MAR 2 3 1994

Docket Nos. 50-277
50-278

Mr. D. M. Smith
Senior Vice President-Nuclear
PECO Energy
Nuclear Group Headquarters
Correspondence Control Desk
P. O. Box 195
Wayne, Pennsylvania 19087-0195

Dear Mr. Smith:

SUBJECT: Reply to NRC Combined Inspection Nos. 50-277/93-34; 50-278/93-34

This letter refers to your March 4, 1994 correspondence, in response to our January 26, 1994 letter.

Thank you for informing us of the actions taken toward enhancing the trending of emergency preparedness (EP) related discrepancies. Mr. Lonny Eckert of my staff discussed this matter further with Mr. R. Kinard of your staff in a telephone call held on March 18, 1994. The following additional information was conveyed to Mr. Eckert during this conversation:

- It is planned to modify the EP Action Item Tracking (EP-AIT) system to better integrate it with the Performance Enhancement Process (PEP), which is used at both stations operated by PECO Energy

- Corporate Quality Assurance has become involved in EP discrepancy resolution

- The Emergency Response Organization will be re-evaluated to determine whether current personnel assignments in regards to EOF dose assessment is appropriate

These actions will be examined during a future inspection of your emergency preparedness program.

OFFICIAL RECORD COPY

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Thank you for the information provided. Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
Richard R. Keimig

James H. Joyner, Chief
Facilities Radiological Safety
and Safeguards Branch
Division of Radiation Safety
and Safeguards

cc:
J. Doering, Chairman, Nuclear Review Board
G. Rainey, Vice President, Peach Bottom Atomic Power Station
W. H. Smith, Vice President, Nuclear Services Department
G. Cranston, General Manager, Nuclear Engineering Division
C. Schaefer, External Operations - Nuclear, Delmarva Power & Light Co.
G. Edwards, Plant Manager, Peach Bottom Atomic Power Station
A. J. Wasong, Manager, Experience Assessment
G. A. Hunger, Jr., Manager, Licensing Section
J. W. Durham, Sr., Senior Vice President and General Counsel
J. A. Isabella, Director, Generation Projects Department, Atlantic Electric
B. W. Gorman, Manager, External Affairs
R. McLean, Power Plant Siting, Nuclear Evaluations
D. Poulsen, Secretary of Harford County Council
R. Ochs, Maryland Safe Energy Coalition
J. H. Walter, Chief Engineer, Public Service Commission of Maryland
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
K. Abraham, PAO (2)
NRC Resident Inspector
Commonwealth of Pennsylvania
TMI - Alert (TMIA)

bcc:
Region I Docket Room (with concurrences)
K. Gallagher, DRP

bcc: (Via E-Mail)
V. McCree, OEDO
Joseph Shea, NRR
C. Miller, PDI-2, NRR
M. Shannon, ILPB

CONCURRENCES:

LLE		
Eckert	Kemnig	Joyner
RI:FRPS	RI:EPS	RI:FRSSB
3/18/94	3/23/94	3/23/94

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

JAN 26 1994

Docket Nos. 50-277
50-278

Mr. D. M. Smith
Senior Vice President-Nuclear
PECO Energy Company
Nuclear Group Headquarters
Correspondence Control Desk
P. O. Box 195
Wayne, Pennsylvania 19087-0195

Dear Mr. Smith:

SUBJECT: **Emergency Preparedness (EP) Inspection 50-277/93-34 and 50-278/93-34**

This letter forwards the report of the announced inspection of your emergency preparedness program conducted by Mr. L. Eckert and others of this office on November 29 through December 3, 1993 at the Peach Bottom Atomic Power Station, Units 2 & 3, Delta, Pennsylvania. The inspection was continued in the Region I office through January 19, 1994 to review the most current status of the Technical Support Center ventilation system surveillance procedure issue identified during the inspection, and to review surveillance reports and discrepancy corrective action reports obtained during the inspection. Preliminary inspection findings were discussed by Mr. Eckert with members of your staff on December 3, 1993, with an additional finding provided to Mr. Yost of your staff on January 19, 1994.

Areas examined during this inspection are described in the NRC Region I Inspection Report which is enclosed with this letter. Within those areas, the inspection consisted of observations by the inspectors, interviews with personnel, and examination of selected procedures and records.

Overall, this inspection found that, in general, the EP program was well implemented. Support from site management was evident. Emergency response facilities and equipment were operationally ready. Emergency response organization training was complete, and independent program audits were well performed.

The inspection team raised a question regarding the Technical Support Center ventilation system surveillance procedure. Additionally, the team questioned the effectiveness of the discrepancy resolution system that is being used by the EP group and noted that it had been identified by your EP group in a 1993 self assessment as a weakness. Examples of problems noted by the team are provided in the enclosed report. Within 30 days of receiving this

letter, please provide us with your plans and associated schedule(s), with regard to these questions. No violations of regulatory requirements were identified.

Thank you for your cooperation.

Sincerely,

James H. Joyner, Chief
Facilities Radiological Safety
and Safeguards Branch
Division of Radiation Safety
and Safeguards

Enclosure: Inspection Report Nos. 50-277/93-34 and 50-278/93-34

cc w/encl:
J. Doering, Chairman, Nuclear Review Board
G. Rainey, Vice President, Peach Bottom Atomic Power Station
W. H. Smith, Vice President, Nuclear Services Department
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C. Schaefer, External Operations - Nuclear, Delmarva Power & Light Co.
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V. McCree, OEDO
Joseph Shea, NRR
C. Miller, PDI-2, NRR
M. Shannon, ILPB
J. Laughlin, EPS

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-277/93-34 and 50-278/93-34

Docket Nos. 50-277, 50-278

License Nos. DPR-44, DPR-56

Licensee: PECO Energy Company

Facility Name: Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3

Inspection Period: November 29 - December 3, 1993 through January 19, 1994

Inspectors: Tony Eckert 1/19/94
L. Eckert, Radiation Specialist Date
Facilities Radiation Protection Section
D. Silk, Senior Emergency Preparedness Specialist
W. Maier, Emergency Preparedness Specialist
K. Mikkelson, Batelle, Pacific Northwest Laboratories (Contractor)

Approved By: R. Keimig 1-24-94
R. Keimig, Chief Date
Emergency Preparedness Section

Areas Inspected: PBAPS emergency preparedness (EP), including: program changes; emergency facilities; equipment, instrumentation, and supplies; organization and management control; emergency response organization (ERO) training; staff knowledge and performance of duties; independent reviews/audits; and public information and off-site interfaces.

Results: The EP program was, in general, thoroughly implemented and administered. Emergency response facilities and designated equipment were operationally ready. Management involvement in the EP program was evident. ERO staffing levels were maintained with individuals qualified in the established EP training program. Independent program audits were performed. However, a question was raised regarding the Technical Support Center ventilation system surveillance procedure. Additionally, the discrepancy resolution system was found to be not fully effective. No violations of regulatory requirements were identified.

DETAILS

1.0 Personnel Contacted

1.1 Station Personnel

* H. Abendroth, Atlantic Electric Site Representative
* J. Carey, Public Service Electric and Gas
* A. Daugherty, Site EP Supervisor
* W. Eckman, Acting Audit Superintendent
* G. Edwards, PBAPS Plant Manager
* G. Gellrich, Senior Operations Manager
* B. Guzejko, Training/Drills Analyst, Site EP Section
* S. Keenan, Branch Supervisor Station Support
* R. Kinard, EP Manager (Corporate)
* C. Kirkpatrick, Instructor

  B. Mandick, Branch Supervisor Offsite

  H. Langley, Facilities/Equipment Coordinator
* D. McComsey, Facilities/Equipment Technical Assistant
* T. Niessen, Site Engineering Director
* R. Smith, Regulatory Engineer
* T. Wasong, Experience Assessment Manager

  N. Yost, Program/Assessment Analyst, Site EP Section

Other licensee personnel were contacted during the inspection.

1.2 Commonwealth of Pennsylvania - Bureau of Radiation Protection

* S. Miangi, Nuclear Engineer

1.3 Nuclear Regulatory Commission

* R. Keimig, Emergency Preparedness Section Chief, Region I

* Denotes attendance at the exit meeting.

2.0 Operational Status of the Emergency Preparedness (EP) Program

2.1 Changes to the EP Program

2.1.1 Emergency Plan and Emergency Plan Implementing Procedure (EPIP) Changes

Since the last program inspection in this area, the licensee initiated implementation of a common emergency plan for both stations operated by PECO Energy Company (Peach Bottom and Limerick). The inspectors reviewed changes made to the Emergency Plan and its implementing procedures since the last program inspection, including a sampling assessment of the impact of those changes upon Emergency Plan effectiveness. No decrease in effectiveness was noted.

Station-specific Emergency Action Levels (EALs) are no longer maintained in the (common) emergency plan. At the time of the inspection, the licensee was nearing completion of a major EAL upgrade which adopts the Nuclear Management and Resources Council (NUMARC) EAL guidance and incorporates new 10 CFR 20 requirements, NRC Response Technical Manual (RTM)-92 guidance, and revised EPA protective action guidelines (EPA 400-R-92-001). The licensee planned to submit the revised EALs in the first quarter of 1994. NRC will continue to review changes to EALs in accordance with 10 CFR 50.4; 10 CFR 50.34(b)(v); and 10 CFR 50, Appendix E, Sections III, IV, and V.

Since the last program inspection in this area, the licensee improved EP program administration through the development of common nuclear procedures and Routine Test/Emergency Response Procedures (RT/ERPs). The following RT/ERPs were developed since the last EP program inspection to provide a structured format for station EP staff use.

- RT/ERP-2, "Distribution of ERO Call Out Lists," Revision 1, 10/20/92
- RT/ERP-3, "Mini-Drill Conduct,"
- RT/ERP-4, "ERO Qualification Status,"
- RT/ERP-6, "ERO Telephone Number Review,"
- RT/ERP-7, "Emergency Facility Activation,"
- RT/ERP-8, "Prompt Mobilization Communications Test,"
- RT/ERP-9, "EP-Aid Inventory and Review,"

In summary, these additions have minimized the vulnerability of having only one individual thoroughly familiar with a specific EP program task.

2.1.2 Letters of Agreement

Letters of Agreement are maintained by the Corporate Emergency Preparedness Section. All of the Letters of Agreement stipulated in the emergency plan were reviewed by the inspectors and found current at the time of the inspection. No substantive changes in any of the support arrangements were noted by the inspectors.

2.1.3 Licensee Support of Industry Initiatives

The licensee has been an active participant in the BWR NUMARC Emergency Action Level (EAL) guidance. Additionally, the licensee continued to be an active participant in the BWR Owners Group to develop new guidance concerning severe accident management.

2.2 Facilities

2.2.1 Equipment Readiness

The inspectors toured the Control Room (CR), Operations Support Center (OSC), Technical Support Center (TSC), and the Emergency Operations Facility (EOF) to assess whether these facilities, equipment, supplies, and procedures were adequately maintained as required by 10 CFR 50.47(b)(8).

The inspectors sampled communications equipment, computer terminals, and survey equipment for operability and calibration. The inspectors found that all sampled equipment was functional and, if applicable, calibrated.

At the time of the inspection, those facilities reviewed were, in general, well maintained and ready. However, the licensee's 1993 EP audit (Audit No. A0680052) identified a Corrective Action Request (CAR) relating to maintenance of documents (current revisions) in the EOF. The audit report noted the potential for a programmatic problem in this regard as a self-assessment had identified a large number of document control deficiencies at the EOF. The concern had been forwarded to Chesterbrook Nuclear Quality Assurance (NQA) for further assessment. This matter will be reviewed in a subsequent inspection (IFI 50-277/93-34-01).

The NRC inspector reviewed the surveillance procedure for emergency equipment inventory at the Coatesville EOF. The procedure is carried out by Limerick Generating Station personnel (Limerick procedure ST-7-EPP-354-0). In the case of the test conducted on 9/2/93, the inspector noted that a certain individual signed for completing a portion of the test, and that same individual also signed for reviewing the test on the same day. This practice precludes an independent review of the test from being accomplished, thus reducing the quality assurance provided by the review process. The inspector did not note any other test where this had occurred.

Review of the licensee's on-site facility surveillance reports and discrepancy corrective action reports for the first and third quarters of 1993 found them an effective means of insuring ERF readiness. In general, discrepancies were promptly corrected. The inspectors observed that some surveillances had been completed with "blanket" sign-offs. This matter was discussed with station EP management. The inspectors found no administrative directive that either condoned or prohibited this practice. Further review of the surveillance procedure checklists in the regional office found one checklist in which the "quantity found" column

had been completed as "ok" in lieu of denoting the actual number of items. By procedure, this practice is allowed. A note in the procedure checklist states that "inventory of items in excess of the expected quantity is not required." This practice prevents the verification, by a reviewing individual, that adequate quantities of supplies exist. It also might inhibit prompt initiation of a requisition for additional supplies prior to falling below checklist specified quantities. This was identified after the on-site inspection was completed and was conveyed to a licensee representative by telephone on January 19, 1993. Licensee dispositioning of the above was identified for subsequent NRC review (IFI 50-277/93-34-02).

The inspectors noted that the licensee utilized the plant information management system (PIMs) to ensure that items open for a long period of time, due to ordering, manufacturing, or work order delays, were properly resolved for closure.

2.2.2 ERF Procedures

The following potential weaknesses in the EPIPs were noted by the inspectors.

- There was no step in either ERP-205, "Emergency Preparedness Coordinator/TSC," or SO 40P-7A, "TSC Ventilation System Operation," to verify that the TSC ventilation system was providing a differential pressure of 0.125" H_2O (the system design objective). Such verification of system operability is important because early identification of system failure and/or deficiencies might allow sufficient time for corrective actions prior to loss of the facility due to habitability concerns (see Section 2.2.4).

- Although ST/ERP-2, "Emergency Equipment Inventory - Unit 1 Miscellaneous, Guardhouse, and Control Room," directs quarterly source checking of TSC frisking instrumentation, there were no directions in the EPIPs concerning source checking of TSC instruments upon facility activation.

Licensee dispositioning of the above will be the subject of further NRC review (50-277/93-34-03).

2.2.3 ERF Changes

The following facility enhancements are underway or have been completed since the last EP program inspection.

- The licensee has undertaken to upgrade the TSC to increase its size, data display capability, and overall functionality and is utilizing the old EOF in Unit 1 in the interim. Appropriate measures such as ventilation system testing (the old Unit-1 EOF and TSC ventilation systems are independent of one another) were taken prior to establishing the interim TSC. A diagram of the remodeled TSC is included as Attachment 1.

- The licensee developed PBAPS specific maps for field monitoring team use. These maps include survey point, siren, sampling, and telephone locations.

- A new siren control system was acquired by the licensee. The system facilitates real-time indication of failure, down to the component level. This system provides the licensee with the ability to control individual and/or groups of sirens.

- An autodailing system was acquired (NUROCS - Nuclear Emergency Callout System) which became the primary means by which the licensee's ERO personnel are notified of the need for ERF augmentation.

2.2.4 TSC Ventilation System

The TSC ventilation system was tested per ST/ERP-41, "TSC & Unit 1 HVAC System Test," (system functionality is tested using SO 40P-7A). Procedure ST/ERP-41 provides tests for the charcoal and HEPA filters. However, a test to verify the design objective of positive pressure (.125" H_2O) within the facility was not evident. This omission was identified by the team during the inspection but could not be resolved by the licensee prior to the end of the inspection. On Monday, December 27, 1993, the lead inspector initiated a call to the Site Emergency Preparedness Supervisor (SEPS). The SEPS conveyed that the matter was still under review. At that time, the inspector requested that the licensee initiate a review of TMI Action Plan licensing actions regarding the TSC ventilation system. Regulatory Guide 1.52 "Design, Testing, And Maintenance Criteria For Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration And Adsorption Units Of Light-Water-Cooled Nuclear Power Plants" provides guidance on how to meet General Design Criteria (GDC) 19 of 10 CFR Part 50. Other applicable guidance is contained in NUREG-0737, "Clarification of TMI Action Plan Requirements," Item II.B.2, NUREG-0696, "Functional Criteria for Emergency Response Facilities, Item 2.6, and Section 2.6 of this report. This matter will be reviewed in a future inspection (IFI 50-277/93-34-04).

2.2.5 Facilities Summary

This program area was assessed as good. ERF surveillances were being performed adequately, the ERFs were maintained in a state of readiness, and the supporting ventilation system for the TSC was operational.

2.3 Organization and Management Control

The inspectors reviewed the Emergency Response Organization (ERO) and management control of the EP program to assess conformance to the Emergency Plan.

2.3.1 ERO Augmentation Plan and Procedures

To determine if 10 CFR 50.47(b)(2) and (b)(5) were being met and whether NUREG-0654 guidance was being implemented, the inspectors conducted interviews, reviewed Emergency Plan Section 6.0, "Maintaining Emergency Preparedness," and reviewed relevant documentation.

Corporate EP maintained a primary responder list for key positions in the EOF and Emergency News Center (ENC). The PBAPS EP Section maintained a weekend primary responder list for key station ERO positions. Also, the licensee has qualified multiple individuals for each key position. Quarterly prompt mobilization communication tests were conducted (a combination pager-autodialer test). These tests require ERO member acknowledgement. Pager/autodialing tests were held at various times and days of the week. The autodialing test continues to call individuals within each position until the system receives a call-back from an individual within that position (each ERO member has their own code number).

Additionally, the inspection team confirmed that the licensee had met NUREG-0654 guidance concerning the conduct of unannounced and off-hours drills. The team concluded that the licensee provided sufficient objective evidence of its ability to assure ERO staffing adequacy and timeliness.

2.3.2 Reporting Chain

The Manager, EP now reports to the Manager, Support Services. The Manager, Support Services reports to the Vice President, Station Support who, in turn, reports to the Senior Vice President, Nuclear. No change in the depth of the corporate reporting chain occurred as a result of the Nuclear Effectiveness and Efficiency Design Study (NEEDS) re-organization.

2.3.3 EP/ERO Staffing

Since the last EP program inspection, another individual was assigned to the position of EP Manager. The individual has been with PECO for about five-and-a-half years. Prior to this reassignment, the individual served as the Supervisor, Off-site Branch. He also worked for the U.S. Federal Emergency Management Agency (FEMA) Region III for 11 years. Seven of those years were in the FEMA Radiological Emergency Planning (REP) program. In his last seven months with FEMA, he served as a Radiological Assistance Committee (RAC) chairman.

The following changes in EP/ERO staffing have resulted from NEEDS.

- While there has been no significant in-flux of new personnel, in some cases, individuals were serving in new capacities within the EP organization.

- The number of supervisory positions has been reduced from five to four.

- The total EP staff (corporate and both stations) has been reduced from 24 positions to 21.

- Many of the corporate Radiological Engineers, who would be utilized as Dose Assessment Team Leaders (DATLs) and Dose Assessment Group Leaders (DAGLs) at the Coatesville EOF, were reassigned to the Peach Bottom and Limerick stations and are, therefore, no longer assigned to perform EOF dose assessments. Because few Radiological Engineers remain at Chesterbrook, the licensee has qualified Chesterbrook Fuels Group personnel as DATLs. Since previous EOF dose assessment discrepancies were identified by the licensee and the NRC (see Section 2.6.1.3), the effectiveness of this action remains to be determined by the NRC during the next exercise.

At the time of this inspection, no degradation in program effectiveness was evident as a result of these changes.

The EP staff was stable and staff backgrounds were diverse, including individuals previously licensed as operators and individuals with experience in health physics. The PECO Energy EP organization chart is included as Attachment 2. Attachment 3 depicts the corporate organization and responsibilities. Attachment 4 depicts the PBAPS EP section and responsibilities.

Site EP training was being conducted by two individuals from the Training Department. At the time of this inspection, one of those individuals had been dedicated to that effort and the Manager, Services Training planned to dedicate the other in the future.

The licensee provided training to off-site emergency response personnel through a vendor (SE Technologies, Inc.). The training (and other support to off-site organizations) consumed about seven-and-a-half full time equivalent employees.

2.3.5 ERO Qualifications

Qualification records were maintained by both the Training Department and the site EP Section. The inspectors reviewed the training records of twenty-five ERO members to ensure that they met the required training qualifications to be placed on the ERO callout list. No discrepancies were found. The ERO was fully staffed and was at least four deep in all major site ERO positions. The Manger, EP and the SEPS had authority to place individuals and remove individuals from active ERO status.

2.3.6 Organization and Management Control Summary

This program area was assessed as being effectively implemented.

2.4 EP Training

To determine if 10 CFR 50.47(b)(15) and 10 CFR 50, Appendix E, Section IV.F., "Training," had been met and whether NUREG-0654 guidance had been implemented, the inspectors conducted interviews and reviewed Emergency Plan Section 6.0, "Maintaining Emergency Preparedness," Training and Qualifications (TQ) procedures, selected training records, and Lesson Plans (LPs).

2.4.1 Training Program Administration

Procedure SC-3.1, "Emergency Preparedness Training Course Plan," Revision 1, 11/29/93, provided direction for the development and implementation of EP training used to support the PBAPS emergency plan.

At the time of the inspection, the licensee was in the process of revising their LPs to a task-based format. Several of the new LPs were reviewed and found to be an improvement over their predecessors. The Training and EP groups have sponsored feedback sessions called "customer focus meetings" to provide user input on the on-going effort to revise EP LPs.

Requalification training is conducted in a classroom environment. Training for minor EP program changes may be conducted through a read-and-sign system.

The licensee established a performance-based EP training goal of participating (as a player) in a drill or exercise once every three years. This goal has been incorporated into Procedure SC-3.1. In practice, individuals in key positions have, in many cases, exceeded this goal. This procedure also delineated the initial and requalification courses for each position.

2.4.2 Interviews

Interviews were conducted with three Emergency Directors (EDs) and one Emergency Recovery Manager (ERM). The licensee was informed that a non-participating representative could observe this activity. Each interview lasted approximately forty-five minutes. The interviews were open-book, and focused on the adequacy of the emergency plan implementing procedures and how individuals were trained on these.

Individual interviews provide a different environment from the conditions under which emergency procedures are actually implemented. Actual Emergency Action Level (EAL) declarations and PARs are more of a team effort, and individual interviews do not measure overall licensee ability to classify events and make PARs. (That capability has been found acceptable at PBAPS during actual events and periodic emergency exercises.) Overall, the interviews indicated acceptable individual knowledge. The interviews did, however, provide indicators that merit licensee consideration from the viewpoint of determining whether EP training (and/or associated tests) should be strengthened or re-oriented to better assure maintenance of an individual's ability to respond to events. Specific indicators were:

- The EDs interviewed did not demonstrate full appreciation of the potential impact of the NRC Site Response Team on the licensee's Emergency Response Facilities (ERFs). While knowledgeable concerning the NRC Site Response Team's interaction in the TSC, the EDs did not know when to expect the team, how many would be in the team, where team members would want to go (ERFs), or what their responsibilities would include.

  NUREG-0654, Item I.I., "Federal Response," (Page 28) states: "The facility licensee must make provisions for an NRC presence onsite following an accident...."

  NUREG-0654, Item II.C., Emergency Response Support and Resources," (page 40) provides additional guidance in this regard.

- The inspectors questioned the EDs on whether they could provide an example(s) of when a containment radiation monitor might provide non-representative reading(s). Although the team noted that the EDs provided acceptable responses to this question, the EDs had some difficulty in answering this question. It would be beneficial to strengthen training in accident monitoring instruments and their limitations (see RTM-93 section B, "Core and Containment Assessment").

The team concluded that, overall, senior ERO management was able to implement EP procedures as intended. The interviewees were knowledgeable of their responsibilities and the overall ERO organization and function. When posed with challenging hypothetical situations, the inspectors noted an appropriate application of discretion, demonstrating cognizance of the need to evaluate all impacts upon the public.

2.4.3 Knowledge and Performance of Duties

Walk-through (table top) scenarios were conducted on two different control room crews. Two scenarios were presented to each crew. Each scenario was a fast-breaking sequence of events that challenged the crews to implement the EPIPs without the assistance of the augmenting staff. The NRC modified the scenarios from the Licensed Operator Requalification Training (LORT) program for this purpose.

Each crew consisted of a Shift Manager (a licensed Senior Reactor Operator {SRO}), an SRO, and shift administrative assistant. The walk-throughs were held in the TSC and calls were simulated. Dose projections for the scenarios were performed by a Radiological Controls Technician (RCT). Licensee personnel were present to assist the inspectors in providing plant system status and radiological data as each crew progressed through the scenarios.

Debriefs were conducted after each scenario. The walk-throughs resulted in the following findings.

- Overall, the crews correctly identified plant conditions, promptly declared the events, initiated state and local notifications within 15 minutes, and included the correct PARs for the scenarios necessitating declaration of General Emergency. The protective actions that were recommended would have protected the health and safety of the general public under the circumstances of the scenarios.

- The telephone list, ERP-110, Appendix 1 does not include the Bureau of Radiation Protection (BRP) on the 15-minute notifications, but the flow chart in ERP-110 and the General Emergency Notification Form, ERP-200, Appendix 4 provides the correct instructions.

- When asked what their (SRO's) actions would be if the EOF were not activated, a General Emergency had been declared, and the Maryland Radiological Health Program (RHP) could not be reached, various incorrect answers were provided by the SROs.

Licensee representatives acknowledged these findings and stated that they would be addressed. Licensee dispositioning of the above and items from Section 2.4.2 were identified for subsequent NRC review (IFI 50-277/93-34-05).

2.4.4 Operator EP Training Effectiveness

The inspectors checked LORT scenarios used in the simulator to retrain operators for applicability in table top scenarios. The inspectors modified LORT scenarios for use in the table-top scenarios. LORT is not intended to provide in-depth EP training and the amount of performance-based EP training provided by LORT is not extensive. Shift staff do not usually practice with scenarios that postulate events at the General Emergency level in LORT. The licensee applied the performance-based training goal (see Section 2.4.1) to the shift staff. While EP training is a Job Performance Measure (JPM), this goal is met by the licensee outside of LORT. The inspectors noted that all operators received EP training. However, the EP training requirements are not defined for Reactor Operators. This was conveyed to the licensee for review.

The Shift Manager relies upon the RCT for dose projections to support proper EAL selection and, therefore, proper event classification. RCTs do not currently practice with the control room operators in the EP LORT training sessions and, therefore, meet their performance-based training goal outside of LORT.

The inspectors reviewed Licensee Event Reports (LERs) for both units in 1993. No EAL declaration discrepancies were noted. Events requiring declaration were properly classified by Control Room personnel.

2.4.5 EP Training Summary

This program area was assessed as being well implemented.

2.5 Independent Reviews/Audits

An independent review, including an evaluation of the adequacy of the off-site interface with state and local governments is required at least every 12 months by 10 CFR 50.54(t). To determine if requirements were met, the inspectors reviewed the licensee's Technical Specifications, Quality Assurance (QA) Procedures, reviewed the Audit Plan and Audit checklists, reviewed the QA reports and QA surveillance reports.

The results of the off-site portion of the audit were made available to the state and county governments as required. EALs were reviewed with the surrounding Counties and the Commonwealth of Pennsylvania and State of Maryland, as required.

The inspectors reviewed audits and surveillances conducted by the licensee and concluded that they conformed to QA procedures. The inspectors reviewed audit plans and checklists and found them comprehensive and thorough. Audit reports were sent to the Manager, EP, other appropriate licensee management, and the county emergency management offices.

The inspectors noted that the inclusion of a technical expert on the 1994 audit team would be beneficial considering the program changes expected as a result of new 10 CFR 20, new EPA protective action guidelines, and the new EAL scheme.

This program area was assessed as being well implemented.

2.6 Commitment Tracking

To determine if 10 CFR 50.47(b)(14) and 10 CFR 50, Appendix E, Section IV.F., "Training," had been met, the inspectors conducted interviews, reviewed the emergency plan, reviewed drill/exercise reports, reviewed drill/exercise observer reports/notes, scenario objectives and training LPs.

2.6.1 Commitment Tracking Review

Corrective action follow-up was reviewed for the open items noted in NRC Combined Inspection Reports 50-277/92-19 and 50-278/92-19, 50-277/93-10 and 50-278/93-10, and licensee-identified drill findings. The inspectors evaluated the licensee's actions taken to resolve EP-related discrepancies for their adequacy and timeliness.

1) Licensee observations from the 8/11/92 and 6/29/93 drills identified maintenance/repair team members that were not respirator qualified. Licensee corrective actions included issuing a letter to maintenance personnel reminding them to take respirator training. Also, personnel who had medical problems precluding respirator usage were removed from the ERO.

   During the conduct of this inspection, about 25 ERO personnel (in positions that may require the use of respirators during an emergency) were found by the inspector to be unqualified in Scott 4.5 and ultra-view respirators. The site EP Section did not adequately track respirator qualifications for ERO personnel.

2) The inspectors reviewed the copy of surveillance test ST/ERP-41 (TSC and Unit 1 HVAC System Test) that was performed on 12/7/92. The person performing that test noted that the Varicel roughing filters for the TSC exceeded the maximum differential pressure specified in the procedure. The inspector asked an EP staff member what the status of the corrective action was for the deficiency. The staff member referred the inspector to the system engineer. The engineer involved was unable to provide the status of this item.

3) There have been several EOF dose assessment related discrepancies identified by both NRC and the licensee over the past three years, despite significant licensee attention and devotion of resources to this area. Several NRC exercise inspection reports (50-277/91-25 and 50-278/91-25, 50-277/92-19 and 50-278/92-19, 50-277/93-10 and 50-278/93-10, 50-352/93-19 and 50-352/93-19) have noted problems and Areas For Improvement (AFI) over the past three years. The following are excerpts from licensee drill reports.

   Licensee drill held 6/2/93

   Licensee identified dose assessment AFIs:

   - It took about 30 minutes for the EOF dose assessment team to identify the release pathway and release duration and communicate this to the ERM.
   - The field survey team's exposure was not maintained As Low As Reasonably Achievable (ALARA). Teams were directed into the plume, resulting in two of the three teams receiving 10,000 MPC.

   Licensee drill held 8/11/93

   Licensee identified dose assessment AFI:

   - The dose assessment team did not pursue the source term of iodine from the Standby Gas Treatment System (SGTS) filter fire.

2.6.2 Commitment Tracking Summary

The inspectors concluded that the discrepancy resolution system that is currently in use by the EP group is not fully effective. The licensee had also identified EP discrepancy

resolution as a weakness in its 1993 self assessment. The EP group does not utilize the Performance Enhancement Process ({PEP} a discrepancy resolution process used at PBAPS) system as do other station groups. Licensee EP discrepancy resolution will be reviewed in a future inspection (IFI 50-277/93-34-06).

This program area was assessed as being adequately implemented.

2.7 Drill and Exercise Program

To determine if 10 CFR 50.47(b)(14) and 10 CFR 50, Appendix E, Section IV.F., "Training," continued to be met and whether NUREG-0654 guidance continued to be implemented, the inspectors reviewed the emergency plan, scenarios, critique notes, final reports, and interviewed cognizant EP staff.

Procedure EP-C-6, "Preparation, Conduct, and Evaluation of Emergency Response Drills and Exercises," Revision 0, 2/15/93, designates the Manager, EP, as cognizant for scheduling, preparing, reviewing, approving, and controlling drills/exercises and scenarios. The Vice President, PBAPS, has the responsibility of assigning managers who provide the scenario development team and drill controllers/evaluators. The Site Emergency Preparedness Supervisor has the responsibility of evaluating drill reports to develop resolutions and corrective actions. Other directions were provided which clearly delineate the responsibilities of other individuals tasked with portions of the drill/exercise program.

The Emergency Plan requires that the licensee conduct an annual exercise and the following drills: communications (monthly), medical emergency (annual), radiological monitoring/health physics (semi-annually), and fire (quarterly). The EP group maintains a five-year rolling objective matrix, in accordance with EP-C-6, which provides a mechanism to help ensure that the sixteen planning standard criteria of NUREG-0654 are being tested in drills and exercises at appropriate frequencies.

The inspectors reviewed the drill/exercise scenario development process for the drills and exercises conducted in 1993 and found no problems. Previous identified problems (such as exercise weaknesses) and new procedures received emphasis through inclusion in drill/exercise objectives. Drills and exercises conducted met Emergency Plan requirements for 1993, provided challenges to the ERO, and were approved by senior management. Drill reports were timely and widely distributed to management. Four full station drills/exercises were conducted on 12/16/92, 6/2/93, 6/29/93, and 8/11/93.

This program area was assessed as being effectively implemented.

2.8 Public Information and Off-site Interface

To determine if 10 CFR 50.47(b)(7) and 10 CFR 50, Appendix E, Section IV.D.2., "Notification Procedures," continued to be met and whether NUREG-0654 guidance continued to be implemented, the inspectors conducted interviews with public relations personnel and county directors, reviewed the emergency plan, and selected pertinent documentation for additional verification.

A September 29, 1993 training session on radiation injuries was conducted, as well as quarterly coordination meetings were sponsored by the licensee for off-site agencies to discuss items of mutual interest. For example, the NEEDS process, siren system, the EP audit, the SALP report, and the NRC exercise report were topics of discussion during the February 4, 1993 meeting.

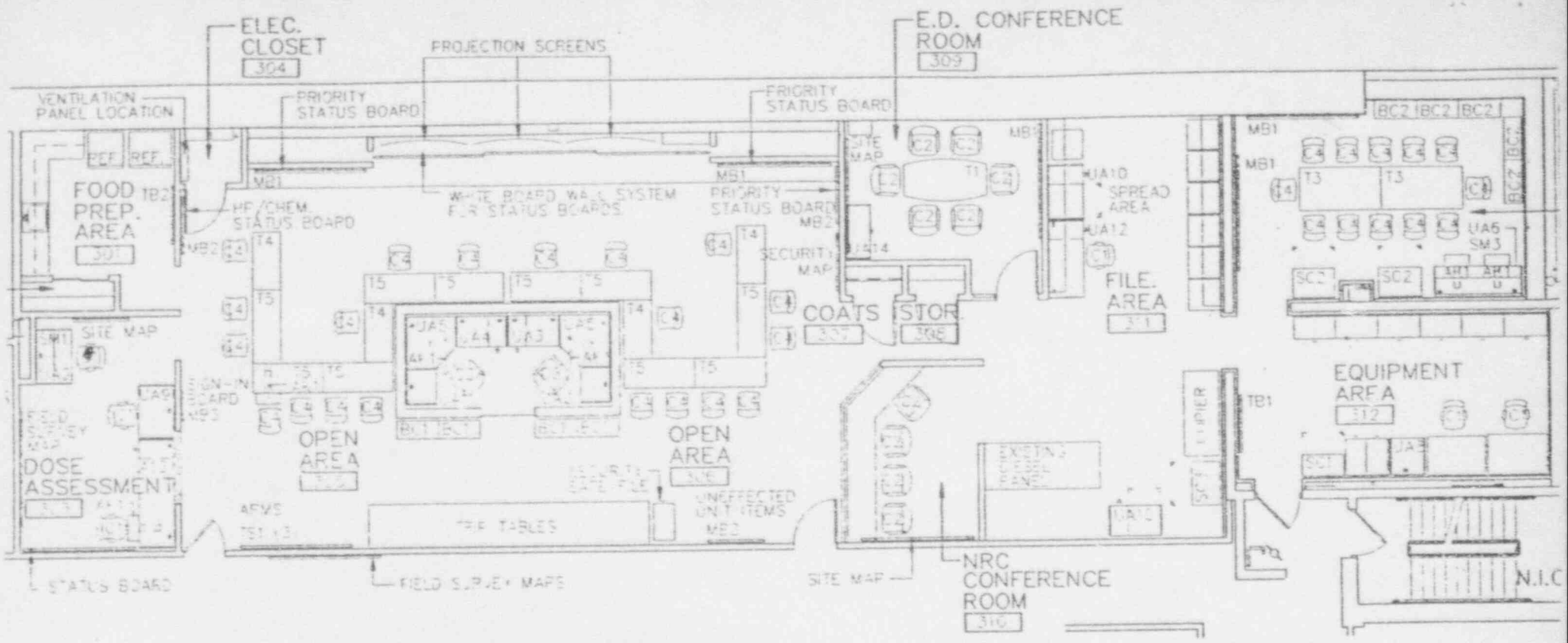
The licensee also assisted another utility (Duquesne Light Company) in hosting two conferences on January 28-29 and February 10-11, 1993 to discuss issues pertaining to the implementation of the EPA-400 PAG manual. The meetings were conducted with officials from the Commonwealth of Pennsylvania and the States of Maryland, Ohio, and West Virginia. Representatives from other utilities also attended.

The inspectors interviewed the Director of the Cecil County (Maryland) Emergency Management and Civil Defense Agency and the Director of the Lancaster County (Pennsylvania) Emergency Management Agency (EMA). Both directors indicated that they had an excellent working relationship with the PBAPS EP staff. They also noted that the quality of support in regards to siren maintenance and EAL training was excellent.

This program area was assessed as being effectively implemented.

3.0 Exit Meeting

The inspectors met with the licensee personnel denoted in Section 1 at the conclusion of the inspection to discuss the inspection scope and findings. The licensee acknowledged the findings and stated their intention to evaluate them for further action as appropriate. Additional discussions relative to the inspection were held with licensee staff by telephone on December 27, 1993, and January 19, 1994.



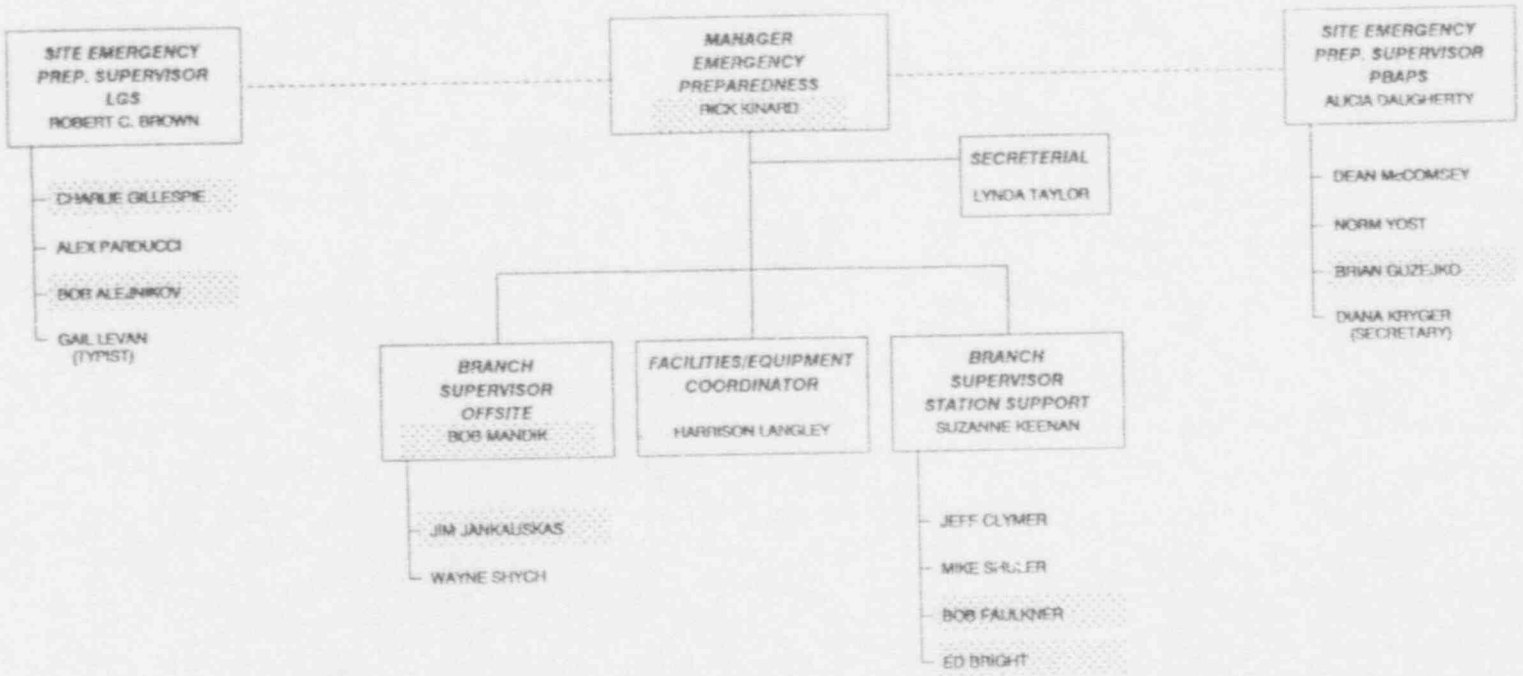
1 / F-1 FURNITURE LAYOUT PLAN – THIRD FLOOR

SCALE: 1/8" = 1'-0"

ATTACHMENT 1

EMERGENCY PREPAREDNESS

ORGANIZATION (LONG-TERM)



DIRECT REPORT - CHESTERBROOK

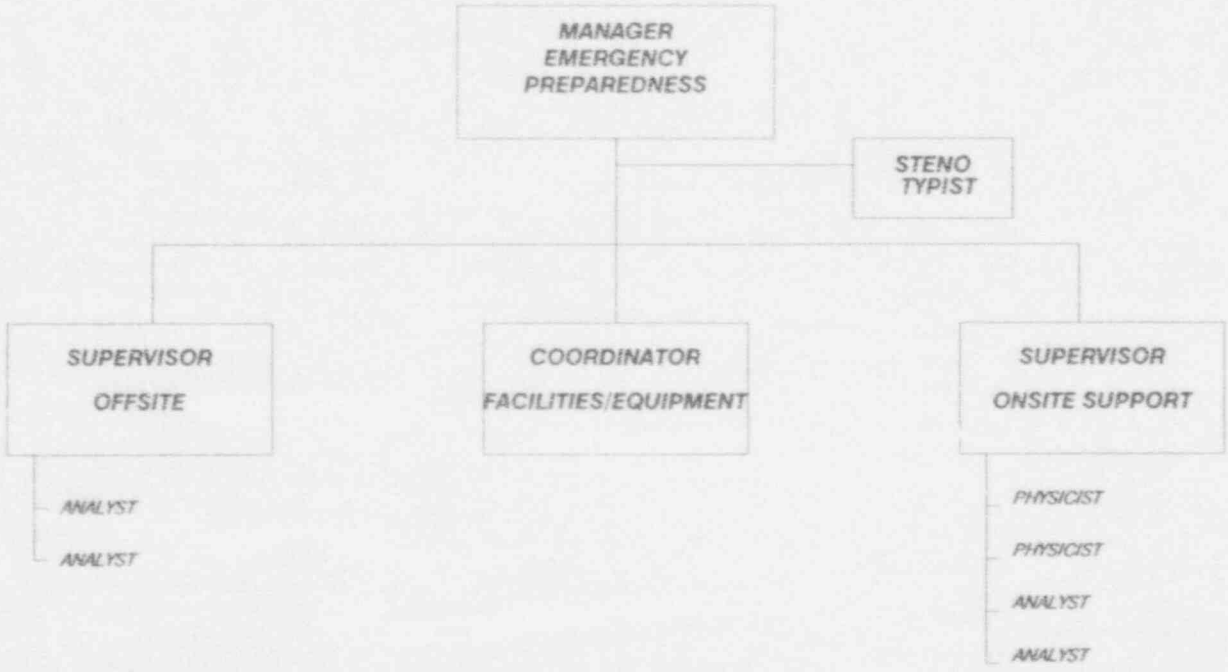
SITE EMERGENCY PREPAREDNESS

CHANGES

CB - 11 (127)
LGS - 5
PBAPS - 5
TOTAL - 21

ATTACHMENT 2

NUCLEAR SUPPORT
EMERGENCY PREPAREDNESS
ORGANIZATION



OFFSITE INTERFACE - STATES, COUNTIES, MUNICIPALITIES
OFFSITE TRAINING
OFFSITE PLANNING
MEDICAL PROGRAM CONTACT

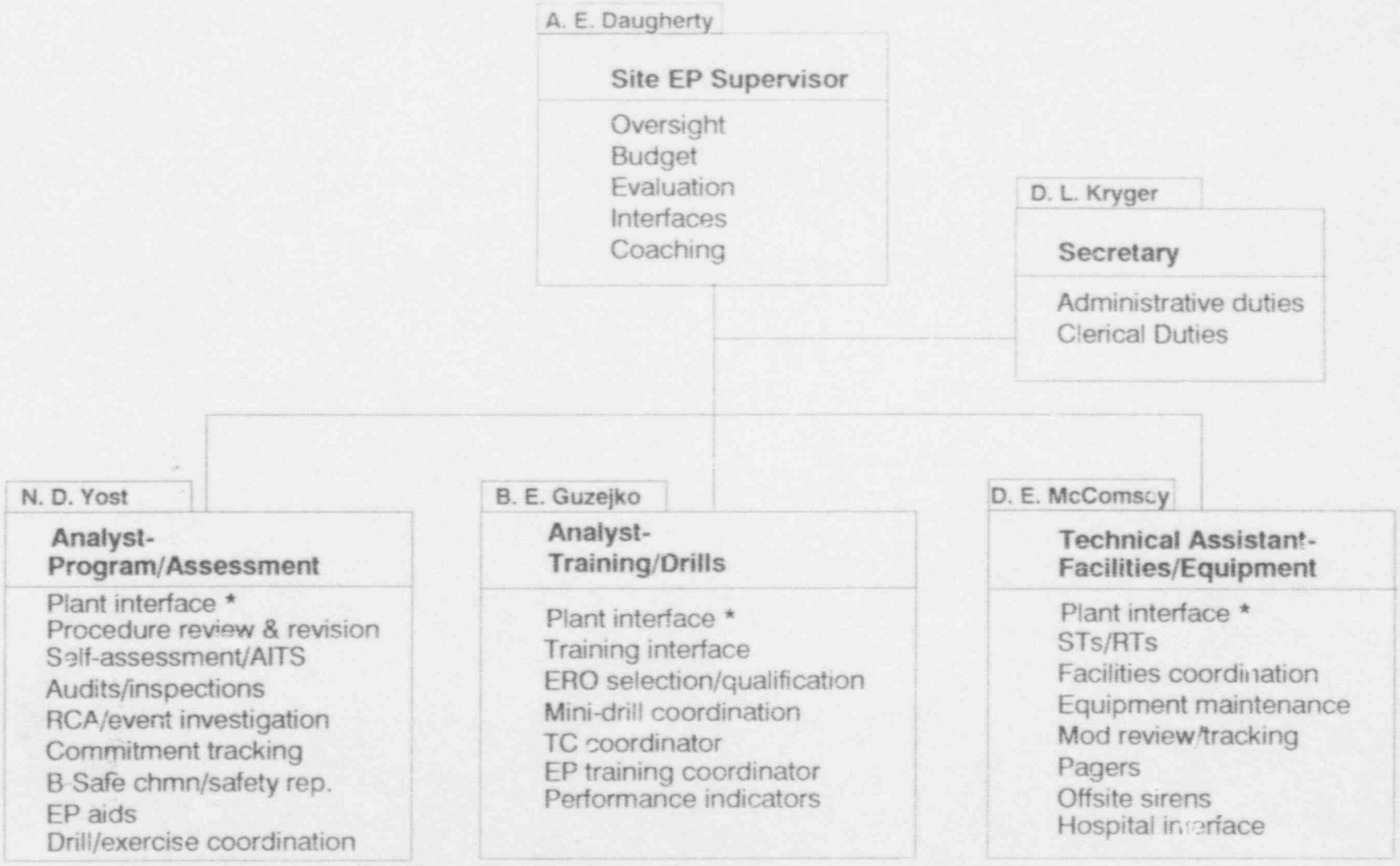
EOF FACILITY
SIRENS
PAGERS

DOSE MODEL AND DOSE ASSESSMENT
DRILLS/EXERCISES
EMERGENCY PLAN DEVELOPMENT AND MAINTENANCE
EOF PROCEDURE DEVELOPMENT AND MAINTENANCE
PERFORMANCE BASED TRAINING - EOF
ERO MANAGEMENT
SCENARIO DEVELOPMENT
SELF ASSESSMENT

ATTACHMENT 3

Site Emergency Preparedness Section

Functional Organization



* Interface with station technical groups as appropriate for background/expertise

ATTACHMENT 4