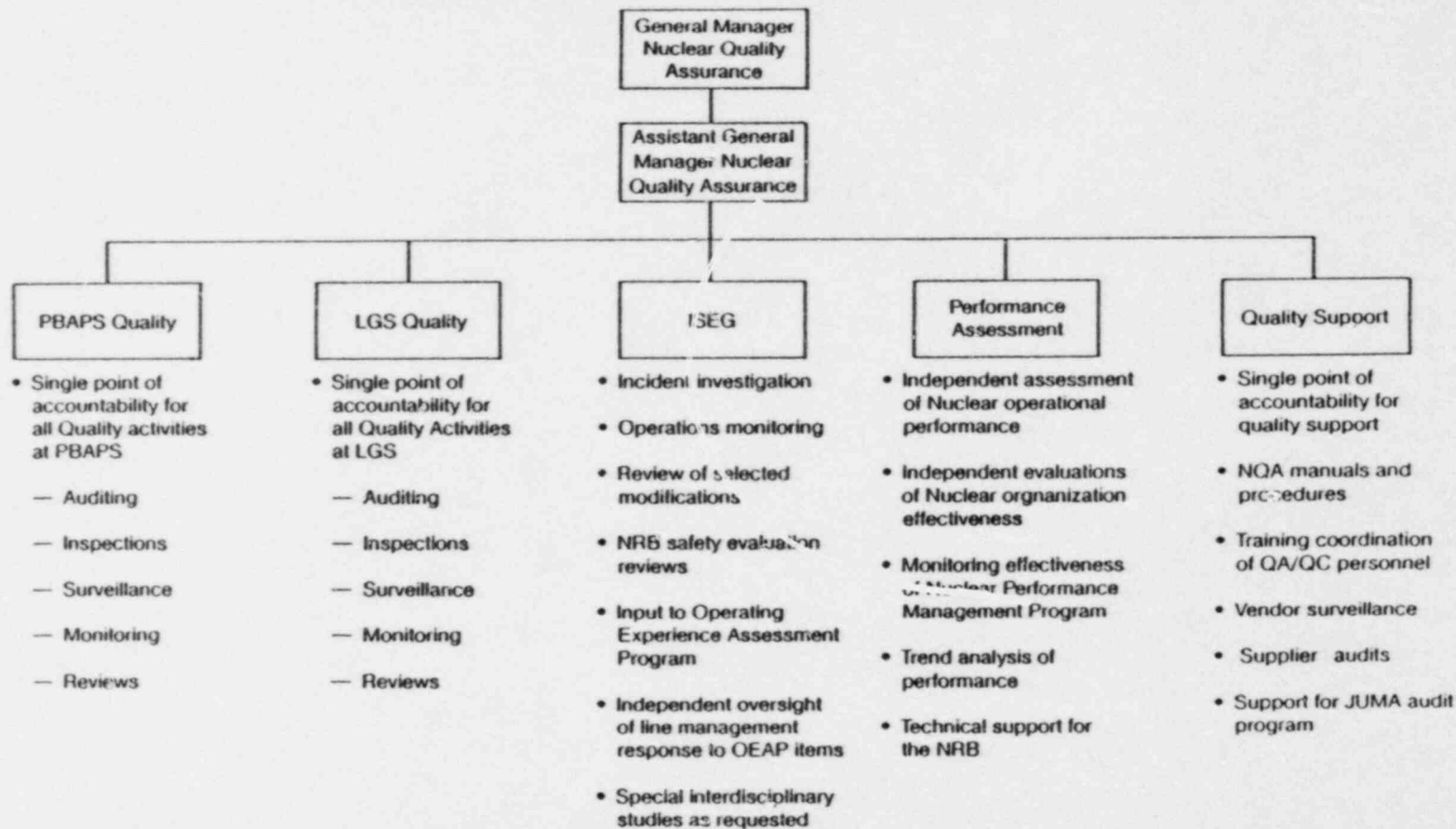
FUNCTIONAL ORGANIZATIONAL CHART FOR NUCLEAR SERVICES

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FUNCTIONAL ORGANIZATIONAL CHART FOR NUCLEAR QUALITY ASSURANCE



APPENDIX E. SITE ACCOUNTABILITIES

Section II: PBAPS ACTION

The Vice President for each site has four direct line reports: the Plant Manager, the Project Manager, the Support Manager, and the Training Superintendent.

The Plant Manager is accountable to the Vice President-PBAPS for:

- Operating the plant safely, reliably and efficiently in compliance with all applicable Technical Specifications, quality assurance requirements, PE procedures, and federal, state, and local requirements, and in accordance with the highest standards of nuclear excellence.
- Ensuring that all operating and technical personnel are trained and/or licensed as required and that there is an adequate number of qualified operators and supervisors available for duty.
- Ensuring that the Radiation Protection Program is being properly implemented with emphasis on "ALARA."
- Ensuring that the plant is being properly maintained through implementation of effective site maintenance and chemistry programs and that plant operational and maintenance activities maintain the integrity of the configuration management program.
- Approval, control and application of blocking for plant and personnel safety.
- Identifying and communicating the need for plant modifications or technical services and final acceptance of completed modifications.
- Ensuring effective management of plant activities to minimize radwaste generation and assure safe and proper radwaste disposal.
- Ensuring timely fulfillment of all regulatory commitments for which the plant organization is responsible and administering the commitment management program for the site.
- Maintaining effective relations in a spirit of openness and cooperation with the NRC Resident Inspectors and other regulatory or industry visitors.
- Serving as Emergency Director, implementing relevant requirements of the site Emergency Plan, and ensuring that the plant staff is prepared to fulfill its responsibilities under the site Emergency Plan.
- Ensuring that the Plant Operations Review Committee (PORC) is functioning effectively and in accordance with the Technical Specifications.
- Keeping the Vice President-PBAPS promptly informed of significant plant activities and providing the appropriate status reports.
- Maintaining open communications and a spirit of collaboration within the Plant organization and between the Plant organization and other site and off-site support groups.

Section II: PBAPS ACTION

The Project Manager-PBAPS is accountable to the Vice President-PBAPS for:

- Coordinating site management of the Integrated Living Schedule with Nuclear Engineering.
- Ensuring that unit outages are effectively planned and managed so that outage durations are minimized and outage work is performed within all safety and quality parameters as established by the Plant Manager.
- Ensuring that the Radiation Protection Program is being properly implemented with emphasis on ALARA.
- Providing integrated planning and efficient scheduling of all daily non-outage and outage work activities related to plant operations, maintenance and modifications.
- Coordinating major plant modifications and improvement projects with Nuclear Engineering to ensure high quality, cost-effective implementation in a manner supportive of plant operational needs.
- Ensuring that minor plant modification and improvement projects are implemented in a coordinated, cost-effective manner supportive of plant operational needs and in compliance with configuration control requirements.
- Ensuring that plant and organizational performance data are collected, analyzed and reported in a timely and effective manner as directed by the Vice President-PBAPS.
- Establishing and maintaining effective materials management systems which will ensure timely availability of required spare parts, equipment and materials, and timely resolution of receipt inspection deficiencies and obsolete parts issues.
- Maintaining open communications and a spirit of collaboration within the Project organization and between the Project organization and other site and corporate office support groups.
- Administration of projects within the scope of the Project organization.

Section II: PBAPS ACTION

The Support Manager is accountable to the Vice President-PBAPS for:

- Ensuring that the approved site security program is effectively implemented and managed for normal and emergency conditions.
- Coordinating implementation of the Emergency Preparedness plan at the site.
- Coordinating with Nuclear Engineering on site Capital budget development and preparing PBAPS/LGS operating, maintenance, and capital budgets for approval by the site Vice President.
- Implementing an effective cost control and tracking program, monitoring cost allocations, and recommending corrective actions to the Vice President-PBPAS as appropriate.
- Coordinating the use of site facilities and their maintenance and equipment allocation; ensuring that all office services are provided as required.
- Ensuring that procedures are regularly updated, maintained, distributed and controlled effectively.
- Ensuring that all required records and documents are prepared, stored and protected appropriately.
- Providing assistance to the Vice President-PBAPS with site employee communications programs.
- Providing effective personnel administration services and assistance to site managers with employee performance and employee relations concerns.

Section II: PBAPS ACTION

General Accountabilities for All Site Superintendents

In addition to the specific accountabilities listed later for each superintendent-level position, the following general accountabilities are included for each of the superintendent-level positions at PBAPS.

Each Superintendent is accountable to the Vice President-PBAPS through his Manager for:

- Ensuring that the work done by his organization is in compliance with applicable Technical Specifications, Quality Assurance requirements, PE procedures and federal, state, and local requirements and is accomplished in accordance with facility licenses and regulations.
- Periodically assessing the performance of his organization in accordance with INFO criteria and regulatory requirements in order to self-identify needs for improvement.
- Ensuring that personnel under his supervision are motivated to maintain a high level of quality and productivity of work and that high morale is maintained through effective leadership.
- Ensuring that the radiation protection program is being properly implemented in his organization with emphasis on ALARA and meeting exposure goals; that personnel assigned to his organization are knowledgeable in radiation work practices; and that practices are followed which minimize the generation of radwaste and personal contamination.
- Ensuring that personnel assigned to his organization follow safe work practices (both nuclear and industrial) and that all incidents are reported so that the extent of the concern can be evaluated for appropriate corrective action.
- Ensuring that the plant is being properly monitored through implementation of effective site surveillance and performance programs within his area of responsibility.
- Ensuring timely fulfillment of regulatory commitments assigned to his organization.
- Keeping his Manager promptly informed of significant plant and personnel activities related to his organization and providing status reports as appropriate.
- Administering the personnel policies and practices of the Company and the site for all personnel under his supervision.
- Ensuring that personnel assigned to his organization are appropriately trained in accordance with requirements and high standards of professional development.
- Ensuring that there is an adequate number of qualified supervisors.
- Ensuring the professional development of personnel assigned to his organization through periodic performance evaluations, coaching and counseling.

Section II: PBAPS ACTION

- Maintaining open communications in a spirit of collaboration within his organization and between his organization and other site and off-site support organizations.
- Maintaining effective relations in a spirit of openness and cooperation with federal and state authorities as well as regulatory and industry review groups and insurance inspection authorities.
- Managing expenditures within the approved budget of his organization or providing reasonable notice to management of variances and the reasons for them.

In addition to the above general accountabilities, each PBAPS superintendent is also specifically accountable to his respective Manager as stated below.

The Superintendent-Training, PBAPS reports directly to the Vice President-PBAPS and is specifically accountable to the Vice President-PBAPS for:

- Interfacing with the Corporate Nuclear Training Manager and his staff to develop and provide training programs and supplementary training as required to support site needs.
- Identifying and analyzing programmatic training needs, in coordination with the appropriate PBAPS Superintendents, for all site personnel.
- Developing and administering through a systematic method initial and continuing performance-based training programs for:
 - Licensed Operators
 - Non-licensed Operators
 - Shift Technical Advisors
 - Chemistry Personnel
 - Health Physics Personnel
 - Radwaste Personnel
 - Technical Staff and Management Personnel
 - Maintenance Personnel (on-the-job training)
 - I&C Technician Personnel
 - Emergency Planning for appropriate personnel
 - General Employee Training for all employees
 - Contractor Training
 - Respiratory Protection Training
- Supervising the planning and scheduling of on-site training activities.
- Scheduling and coordinating off-site training for site personnel in the areas of maintenance, I&C, construction, emergency planning, fitness for duty, engineering and management skills and development.

Section II: PBAPS ACTION

- Monitoring and evaluating the effectiveness of training for site personnel and implementing appropriate corrective actions for this training.
- Evaluating trainee knowledge and skills to identify appropriate training opportunities.
- Ensuring that identified operating events and/or experience are incorporated into site and off-site training programs in a timely manner.
- Developing a qualified and motivated training staff and maintaining adequate facilities to accomplish on-site training activities.
- Maintaining current and complete training records for site personnel.
- Effectively managing the operation and scheduling of the plant-specific simulator to maximize the training impact and improve operator performance, as well as maintaining plant configuration accuracy on the simulator.
- Cooperating with the Manager-Nuclear Training in assuring maintenance of INPO accreditation of the required training programs for PBAPS.

Specific Accountabilities for Superintendents in the Plant Manager Organization

The Superintendent-Maintenance/I&C is accountable to the Plant Manager-PBAPS for:

- Ensuring that the plant is being properly maintained through implementation of effective preventive and corrective site maintenance programs.
- Ensuring that inspections, testing, calibration, maintenance and repair of station electrical, mechanical, and instrumentation and control equipment are performed in accordance with approved procedures and requirements of facility licenses, regulations and Company policy.
- Ensuring that the plant maintenance activities maintain the integrity of the configuration management program.
- Developing, evaluating, and implementing improved methods, processes, and equipment for plant maintenance/I&C.
- When required in the absence of the Superintendent-Operations, ensuring that the Plant Operations Review Committee (PORC) is functioning effectively in accordance with the Technical Specifications.

Section II: PBAPS ACTION

The Superintendent-Plant Services is accountable to the Plant Manager-PBAPS for:

- Providing managerial direction and oversight to plant chemistry, radwaste and health physics functions at site.
- Coordinating implementation of the site ALARA program.
- Monitoring the chemistry parameters of plant systems and recommending changes to improve overall water chemistry quality within regulatory requirements, industry standards and corporate guidelines.
- Processing, packaging and disposing of radioactive materials from the plant in accordance with regulatory requirements, industry standards and corporate guidelines.
- Monitoring, calculating and reporting the effect on the environment of radioactive releases.
- Monitoring radiological hazards and personnel protection requirements for all nuclear workers; evaluating the effectiveness of the implementation of the radiological controls program against regulatory requirements, industry standards and within corporate guidelines.
- Conducting general housekeeping within the power block, identifying housekeeping problems, reporting them to responsible management, and evaluating the corrective actions taken.

The Superintendent-Technical is accountable to the Plant Manager-PBAPS for:

- Providing timely, high quality technical support on systems design, testing, operation and maintenance to site organizations.
- Providing overall coordination of on-site regulatory and inspection activities involving Company, private and governmental organizations.
- Ensuring the effective planning, scheduling and implementation of commitments; monitoring and reporting progress toward commitment completion; facilitating a clear understanding of commitments and problem resolution; reviewing completion documentation for acceptability; assuring that past commitments are maintained when further modifications or changes occur.
- In the absence of the Plant Manager and the Superintendent-Operations, serving as Emergency Director, implementing relevant requirements of the PBAPS Emergency Plan, ensuring that the plant staff is prepared to fulfill its responsibility under the PBAPS Emergency Plan.
- Providing site coordination of input to the selection process for new technical hires.
- Coordinating the Operating Experience Assessment Program for the site.

Section II: PBAPS ACTION

- Keeping site organizations informed concerning new regulations/proposals in their areas of responsibility.
- Coordinating the fire protection program for the site.

The Superintendent-Operations is accountable to the Plant Manager-PBAPS for:

- Operating the plant safely, reliably and efficiently.
- Chairing the Plant Operations Review Committee (PORC), ensuring its proper functioning in accordance with the Technical Specifications.
- Developing, approving, controlling and applying of blocking for plant and personnel safety, completing operating verification forms and check lists to ensure return to service.
- In the absence of the Plant Manager, serving as Emergency Director, implementing relevant requirements of the site emergency plan, ensuring that the plant staff is prepared to fulfill its responsibility under the site emergency plan.
- Ensuring that identified operating experience is utilized to improve plant operations.

Specific Accountabilities for Superintendents in the Project Manager Organization

The Superintendent-Outages is accountable to the Project Manager-PBAPS for:

- Ensuring that unit outages are effectively planned and managed in a manner consistent with the Plant Manager's direction so that outage durations are minimized and outage work is performed within all safety and quality parameters as established by the Plant Manager.
- Providing integrated planning and efficient scheduling of all outage work activities related to plant operations, maintenance and modifications.
- Providing coordination during planned outages to support the plan, adjust priorities as required, and expedite support services.
- Coordinating the preparation of the outage report and formal post-outage critique, as well as considering other industry experience, so that lessons learned may be applied to future outages.
- Producing and continually updating plans for unscheduled outages.

Section II: PBAPS ACTION

The Superintendent-Planning, Scheduling and Reporting is accountable to the Project Manager-PBAPS for:

- Providing integrated planning and scheduling services to plant organizations to allow the effective scheduling and monitoring by those organizations of outage and non-outage work activities for which they are responsible.
- Providing collection, analysis and reporting services of plant schedule, performance, cost and resource data for all levels of plant management and supervision.
- Coordinating site management of the Integrated Living Schedule with Nuclear Engineering.
- Fostering inter-department communications at appropriate organizational levels to ensure viable planning and schedule development and execution.
- Providing functional/administrative support for station management information system needs.
- Setting priorities for requests to the Computer Section for technical support for both main frame and personal computer application.

The Superintendent-Modifications is accountable to the Project Manager-PBAPS for:

- Implementing all phases of site designed minor modifications.
- Installing and testing of modifications designed by Nuclear Engineering.
- Coordinating acceptance testing of all modifications. design modifications.
- Administering and implementing projects within the scope of the Modifications organization.
- Providing training on specification and installation procedures and supporting the training provided by others in the Company.
- Preparing capital authorizations, including estimating the site portion of modifications and projects.
- Maintaining configuration control during the implementation of projects or modifications.
- Maintaining modification procedures.
- Tracking change documents.
- Initiating purchase of non-engineered materials.

Section II: PBAPS ACTION

The Superintendent-Materials is accountable to the Project Manager-PBAPS for:

- Ensuring timely availability of spare parts and site-requisitioned materials, determining optimum stocking levels for spare parts, determining the shelf life of stored materials, and administering an effective shelf life program.
- Obtaining substitute materials and components and providing satisfactory analysis of their conformance to design requirements.
- Dedicating non-quality assured materials and components for quality assured applications in accordance with guidelines approved by Nuclear Engineering.
- Determining source and receipt inspection requirements for site-requisitioned materials, and ensuring expeditious resolution of receipt inspection discrepancies and nonconformances.
- Maintaining effective and timely communications with the Plant Equipment Configuration Branch of Nuclear Engineering and with the Purchasing Department, including the tracking of purchase order status and issuance of site requisitions.
- Expediting procurement services to all site organizations.
- Effectively managing and controlling the Storeroom activities in conjunction with Stores Division.

Specific Accountabilities for Direct Reports to the Support Manager

The Nuclear Security Specialist is accountable to the Support Manager-PBAPS for:

- Supervising and directing the activities of the Nuclear Plant Security organization at the station as required to ensure that the Security Program is in compliance with the commitments contained in the NRC-approved Security Plans and with the requirements in applicable federal regulations and guidelines.
- Coordinating with all on-site department heads and vendor representatives concerning security-related programmatic concerns as required to integrate the overall goal of the security programs with station goals and objectives.
- Interfacing with the Security Contract District or Program Manager and Contract Security Force Supervisor or Captain so as to be aware of their daily performance, findings, and suggestions that relate to improving the overall security program.
- Participating with the Director-Nuclear Plant Security, Support Manager, Chief Security Coordinator, Technical Assistant-Security, and Security Force Supervisor or Captain to continually identify and upgrade the Security Program.
- Providing administrative support for the Security Computer Program.

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- Ensuring that information is gathered and reports are generated as required to properly document and report significant security-related matters.
- Communicating and maintaining effective working relations with Claims-Security Division, the NRC, and local law enforcement agencies.
- Ensuring that the plant protection, security-related surveillance tests, and Administrative procedures are prepared, revised, reviewed, and implemented as required to support the Security Program.
- Reviewing guard force staffing levels to ensure that program commitments and plant operation can be supported in an efficient and economical manner.
- Reviewing the training and qualification activities for the Security Force to ensure that they are documented and conducted by the contractor in a manner that satisfies NRC commitments and regulatory requirements.
- Ensuring that the proper site security support is supplied for Emergency Preparedness exercise drills and activities.
- Reviewing the requirements for ingress and egress from protected areas so as to minimize personnel delays.

The Station Controller is accountable to the Support Manager-PBAPS for:

- Supplying necessary information to the Nuclear Administration Budget and Cost Control Section to facilitate preparation of Nuclear Group, Personnel, O&M and Capital Budgets.
- Coordinating for PBAPS the preparation of the O&M and Capital Budgets.
- Providing guidelines and support to station management regarding budget preparation.
- Consolidating budget variances at the station level and preparing variance reports.
- Researching unfavorable cost trends and supporting station management in identifying problems and tracking costs.
- Providing special accounting and cost control functions such as record keeping for insurance claims, NRC requests, back charges.
- Reviewing and providing comments on contracts and amendments prior to approval.
- Providing consultation to station management regarding contract administration and financial impact.
- Tracking and trending contract expenditures against budget and providing information back to each responsible cost center manager.

Section II: PBAPS ACTION

- Supplying necessary information to the Nuclear Administration Budget and Cost Control Section to facilitate preparation of periodic reports including monthly cash flow projections.
- Ensuring that accounting at the station is established and maintained in compliance with corporate and regulatory policies.
- Providing assistance to station personnel in determining the proper accounting for expenditures.
- Researching resolutions to accounting questions with other Finance and Accounting (F&A) divisions and the Budget and Cost Section of Nuclear Services.
- Ensuring accounting transactions are accurate, authorized and supported including proper determination between capital and expense.
- Initiating recommendations for accounting system developments and improvements to promote efficiency, reduce cost, and ensuring that the reporting needs of station management are met.
- Assisting Internal Auditing in the performance of audits and station management in the interpretation, implementation, and follow-up of audit recommendations.

The Superintendent-Administration is accountable to the Support Manager-PBAPS for:

- Implementing the PBAPS Emergency Plan and maintaining site Emergency Response procedures; coordinating site and plant emergency response training, drills and graded exercises
- Providing and maintaining the main plant and appropriate satellite libraries for record and user copies of controlled plant drawings, vendor manuals and approved procedures; providing appropriate research capability to support station needs.
- Microfilming and providing for permanent storage and retrieval of selected nuclear records; providing research capabilities for microfilmed nuclear records.
- Establishing a control mechanism to support a two-year review cycle for plant procedures; establishing and maintaining controls over the implementation of the procedure change process.
- Developing, maintaining and monitoring an industrial safety program and procedures; procuring and maintaining required safety equipment for use on site.
- Enhancing interactive site and employee communications by facilitating the employee advisory committee (PB-TEAM), publishing responses from the "Tell It To The Vice President" program, maintaining site bulletin boards and message systems, and assisting the Vice President-PBAPS and the Plant Manager with other employee communication tools.

Section II: PBAPS ACTION

- Planning, providing, maintaining and modifying, as necessary, office space, furnishings, equipment and services, including telecommunications and corporate computer equipment; providing site administration of contracts for vendor support of administration facilities.
- Administering the Quality Concerns program.

The Personnel Administrator is accountable to the Support Manager-PBAPS for:

- Providing line management with professional human resource support in the areas of personnel management and human relations.
- Working with site managers, supervisors and employees to ensure consistent and equitable implementation of personnel policies.
- Assisting supervisors with resolution of employee performance and behavior problems.
- Administering the employee performance review program.
- Administering the site access coordination program.
- Supervising the site medical facility including the employee physical examinations and acting as interface with the Employee Assistance Program.
- Identifying, promoting, and administering positive discipline techniques.
- Acting as the day-to-day management contact with the local Independent Group Association (IGA) representatives.
- Interpreting and trending overtime and absentee reports.
- Obtaining and providing clarification as required on personnel policies.
- Providing a focal point for employee access to employee services such as Blue Cross/Blue Shield, Major Medical, Pension plan, Tuition Refund, and other Company benefits.

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APPENDIX F. NUCLEAR GROUP VISION, MISSION AND OBJECTIVES

NUCLEAR GROUP

1988

NUCLEAR MISSION

AND

OBJECTIVES

Signed:

John S. Kasper
Senior Vice President - Nuclear

J. H. Smith
Vice President - Limerick Generating Station

Don Smith
Vice President - Peach Bottom Atomic Power Station

S. J. Kowalski
Vice President - Nuclear Engineering

J. W. Bellayha
Vice President - Nuclear Services

DR Helwig
General Manager - Nuclear Quality Assurance

Section II: PBAPS ACTION

Philadelphia Electric Company

Nuclear Group

1988 Nuclear Mission and Objectives

VISION

To be recognized and respected as a leader in the nuclear power industry.

MISSION

We will generate electricity safely, reliably and economically in the pursuit of EXCELLENCE. We will design, construct, operate and maintain our nuclear power plants with full commitment to public and employee health and safety.

OBJECTIVES

- 1) Provide the management direction, staffing and resources necessary to achieve and maintain EXCELLENCE in all aspects of Philadelphia Electric Company's nuclear program.
- 2) Continue to support and complete all activities associated with the corporate nuclear reorganization.
- 3) Complete in a timely manner all activities necessary for restart of Peach Bottom Atomic Power Station (PBAPS) operations.
- 4) Continue to strive for excellence in Limerick Generating Station (LGS) Unit 1 operations and maintain progress on LGS Unit 2 construction and startup activities.
- 5) Ensure an open, candid and cooperative relationship between PE, the Nuclear Regulatory Commission (NRC), the Institute of Nuclear Power Operations (INPO), other regulatory, industry, or public agencies and PBAPS co-owners.
- 6) Promote cultural change by fostering management and work behaviors which support an orientation to nuclear excellence.
- 7) Develop effective management, supervisor, technical and crafts training programs to support PE's commitment to excellence in our nuclear program.
- 8) Encourage all Nuclear Group employees to practice good corporate citizenship by participating in community affairs as appropriate, both privately and as representatives of the Company.

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9) Manage the operation, engineering, maintenance and construction of PE's nuclear plants in manner which promotes:

- nuclear and radiological safety
- industrial safety
- environmental protection
- plant reliability
- economical operation

Section II: PBAPS ACTION

9a. INPO 1988 Overall Performance Indicator Goals

<u>Performance Indicator</u>	<u>UNIT</u>			<u>Combined</u>
	<u>PB 2</u>	<u>PB 3</u>	<u>LGS 1</u>	
a. Unplanned Automatic Scrams: No more than 4 at or above 25% Power	2	N/A	2	4
b. Unplanned Actuations of ECCS and Diesel not Coincident with a scram	1	0	2	3
c. Forced Outage Rate (%)	7	N/A	5	6
d. Thermal Performance gross heat rate, Btu/kwh	10,550	10,550	10,550	10,550
e. Fuel Reliability (Radioactive isotopes, micro-curies/sec.)--See Note 1	20,000	N/A	5,000	Meet both 2 of 2 Indicators
f. Collective Radiation Exposure: no more than 2,620 man-rems	500	2,000	120	2,620
g. Volume of Low Level Solid Radioactive Waste Produced (cubic meters)	515	1,160	500	2,175
h. Industrial Safety (Lost Time Accident Rate per 200,000 man-hrs. worked)		0.50	0.40	0.45

Note 1: The maximum steady-state, full power adjusted and recoil corrected rate of radioactive isotope release as measured in the off-gas at the main condenser steam jet air injector.

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9b. Corporate Performance Award Program Goals

• Quality of Nuclear Operations

To achieve a high standard of excellence in the Company's nuclear activities by meeting at least three of the five key performance goals:

<u>Performance Indicator</u>	<u>UNIT</u>			<u>Combined</u>
	<u>PB 2</u>	<u>PB 3</u>	<u>LGS 1</u>	
a. Collective Radiation Exposure: No more than 2620 man-rem --See Note 2	500	2,000	120	2,620
b. Volume of Compressed Dry Active Waste Generated: No more than 1,300 cu.m.		1,215	85	1,300
c. Unplanned Automatic Scrams: No more than 4 at or above 25% power--See Note 2	2	N/A	2	4
d. Total Skin and Clothing Personnel Contamination Events: No more than 850	200	500	150	850
e. Personnel Errors as Reported to the NRC in Licensee Event Reports: No more than 37		12	25	37

Note 2: Indicator is also an INPO annual performance indicator goal.

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- Nuclear Availability

To achieve a combined equivalent availability factor of 50% or greater for Limerick Unit 1 and Peach Bottom Unit 2.

- Limerick Construction

To achieve 90% completion in the construction of Limerick Unit 2; and to keep start-up activities associated with the unit on schedule; and to keep the unit's projected construction expenditures within the cost cap.

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APPENDIX G. MANAGEMENT DEVELOPMENT PROGRAM: SECTION I, PART 3.7.2

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A central consideration in establishing a Nuclear Training organization is the recognition by PE that excellence in nuclear operations requires excellence in management and supervision. The new management assignments for Nuclear ensure that, in the short term, corporate management will be of high quality. In the longer term, if PE is to ensure management excellence, it will be necessary to develop the management potential of technically competent individuals who presently do not fill management roles and to upgrade the knowledge, skills and competencies of present managers. Thus, the Manager, Nuclear Training will be responsible for the overall design and implementation of a comprehensive management and supervisory training and development program.

The Manager, Nuclear Training will assess management and supervisory training needs with Nuclear management to determine the core management competencies and skills required for each level of Nuclear management from first level supervisor to the executive level.

These core competencies and capabilities will be used to provide guidance for overall program development, monitoring and evaluation. Organizational needs (e.g., improved planning and problem solving) will receive priority attention in developing management skill training requirements.

Existing Company training courses, external educational/training programs, job rotation options, and other developmental opportunities, such as visits or short-term assignments to other utilities and loan assignments to INPO, will be reviewed for their applicability to Nuclear management needs.

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Short-term programmatic efforts will be focused on adapting the schedule and location of Company management training programs to better meet the needs of more Nuclear managers, and on reviewing training records, to identify priorities for manager participation in available training programs over the next year. Specific organizational needs with respect to improved goal-setting, problem solving, and performance management will be addressed through coaching and informal training with established work groups as well as through formal training programs.

A longer-term programmatic focus will be to establish and monitor individual development plans for each Nuclear manager. This effort will be carried out in conjunction with an improved Nuclear performance appraisal program. Each level of management will be trained and/or coached in the effective use of the performance review process to provide ongoing assessment of individual managerial and technical competencies, identify specific individual development plans to be met within the next review cycle, and discuss any problem areas with overall management of the work unit's performance.

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APPENDIX H. PLANT MANAGER'S VALUE SYSTEM FOR BUSINESS SUCCESS

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PLANT MANAGER - PBAPS

PROPOSED VALUE SYSTEM FOR BUSINESS SUCCESS

- Plant Theme
 - attention to detail
 - dedication to quality
 - a caring attitude
- Employee Disposition To Be Achieved
 - concerned
 - committed
 - cooperative
- Rude displays of temper or ego unacceptable
- Courtesy a keynote; dignity and respect for the individual
- Attack the problem, not the person
- Equal measures of care and discipline for the individual
- Enhance each individual's self-image; each of us always acts out our own self-image
- No search for organizational blame to remove the "heat" from oneself; all problems belong to "us", not "they". Teamwork will ensure collective success. Every job needs more than one group to accomplish it. Look at others and ask yourself "How can I help that person do his job?" If each of us does it, we are ensuring collective success.
- Teamwork wins; individual lusts for power or importance lead to team failure
- Maintain your honesty and integrity; once lost, it is difficult to regain
- Do not misuse, abuse or attempt to manipulate others
- Communicate freely and honestly up and down the chain of command; failure to listen stifles solving problems
- Consider yourself a businessperson. Serving your customers is the only way to stay in business. Some of our customers are NRC, INPO, Company Management, fellow workers, stockholders and the public.
- Good business is best conducted in an atmosphere of good humor.

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APPENDIX I. PROJECT MANAGER'S GUIDELINE PRINCIPLES

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GUIDELINE PRINCIPLES
FOR
PEACH BOTTOM PROJECTS GROUP

TOPICS

INTRODUCTION

PRIORITIES

ORGANIZATION AND FLEXIBILITY

OVERTIME

DECISION MAKING

ORGANIZATION RELATIONSHIPS

MISCELLANEOUS THOUGHTS

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INTRODUCTION

You are aware, no doubt, of the organization changes underway here at Philadelphia Electric. I am now a member of Philadelphia Electric here at Peach Bottom and we will be working together during these trying circumstances to improve the situations which have lead to our present difficulties.

We should all grasp the seriousness of our present situation. We must not, however, overly concern ourselves with how we got in trouble but rather what we are going to do to improve our future operations. A statement of our objectives and goals, a recognition of past mistakes, an organizational realignment, some key personnel changes and a commitment of the necessary resources are the actions that our Executive Management has taken to help put us on the road to recovery. For these actions to really become effective each one of us must now work to improve many of our past attitudes, habits and relationships.

In my own case, being a new employee of Philadelphia Electric and new to Peach Bottom has some very distinct advantages and disadvantages. I need your support in getting to know all of you and learning the detailed status of all plant activities as quickly as possible. The next page gives a summary of my background so you can know something about me. (Resume omitted from appendix.) I look forward to becoming knowledgeable of your capabilities. Please feel free to seek me out to discuss any issues relevant to our mutual goals.

I am very much aware that there have been and are many things going well here, but recently, on a matchbook cover, of all places, I recently read a definition of

Section II: PBAPS ACTION

excellence that we should strive to achieve, it said: "Excellence is not doing one thing well, it is doing everything superbly."

Our #1 Priority is Public and Personnel Safety

Let there be no question that as an operating nuclear plant and a major industrial facility, the safety of the public and all our workers is our #1 concern. There must be no compromises in this area as we work on our other important priorities.

Our #2 Priority is Quality

It is not our prerogative to judge if any of the many procedural requirements are necessary or justified. We must all understand and adhere to every approved procedure. When we do wish to question the validity or efficiency of any current procedures, please do so through the organization with the submittal of well thought out suggestions for improvement. I personally believe that the key to both safety and quality is in ensuring that everyone is made aware of, and understands what is expected of them. This can only be accomplished by teaching/training and encouraging everyone to communicate up, down and across when they are not certain of something.

Our #3 Priorities are Schedule and Efficiency

Our first two priorities are absolute and cannot be compromised. We must then direct our efforts to schedule and efficiency issues. These efforts are always difficult and require cohesive team work and dedication. We as a group have the

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job to support plant operations, plan site work activities and quickly complete our tasks during outages.

We must be a cohesive force in planning, organizing, removing obstacles, and accomplishing all aspects of our work. I ask each of you to make the safe, high quality, timely completion of each work item your personal goal.

As this new organization takes shape and evolves, many factors will affect your individual assignments, some of these factors are:

- Understanding and implementing our new organization.
- Actions to satisfy ourselves and the NRC that the station is ready to return Unit 2 to service.
- Completing the Unit 3 outage.
- Planning for the next Unit 2 outage.
- Availability of specific talent.
- Development and broadening of our people for future responsibilities.
- Strengthening our organization.
- Ensuring that we function as one team.

I recently read where Vice President Bush's mother told him as a young man, "Don't tell me about Your home run, how did the TEAM do?"

These factors will cause some people to move up, down, and across organization charts. Flexibility, the ability of each of you to accept, adjust to and master new positions, is a key factor in our success as a station and in enhancing your future individual potential.

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Each of you is urged to welcome and support all challenges which come your way. If anyone has any serious concerns/problems with a new assignment, please discuss it with your supervisor or have the discussion moved up the organization, remembering that the needs of Peach Bottom weigh most heavily on all our decisions. We do, however, want to know and consider your individual needs/wants where possible.

Relative to titles and our places on an organization chart the following points should be noted.

The real key people on this site are the working level people who actually do the work! Those of us who are shown on organization charts in positions of authority will be guided by the knowledge that:

- a) Although people above us put us in positions of responsibility and power, all of you, the members of the whole organization, must be willing and supportive if any of our authority is to be really effective in accomplishing our overall goals.
- b) Therefore, I look upon all of us as "key" people and expect you to conduct yourselves accordingly, by doing what is good for Peach Bottom and trusting that this approach will also be good for you.

Many situations will cause individuals to have to adjust to working in positions of greater, lesser or different responsibilities than their past assignments. This will require each of you from time to time to transfer some personal ego into team spirit. I understand that this is difficult, thanks!

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We expect to see the vast majority of problems solved down in the organization or, brought up to a level where we can help. Individually, none of us matters too much on a team of this size. Together, however, there is no limit to our capabilities if we guide our actions along the lines of a couple of other handy mottos.

- 1) An interesting plaque on President Reagan's desk says, "There is no limit to what people can do or where they can go, if they don't mind who gets the credit."
- 2) The definition of the old Chinese phrase ("Gung Ho") which has been adopted by the Marine Corps. "Cooperate for the common good; do something which has to be done even if its not your responsibility."

With all these factors in mind, we have initially set up our group's organization shown on the last page of this package. This organizational realignment will evolve over some period. We will continue to communicate organizational and others issues to you as we firm up the details. I ask for each of you to remain calm and productive by being a Category 1 person as defined below.

CATEGORIES OF PEOPLE

<u>CATEGORY</u>	<u>PEOPLE WHO:</u>
1	Make things happen
2	Watch things happen
3	Don't know what's happening
4	Screw up what's happening

Section II: PBAPS ACTION

OVERTIME

Overtime will be needed and selectively used to accomplish our near term goals. However, in the long run we must work together to find ways to keep overtime at an economic minimum. Having time for family, friends, hobbies and relaxation is, I believe, a key part of our on the job performance.

DECISION MAKING

Decisions should be made at as low a level as possible in the organization; bearing in mind that the Charge of the Light Brigade was ordered by someone who was thousands of miles away from the territory.

Two kinds of decisions exist -- (1) Those that are serious, far-reaching, expensive or difficult to change and, (2) Those that are not.

The first kind will not be made hastily nor without plenty of input from all involved organizations.

The second kind - the garden-variety decision - should be able to be made fast and by the people closest to the situation or the whole place will be out of business while we oscillate between baby-blue or buffalo-brown coffee cups. Where you feel qualified take your best shot and move out. Just remember to keep the people around and above you informed of where you're going. If there are obstacles let's discuss how we can remove them.

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ORGANIZATIONAL RELATIONSHIPS

Philadelphia Electric Company needs and wants support from outside companies in many areas. We expect people from all organizations to conduct themselves with a manner of true teamwork, with those of us from Philadelphia Electric leading the way by example. As our present difficulties subside we will be evaluating our long term plans for support and we will keep everyone advised as these plans develop.

MISCELLANEOUS THOUGHTS

The following is an odd collection of statements for your consideration:

- Get to know all members of team
- Look at the specifics of problems in the Plant
- Offer alternative solutions
- Respond to problems
- Involve yourselves
- Cooperative with all groups
- Communicate up, down, and across
- Don't make excuses; offer solutions
- People who row the boat, generally don't have time to rock it.
- Cooperation is doing with a smile what you have to do anyway.
- Anything scarce is valuable: praise, for example.
- Tact is the art of making a point without making an enemy.
- People who matter most are aware that everyone else does too.
- A skeptic is a person who, when he sees the handwriting on the wall, claims it's a forgery.

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- More people are hired or promoted on their people and team work skills than on their technical job skills.
- It's not what a person can do that makes a difference. It's what a person does do that makes a difference.
- When pointing your finger at someone else, remember, three of your fingers are pointing at yourself.

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APPENDIX J. COMMITMENT TO EXCELLENCE STATEMENT

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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.