U.S.NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-352/93-15 and 50-353/93-15

Docket No. 50-352 and 50-353

Licensee No. NPF-39 and NPF-83

Licensee: Philadelphia Electric Company
Post Office Box A
Sanatoga, Pennsylvania 19464

Facility Name: Limerick Generating Station, Units 1 & 2

Inspection At: Chesterbrook and Sanatoga, PA

Inspection Conducted: June 28-July 2, 1993

Inspectors: _____ 7-30-93
J.E. Carrasco, Reactor Engineer date
Materials Section, EB,DRS

_____ 7-30-93
A. Lohmeier, Senior Reactor Engineer date
Materials Section, EB,DRS

Approved by: E H Gray 8/3/93
E. H. Gray, Chief, date
Materials Section, EB,DRS

Inspection Summary:

Areas Inspected: An announced safety inspection was conducted to assess the adequacy of the licensee's selected programs for engineering and technical support of the plant operations including management support, interfaces with other internal and external organizations, design modifications, experience and professional proficiency of the engineering staff engaged in the design modifications, including a review of the results of the NEEDS program.

Results: The NEEDS reorganization at the NED and the Site was found to be well planned, implemented in accordance with schedu , responsibilities clearly defined, and the selection of key personnel to be well founded on performance and experience. The reorganized engineering has provided and it is providing the proper overview of the engineering activities delegated to the engineering of choice organization, the responsible engineers were

knowledgeable of the technical implication of operational events and the technical details of the modifications, and they provided good supervision of the contractor performing design activities. The coordination between plant operations and corporate engineering for the modifications was effective. Design modification analysis and resulting engineering output appear to be technically adequate. The licensee has demonstrated problem solving capability and engineering originality. The engineers engaged in the design modification process have the proper formal training and experience on the pertinent type of design. These positive attributes enable engineering and technical support to provide good supervision of the contractor implementing the modification.

DETAILS

1.0 PURPOSE OF THE INSPECTION

The purpose of this inspection was to assess the adequacy of the licensee's selected programs for engineering and technical support of the plant operations including management support, interfaces with other internal and external organizations, design modifications, experience and professional proficiency of the engineering staff engaged in the design modifications, including a review of the results of the nuclear effectiveness and efficiency design study (NEEDS) program.

2.0 FINDINGS

2.1 Engineering Organization (37700)

Technical guidance, engineering and operational support for Limerick Units 1 and 2 are provided by two engineering organizations, the Nuclear Engineering Division (NED) at Chesterbrook and Site Engineering at the Limerick Generating Station (LGS) in Limerick, Pa.

Nuclear Engineering Division (NED)

NED is responsible for providing engineering and technical support services for plant operations beyond those performed by the LGS engineering group. These include major design modifications, special studies, engineering programs and standards for LGS and Peach Bottom nuclear stations. NED has been recently reorganized under the NEEDS program. The newly formed organization, together with its scope of responsibilities is discussed in Section 3.3 of this report.

The inspector verified that the allocation of responsibilities among NED sections was clearly defined. In order to assess the adequacy of the licensee's selected programs for engineering and technical support of the plant operations, the inspector interviewed a selected number of section managers to determine their organizational changes, staffing enhancements, plant enhancements and programmatic initiatives and how the changes of reduced staff affect the overall safety philosophy of the plant for the selected sections.

Site Engineering at LGS

LGS engineering is responsible for providing engineering services and technical support for plant activities including small modifications and disposition of engineering issues that do not constitute major modification work. The reorganized engineering effort at LGS is described in Section 3.4 of this report.

2.2 Assessment of Engineering Performance (37700)

To assess the licensee's engineering performance, the inspector reviewed selected on-going engineering activities that are vital to the safety of the plant. These assessments began at Chesterbrook and were followed-up at the site, as follows:

At Chesterbrook, the inspector assessed the Fuel and Services Section, which is responsible, among other tasks, for the Shoreham fuel transfer.

Shoreham Fuel Transfer

The inspector interviewed the responsible engineers at the NED and the site. At NED the cognizant engineer provided the inspector with an excellent overview of the project, which is summarized as follows:

In March 8, 1993, the licensee submitted a request to the NRC for a change to the LGS Unit 1 and 2 operating licenses. The proposed license change would allow the licensee to receive and possess the fuel assemblies and fuel channels from the Shoreham Nuclear Power Station. Shoreham never commenced commercial operation and is presently in non-operating, defueled condition with all fuel stored in the spent fuel pool. The Shoreham fuel consists of 560 GE6, pressurized, c-lattice, non-barrier fuel assemblies fabricated by the General Electric (GE) Company. This fuel was removed from the reactor and placed in the Shoreham spent fuel pool in August 1989. The Shoreham fuel assemblies are similar to the Limerick Unit 1 initial core. Shoreham uses c-lattice fuel. Peach Bottom uses d-lattice fuel, which is one of the major reasons that the Shoreham fuel was considered for the use at Limerick, but not at Peach Bottom.

At the site, the inspector interviewed the System Manager and walked down the spent fuel pool area. Based on these interviews and the review of selected documentation; it appears that the licensee has developed an aggressive schedule for the transfer of the fuel from Shoreham to Limerick. Fifty-six Shoreham fuel bundles are currently scheduled to be used in Unit 1 during the fifth refueling outage (1RO5) scheduled to begin in January 1994. The use of the Shoreham fuel would eliminate the need for 24 new fuel bundles and would allow replacement of 32 high burn-up bundles with more reactive fuel. The fuel would be shipped in an NRC approved IF-300 Cask, in 33 trips, with 17 bundles per transport cask. The schedule includes two day turnaround time at both Limerick and Shoreham for the shipping cask and a six day travel time in between sites.

Based on the assessment of the Shoreham fuel transfer to Limerick, the inspector noted the following. The System Manager at the site was well informed of the progress of the planning for the task at Chesterbrook, and was knowledgeable of the nuclear fuel handling. Communications between the site and Chesterbrook, in this particular case between the

Nuclear Design Branch in Chesterbrook and the Reactor Engineering Branch at the site were found to be adequate. During the walkdown of the spent fuel pool, the inspector observed that the area was clean. It was also noticed that provisions were being made to receive the Shoreham fuel.

Upon interviewing knowledgeable personnel, reviewing selected procedures, and reviewing the submittal to the NRC for an operating license amendment, the inspector concluded that the licensee is providing adequate engineering resources to handle the fuel transfer.

Recirculation Pump Reliability Improvement

The recirculation pump reliability improvement and cable, raceway and termination were selected to sample the activities of the Electrical and Instrumentation/Controls Section.

The inspector reviewed the participation of LGS engineering in the industry-wide problem of recirculation pump shaft cracking. This was a Peach Bottom restart issue in 1987-88 for which the strategy was to install shaft vibration instrumentation to monitor shaft vibration until the shafts could be replaced. As a result of Limerick start-up testing to obtain baseline vibratory signatures, it was discovered that impeller vane passing forces could excite resonances above the pump running speed. The licensee contracted with the University of Virginia (UVA) to evaluate the effect of rotor resonances on crack propagation. UVA affirmed this possibility in a paper "Experimental and Analytical Investigation of a Main Coolant Pump." On that basis, the licensee initiated a BWR Owners group Committee on Recirculation Pump Reliability Improvement. At meetings with the pump manufacturer, the feasibility of changing to a 7 vane pump was investigated, but discontinued because of obstacles in the development of the 7 vane pump.

Over the past year, the licensee has been updating its strategy to include shaft replacement and integrity testing. NEEDS has slowed down this program and transferred the shaft replacement project to LGS for formalization of the project.

The probability of recirculation pump shaft cracking failure has not been established; however, the pump shafts are being monitored by LGS I&C to determine the vibratory signature changes to indicate changes in the pump shaft condition. This is intended to provide for advance recognition of a possible pump shaft failure.

Cable, Raceway, and Termination Data Reconciliation

The Electrical and Instrumentation/Controls (I&C) Section is responsible for the Integrated Nuclear Cable Management System (INCMS). The INCMS is a computerized Class I cable data base that provides the licensee with comprehensive cable management for safety and nonsafety-related systems. The licensee stated that this major modification INCMS, among other functions, performs calculations for review of raceway fill and overfill of cable trays.

The inspector interviewed the responsible engineers at NED's Electrical and Instrumentation and Controls Engineering Section. In NED, the cognizant engineer provided the inspector with an overview of the project. This overview included a practical demonstration by which the inspector was able to verify the accuracy of the computerized configuration management system. This verification was performed by comparing its data base with the corresponding electrical drawing. During this verification exercise, the inspector noticed that typical data of the configuration management system (CMS) data base were basic cable codes, raceway codes, junction box codes, and system codes. Cables and raceways that involved Appendix R safe shutdown analysis were given higher priority for data entry. Based on the comparison of the data base with the drawing, no discrepancies were found.

The inspector concluded that the INCMS provides the licensee with a tool to maintain an accurate electrical configuration of the plant and it can be used effectively in decreasing the electric system design time. The responsible engineer and supervisor interviewed were knowledgeable and experienced electrical engineers.

Power Re-rate for LGS

To sample activities of the NED System Design Section and the Site's Performance and Programs Section, the inspector selected the Power Re-rate project for Limerick.

The inspector interviewed the responsible engineer, who is a contributor to the System Design Section/Heat Cycle Branch. He coordinated and interfaced with the contractors that performed the Power Re-rate assessments for Peach Bottom and are performing the assessment for Limerick with the following details:

The contractor's activities for the power re-rate assessment were performed under the licensee's oversight. These activities began with the evaluation of the reactor and turbine heat balances performed by the nuclear vendor supplier. The balance of the plant (BOP) portion was evaluated by an architect/engineering firm. The areas evaluated for the power re-rate were systems, piping, structures, line break evaluation, radiological issues, equipment qualifications, environment impact, licensing issues, and plant procedures. By evaluating these areas, the contractor identified operational parameter changes and determined bounding temperature, pressure and flow changes.

These assessments identified impacted areas that were further examined by the contractor who determined their licensing bases, commitments and reviews of design documentation, to establish current design bases and margin. These items were the bases for engineering assessment of plant systems, structures and components. At this point, the roll of the licensee was crucial in establishing the excellent communication between the original A/E custodian of the original design bases and the contractor performing this specific task.

The licensee added that if as a result of these evaluations, modifications were required, then the contractor would be responsible for generating the modification packages and implementing them under licensee oversight. However, if no modifications were required and it was concluded that each system, structure and component can safely and reliably operate at higher power levels, then the integrated licensing report would be prepared by the contractor and submitted to the licensee along with proposed Technical Specification changes. Upon licensee review of this integrated licensing report and prior to its submittal to the NRC, the report is further reviewed by the licensee's PORC committee and the Nuclear Review Board.

In conclusion, the licensee displayed effective project management skills in the coordination of contractors that performed the power re-rate for Peach Bottom. The same overall project approach is being used for Limerick. The licensee's responsible engineers and system manager assigned to this task at LGS are knowledgeable and experienced.

2.3 Design Modification Review (37700)

Control Rod Drive (CRD) Isolation Boundary

The inspector reviewed Modification No. 5816-2. In this modification, the licensee directed the installation of a new check valve in each of the headers to the hydraulic control units (HCU) between the main control station and the vent valve. These valves constitute a new isolation boundary. Each check valve station consists of two check valves, a block valve and three test connections. This enables each valve to be tested individually instead of during the critical path integrated leak rate test (ILRT).

The modification was previously subjected to a technical assessment, including a review of its design input documents (DIDs). The findings of the review were documented in NRC Inspection Report Nos. 50-352/91-21 and 50-353/91-22.

At this time, the inspector focused on the closing documentation to verify the adequacy of the modification. For piping, the extension of the isolation boundary required the upgrading of the existing class piping. This changes the design and installation requirement from ANSI B31.1, Seismic Category II to ASME Section III, Class 2, Seismic Category I. The installation requirement for the new isolation valves is ASME Section III, Class 2, as modified by Section XI. The existing piping has been evaluated and upgraded to be equivalent to Section III, Class 2.

The inspector verified that the official Limerick Generating Station, Unit 2 Technical Specifications Change Request, resulting from the modification, was submitted to the NRC on July 7, 1992. The licensee stated that an analysis has been performed on the piping being upgraded for inclusion in the extended ILRT boundary. The licensee's submittal affirmed that the piping and related supports were designed to meet the criteria of Seismic Category I and the ASME Code Section III, Class 2. Analysis showed that the existing piping and the

modified piping is within the ASME Code allowables. Piping supports have been evaluated and modified as necessary to accommodate the newly analyzed loads. The inspector verified that on September 28, 1992, the NRC issued an acceptance to the licensee application.

At LGS, the inspector verified that the prescribed and approved post-modification tests were performed at full reactor pressure to verify that the cooling water flow rate can be maintained greater than 55 gallons per minute (GPM) with no leakage from valve station as shown in work order CO131223ACT19. This flow rate is within the UFSAR specified range and has been shown by experience to provide adequate temperature control in the drives. The inspector had no further technical questions regarding this modification.

The inspector noted that the System Manager was knowledgeable and well informed of the modification. Through his coordination, the post-modification test was performed. Knowledgeable expertise from Chesterbrook were properly employed and the data were properly disseminated to the field. The licensing section was effective in communication with the NRC to process the Technical Specification change request. Therefore, it was concluded that the engineering know-how and the communications flow between the site and Chesterbrook were adequate.

2.4 System Manager Responsibilities

The inspector reviewed the qualifications and responsibilities of the System Managers. Although, a typical System Manager should have at least a technical degree or be approved by the Director of Site Engineering, they are encouraged and fully supported in their efforts to obtain higher degrees. In this context, the licensee stated that each System Manager must maintain a satisfactory standing, and his/her progress may be determined by the Director of Site Engineering on a case by case basis.

The licensee stated that the primary duty of a System Manager is to maintain a high level of knowledge, confidence and ownership about the system operation and maintenance. The system manager should be familiar with the system design and operation and its response during normal operation, testing and transients, be aware of and periodically review any performance monitoring, know the location of all system equipment and controls, system alarm responses and setpoints.

The System Manager's qualification and responsibilities were clearly outlined in writing in the licensee's Station Procedure AG-19, Revision 7. In addition, the inspector interviewed the cognizant system managers for the modifications described in this report and found that these individuals have a good hands-on experience on specifics of the plant, especially in their assigned systems. The inspector noted that the system managers's plant experience along with adequate communication skills enabled the licensee to have smooth communication between the Chesterbrook office, the site and the contractors for the resolution of technical issues.

2.5 Engineering Training Program

In the last quarter of 1992, the licensee's Technical Staff and Managers Training Program was redesigned to: comply with INPO National Academy for Nuclear Training 91-017, incorporate effectiveness and efficiency recommendations from the NEEDS, and respond to trainee and supervisory feedback. The resulting Engineering Support Personnel Training Program streamlines much of the classroom/laboratory training and relies upon on-the-job training for job specific skills and knowledge.

A core of training courses is required for all engineering professionals whose job functions are listed below:

- Reactor Engineering
- Modification Engineering
- ISI Engineer
- QA Engineer
- System Manager/Maintenance Engineer
- Performance/Reliability Engineer
- Regulatory Compliance Engineer

These core courses should be completed within two years of assignment to the Nuclear Group and must be completed prior to qualifying for any position specific job. The course includes one unit of self-study material and three units of classroom/lab training; fundamentals, systems, and plant orientation.

Focusing on design modification, the inspector interviewed the 10 CFR 50.59 instructor who displayed a good command of the 50.59 process. The inspector reviewed procedure LR-C-13, Revision 0. This procedure provides instructions to the licensee's Nuclear Group personnel for determining the need to perform and for the preparation of 50.59 reviews in accordance with the requirements of 10CFR50.59. Based on the review of the procedure and the class material for NED and the site, the inspector noted the following key points of the training:

- Procedure LR-C-13, Rev. 0 is adequate and it is consistent with the industry practice for the preparation of 50.59 reviews, in particular, the Nuclear Safety Analysis Center NSAC-125 endorsed by the NRC.

- The 50.59 training is comprehensive and covers the pertinent material to prepare a 50.59 design change. This material includes a well prepared guidance for performing 50.59 reviews. This guidance is based on defense in depth design philosophy.

- Trainees are given ample opportunity to review, examine and critique recently completed 50.59s associated with design changes, deficiency reports and procedures.

In addition, the licensee has an excellent Root Cause Analysis and Decision Making course designed for members of the Significant Event Response Team and open to all Nuclear Department personnel involved in problem solving and incident investigations (e.g., LERs). This course emphasizes problem definition and analysis, performance analysis, appraisal and hardware analysis, human/equipment casual factor analysis and corrective action determination and presentation.

Continuing education courses are offered to engineering personnel to provide them with specific industry and plant knowledge.

The inspector concluded that the licensee's plant specific training of already competent professionals is adequate and emphasizes efficiency and effectiveness throughout the different phases of training. However, the inspector commented that in regard to the control of training through the computer data base, a typical supervisor was not able to access the training records of the people working under his supervision. The licensee acknowledged this comment and stated that training would be intensified to overcome difficulties in accessing the system.

2.6 Communications

The inspector reviewed several vehicles of communication used in the Nuclear Group to provide both general and specific information on the activities at NED and LGS. In a special safety issue of the "Possum Hollow Press," the LGS vice President discussed the weaknesses and strengths of LGS safety records. In the "Nuclear News," a wide range of employee activities at LGS is discussed at regular intervals together with nuclear power generation accomplishments. LGS provides a "Daily On-Line Status Report" of significant work activities. LGS Design Engineering provides weekly reports of design engineering performance trends.

The inspector found the communications available to the employee provide an excellent means of informing the employee of the status of nuclear power generation issues at the site and PECo nuclear headquarters.

2.7 Fatigue Cycle Monitoring

The inspector assessed the review of transient operation of LGS. The recording of operating cycles is consistent with the requirements of the Technical Specification. Since LGS units are relatively young, there is no indication from the transient operating results that give concern that the technical specification limits will be exceeded.

The inspector noted that the plant life extension program beyond 1993 will be limited to monitoring industry developments. This is due to continuing economic and license renewal uncertainties. The inspector acknowledges this as a reasonable course of action in view of many current uncertainties with component remaining life evaluation and the early stage of fatigue cycle at LGS.

3.0 NEEDS PROGRAM IMPLEMENTATION

3.1 Planning and Schedules

The inspector reviewed the detailed planning schedule of the Nuclear Effectiveness and Efficiency Design Study (NEEDS) program. The schedule shows the engineering issues broken down into specific tasks together with identification of the manager responsible for each issue. The major issues include engineering roles and responsibilities, monitoring and controlling work, and process complexity. The scheduling shows the beginning, span and completion time of each sub-task. Transition item plans are given which show for each manager the transfer of the specific work items to other managers, and the details of the transfer in schedule, budget, and future actions required.

An executive implementation review of NEEDS progress was conducted in May. The NEEDS implementation review included status and assessment of all prerequisite tasks, plans preparations/schedules for upcoming major activities, performance indicators that reflect the impact on safety and quality of operations, audits/monitoring/assessments that have been concluded or will occur during future changes, planned plant evolution/NRC or INPO activities/drills exercises or other events that may coincide with or be impacted by the changes, and an overall assessment of the organization's readiness to continue with the change process.

The inspector found the NEEDS implementation is comprehensively planned and provides for many details in the transition. Furthermore, the plan offers points of review by executive management to assure that meaningful progress is being made.

3.2 Corporate Goals and Objectives for NEEDS

The licensee continues to provide for management control through dissemination of corporate vision, mission, and values reflected in operational and strategic objectives for the Nuclear Group. Operational objectives of the Nuclear Engineering Division (NED) include those for safety, regulatory performance, financial performance, investment protection, internal and external relations, and organizational effectiveness. Similarly, these goals are also held by the Limerick Generating Station (LGS). Included in the goals for organizational effectiveness is a goal to support implementation of NEEDS recommendations in accordance with approved plans.

The inspector found corporate support of the NEEDS program to be prevalent and in accordance with the PECO system of objective and goal setting with corporate oversight of implementation and performance measurement.

3.3 Nuclear Engineering Division (NED) Organization Changes and Responsibilities

The inspector reviewed the post-NEEDS corporate engineering organization. The Director of Engineering reports to the Nuclear Group Vice President. Reporting to him are the managers of fuel and services, electrical and I&C engineering, civil and mechanical engineering, system design engineering, procedures and projects, and engineering assurance. The total number of licensee's engineering personnel reporting to the Director of Engineering has been reduced from 315 to 257, partially by transfer of engineering positions to the plant engineering staff. Those engineers leaving NED and remaining with PECO will occupy engineering positions at Limerick (LGS) and Peach Bottom (PB) under the new NEEDS organizational format.

The inspector found the senior manager of each NED to be chosen on the basis of his prior experience in engineering management of the same or comparable function. Principle engineers in the sub-sections have been selected from NED, LGS, and PB on the basis of their expertise in the particular discipline. The inspector found the selections of key personnel to be well founded.

The responsibilities of NED in support of LGS will be longer range generic engineering issues together with major modifications. NED involvement in the ongoing short-term issues at Limerick will be reduced because of the transfer of NED engineers to the design engineering function at Limerick. The inspector reviewed the detailed list of responsibilities assigned to each NED engineering section. The responsibility list is a comprehensive one.

The inspector found the NEEDS reorganization at NED to be well planned, implemented in accordance with schedules, responsibilities clearly defined, and the selection of key personnel to be well founded on performance and experience.

3.4 LGS Site Organization Changes and Responsibilities

The inspector reviewed the post-NEEDS Limerick site engineering organization. The Director of Site Engineering reports to the LGS Vice President. Reporting to the Site Engineering Director are managers of four engineering sections. These are Plant Engineering, Design Engineering, Component Engineering, and Performance/Procedures/Programs.

Reporting to the Plant Engineering Manager are the Branch Heads of Reactor Engineering, Electrical System Engineering, Nuclear Steam Supply Systems Engineering, and Balance of Plant Systems Engineering. Plant engineering personnel are the System Managers. They own the responsibilities of the many system activities in the operating nuclear plant. The

inspector found the engineers interviewed to be knowledgeable in the technology of their particular system and to have a positive attitude toward their responsibilities. There are 37 engineers in Plant Engineering. All but five have graduate engineering degrees and those five hold two-year Certificates.

Reporting to the Design Engineering Manager are the Branch Heads of Civil, Electrical, Instruments and Control, and Mechanical Engineering. These sections provide for the disciplinary expertise in design of the minor and temporary modifications. The engineering aspects of the purchasing function are also the responsibility of these sections, who provide engineering direction of required purchasing for the modifications. These engineers provide the technical expertise on the minor modifications heretofore obtained from Chesterbrook. There are 34 engineers in Design Engineering. All but five hold graduate engineering degrees and those five hold two-year Certificates.

Reporting to the Component Engineering Manager are 10 engineers experienced in issues related to components. Reporting to the Performance/Procedures/Programs Manager are nine engineers experienced in programmatic aspects of site engineering.

The inspector reviewed the responsibilities of the System Managers in procedure A-19 and found it to be comprehensive, including specific expectations for the walkdown of the system. Responsibilities were found to be clearly defined for each system and subsystem manager, together with the primary backup manager and responsible supervisor for each system. The inspector noted special attention has been given to the transfer of maintenance responsibilities to the system engineering groups.

The inspector found the NEEDS reorganization at LGS to be well planned, implemented in accordance with schedules, responsibilities clearly defined, and the selection of key personnel to be well founded on performance and experience.

3.5 Performance Indicators

The inspector reviewed the "Nuclear Committee of the Board Performance Indicators." The performance indicators related to the NEEDS program include engineering work requests, engineering review requests, preventative maintenance items overdue, nonconformance index, temporary circuit alteration and interim modification status, and failure report deficiencies. These reports provided for a management overview of the effect of the NEEDS program on essential operational issues.

The inspector noted that weaknesses identified in the trend charts alerted management to areas where the weakness trends could be acted upon to provide for a more positive trend direction in the future. Negative trends were generally attributed to inappropriate staff experience, training, staffing levels, and procedures/processes at the site.

The inspector found performance indicators to be highly effective in controlling the course of NEEDS implementation by PECO management.

3.6 Engineering Training

The inspector reviewed the engineering training matrix defined for members of the engineering department affected by the NEEDS transition. The training elements include orientation, fundamentals, and a wide range of disciplines covering the activities at an operating nuclear power generation plant. The personnel, together with their experience history, are identified in the matrix with the particular training prescribed for the transition. There was no prescribed schedule included in the matrix.

The inspector noted that the licensee has recognized the need for specialized training in support of engineering transition from one group to another.

3.7 Performance Evaluation and Self-Assessment

The inspector reviewed the guidelines for NED self-assessment NED-UG-4. Included in the guidelines are the procedures at the Branch, Section, and Division levels, the organizational self-assessment process, documentation, self-checking and evaluation checklist, suggested meeting agenda, and assessment attributes.

The inspector reviewed a self assessment meeting report 93-01 by the Engineering Assurance Branch. The report described a comprehensive review of the Engineering Assurance Branch strengths, weaknesses and areas to be watched.

The inspector found the guidelines for self-assessment to be comprehensive and the comprehensiveness demonstrated in the Engineering Assurance Self Assessment Meeting Report.

4.0 MANAGEMENT MEETINGS

Licensee management was informed of the scope and purpose of the inspection at the beginning of the inspection. The findings of the inspection were discussed with the licensee management at the July 2, 1993, exit meeting. The licensee did not take issue with the findings of the inspectors. See Attachment 1 for attendees.

ATTACHMENT 1

Persons Contacted

Philadelphia Electric Company

* G. V. Cranston	Division Director of Engineering NED
G. D. Edwards	Director, Site Engineering, Peach Bottom
* J. Muntz	Director, Site Engineering, Limerick
H. W. Vollmer	Sr. Manager of Civil and Mechanical Engineering
* J. J. Gyrath	Branch Head Engineering Assurance
G. Beck	Sr. Manager System Design
* D. B. Neff	LGS Licensing Engineer
* M. Gallagher	Sr. Manager Plant Engineering
* G. Hunger	Director of Licensing
T. Niessen	Sr. Manager Electrical and Inst. Control Engineering
F. Valentino	Manager of Engineering Assurance

U.S. Nuclear Regulatory Commission

* E. H. Gray	Section Chief, Region I

* denotes those present at the exit meeting