

PHILADELPHIA ELECTRIC COMPANY

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SHIELDS L. DALTROFF  
VICE PRESIDENT  
ELECTRIC PRODUCTION

January 28, 1985

Docket Nos: 50-352  
50-353

Mr. A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dr. T. E. Murley, Administrator  
Region I  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

SUBJECT: Limerick Generating Station, Units 1 and 2, Organizational Changes  
in the PECO Electric Production Department

REFERENCES: Letter from S. L. Daltroff to A. Schwencer, dated June 7, 1983

Dear Sirs:

The reference letter transmitted a proposed organization change in the PECO Electric Production Department to reflect the change in the Quality Control Program for the operations phase of Limerick Generating Station. Since submission of the reference letter, a Quality Control Section, as described, has been added to the Quality Assurance Division of the Electric Production Department. Other organizational changes have been made in the Electric Production Department, which include the addition of a Manager dedicated to Nuclear Production and a minor reorganization of the Maintenance Division.

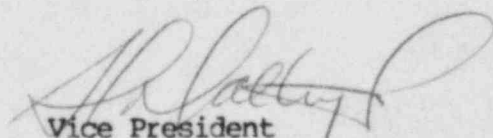
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RI

Attached are draft changes to FSAR Section 17.2, Figures 17.2-2, 3, 4, 5, & 15 and related 260 Series questions which describe the subject changes. These changes have been reviewed and it has been determined that the changes do not reduce the commitments in the QA Program previously approved by the NRC.

The information contained in this draft FSAR change will be incorporated, exactly as it appears on the attachment, in the FSAR revision scheduled for March 1985.

Sincerely,



Vice President  
Electric Production

Enclosure

cc: See Attached Service List

RBW/sh

cc: Judge Helen F. Hoyt	(w/o enclosure)
Judge Jerry Harbour	(w/o enclosure)
Judge Richard F. Cole	(w/o enclosure)
Troy B. Conner, Jr., Esq.	(w/o enclosure)
Ann P. Hodgdon, Esq.	(w/o enclosure)
Mr. Frank R. Romano	(w/o enclosure)
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Jay M. Gutierrez, Esq.	(w/o enclosure)
Atomic Safety & Licensing Appeal Board	(w/o enclosure)
Atomic Safety & Licensing Board Panel	(w/o enclosure)
Docket & Service Section	(w/o enclosure)
James Wiggins	(w/o enclosure)
Timothy R. S. Campbell	(w/o enclosure)

## LGS FSAR

Electric Company has the ultimate responsibility for the Quality Assurance Program for LGS.

The President delegates to the Vice President - Electric Production Department and the Vice President - Engineering and Research Department, the responsibilities for instituting and maintaining the Quality Assurance Programs. The Senior Vice President - Nuclear Power acts as the direct agent of executive management in implementing company policies relating to nuclear power and in ensuring their accomplishment.

### 17.2.1.2 Electric Production Department

The organization of the Electric Production (EP) Department is shown in Figure 17.2-2.

#### 17.2.1.2.1 Office of the Vice President - EP Department

*Manager - Fossil/Hydro*  
The Department is under the direction of the Vice President - Electric Production, assisted by the Manager - ~~Electric Nuclear~~ *Production and the* Production. They are responsible for the operation, maintenance and modification of the Company's electric generation facilities and establishment and implementation of Electric Production Department Quality Assurance Program, goals, and objectives.

The Electric Production Department is composed of ~~seven~~ *six* Divisions: Fossil/Hydro Generation, Quality Assurance, Services, ~~Steam Heating~~, Nuclear Generation, Maintenance, and System Operation.

The Electric Production Department is responsible for Quality Assurance in plant operation from the acceptance of each system from the Architect/Engineer (Start-up Phase) but at least 90 days prior to initiation of fuel loading, through the life of the plant. The Department is responsible for all phases of operation and maintenance. The Department is supplied procurement services, engineering design services, and other support functions from other Philadelphia Electric Company Departments. The Department is divided into functional units allowing centralization of expertise and economic operation.

## LGS FSAR

### 17.2.1.2.2 Nuclear Generation Division

The Nuclear Generation Division organization, duties and responsibilities are described in Section 13.1.

#### 17.2.1.2.2.1

The Station Organization, duties and responsibilities are described in Section 13.1.

### 17.2.1.2.3 Quality Assurance Division

The Quality Assurance Division (Figure 17.2-3) is responsible for the overall Quality Assurance Program of the Electric Production Department within the framework of corporate Quality Assurance Policy as set forth in the Introduction.

*Nuclear Production* → The Division is headed by a Superintendent who reports directly to the ~~Office of the Vice President of the Electric Production Manager, Department.~~ The Division is composed of ~~Site Engineers, Engineers, Technical Assistants, Junior Technical Assistants and QA Assistants who report to the Engineer-QA; Supervisors, Site Supervisors, Senior Auditors, Auditors, and Assistant Auditors both onsite and offsite, who report to the General Supervisor QA.~~ *four* Sections: Engineering, Audit, Quality Control and Training.

Qualifications for the position of Superintendent, QA Division, are established by the Vice President, Electric Production Department. At the time of appointment, the Superintendent shall have a bachelors degree or the equivalent in an engineering or science subject and shall have a minimum of 10 years of responsible administrative or operating experience in the Electric Production Department of which a minimum of 3 years shall be in the fields of power plant operation, safety, and/or quality assurance. A maximum of 4 years of the remaining 7 years of experience may be fulfilled by satisfactory completion of academic or related technical training on a one-for-one time basis. The Superintendent shall have a knowledge of QA regulations, policies, practices, and standards.

The education and experience requirements specified should not be treated as absolute, as Management retains the right to evaluate alternative experience and administrative training to qualify for this position.

17.2.1.2.3.1

The Superintendent, Quality Assurance Division has the following responsibilities and authorities:

- a. Formulate, develop, and establish Quality Assurance policy in the areas of operations, maintenance, modifications, in-service inspection, health physics and chemistry, radioactive waste/material, security, training, surveillance testing, procurement, audits, records, nonconformance and corrective action.
- b. Administration and coordination of the Operations Quality Assurance Program (OQA Program).
- c. Furnish overall direction for implementing the OQA Program.
- d. Review and approve Administrative procedures which implement the OQA Plan.
- e. Approve all Quality Assurance Division Procedures and Audit Instructions for the implementation of the OQA Plan.
- f. Determine the ongoing status and adequacy of the OQA Plan through regular review of the QA Division ~~Programs~~ <sup>Auditing and Quality</sup> identification and investigation of problem areas, and determination of timely and effective steps taken to correct deficiencies; and the evaluation of general plant QA performance through such other inputs as are available or are deemed necessary to make a reasonably objective and confident judgement.  
Control  
↓/QC
- g. Require reaudit for the purpose of verification of corrective action and problem resolution for items affecting quality.
- h. Direct immediate cessation of work when such work is considered by the Superintendent, Quality Assurance Division to be a serious quality degradation. This stop-work authority will be delineated in applicable procedures.

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- i. Initiate and recommend corrective action or provide solutions through designated channels.
- j. Apprise the <sup>Manager, Nuclear Production, and</sup> ~~Office of the Vice President of the~~ Electric Production Department periodically of the status of the Quality Assurance aspects of LGS operation and immediately of significant problems affecting quality.
- k. Control contents and revisions of the OQA Plan. |
- l. Assure that personnel involved in the implementation of the QA Division Procedures are trained and/or qualified.
- m. Contract for consulting services as necessary.  
QAI/QC
- n. To assess, through Quality Assurance Audits and Surveillances, the adequacy and effectiveness of procurement documents, modification and maintenance procedures. → and Quality Control Monitoring and Inspections,
- o. To approve Audit and Surveillance reports and noncompliance reports (NCR) and responses thereto.
- p. Delegate selected portions of the Quality Assurance Program during the operational phase to the Engineering and Research Department QA Section (e.g., major modifications, Evaluated Suppliers List, etc).

17.2.1.2.3.2

Engineering Section

The Engineering Section is under the direction of the Engineer-QA who reports to the Superintendent, QA.  
The Engineer-QA is responsible for the following:

- a. Prepare and maintain the OQA Plan and QA Division Procedures and ~~Audit~~ Instructions. |
- b. Implement and document the OQA Plan, programs and procedures as applicable. |
- c. Keep the Superintendent, Quality Assurance Division informed of status of Quality Assurance effort and of significant problem areas.

LGS FSAR

- d. Provide the technical direction of Quality Assurance activities of the Quality Assurance Division Engineering Staff.
- e. Maintain a liaison with the LGS Plant Staff, other PECO organizations, and outside companies in order to advise and direct quality assurance activities during plant operations and maintenance.
- f. Control the distribution of the OQA Plan and revisions thereto.
- g. Review the OQA Plan and the QA Division Procedures and Instructions Manual to determine if revisions are required.
- h. Maintain a controlled filing system (Nuclear Records Management System) of documentation of activities pertaining to the QA Division's implementation of the OQA Plan.
- i. Maintain current codes, standards and regulations pertaining to the OQA Program.
- j. Keep the Superintendent, Quality Assurance Division advised on the status of regulations, codes and standards which may effect the content of the OQA Plan.
- k. Review audit and surveillance reports.
- l. Ensure, in conjunction with the <sup>General Supervisor - QC and</sup> General Supervisor - QA, that deficient areas which require corrective action, identified in audits ~~and~~ surveillances, are included in re-audits, ~~or~~ surveillances, <sup>monitoring</sup> or inspections, as appropriate. <sub>monitoring or inspections</sub>
- m. Review procurement documents initiated by Electric Production Department organizations for safety-related equipment and services to ensure that adequate quality requirements are included.

move to 17.2.1.2.3.4.2.i

17.2.1.2.3.3

QA Engineering Section Staff



The Engineering <sup>section</sup> Staff ~~and site engineers shall be~~, under the direction of the Engineer-QA, <sup>shall provide</sup> to accomplish the technical and administrative requirements of the QA Division as assigned. <sub>support</sub>

17.2.1.2.3.4

<sup>Audit Section</sup>  
The Audit Section is under the direction of the General Supervisor-QA, who reports to the Superintendent, QA. The General Supervisor-QA has the following responsibilities:

- a. Provide administrative supervision and technical direction of the activities of the Quality Assurance Division ~~auditing personnel.~~  
<sub>Audit Section</sub>
- b. Direct the performance of audits and surveillances in accordance with written procedures to ensure compliance with the OQA Plan.
- c. Oversee the preparation of Quality Assurance audit check lists.
- d. Consult with the Superintendent, Quality Assurance <sup>General Supervisor-QA,</sup> and Engineer - QA on significant problems affecting quality.
- e. Review and approve auditing program reports.
- f. Keep the Engineer-QA advised of deficient areas identified by the auditing program.
- g. Assure that items requiring corrective action, identified by the auditing program, are included in rescheduled audits and surveillances.
- h. Schedule and direct the planning of auditing program to ensure compliance with the OQA Plan.
- i. Recommend to the Superintendent, Quality Assurance, the issuance of Noncompliance Reports as a result of reviews of the QA Division auditing program and other activities.

17.2.1.2.3.5

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LGS FSAR  
Audit Section Staff

Under the ~~technical~~ direction <sup>of</sup> ~~and the administrative supervision~~ <sup>of Site or Corporate Audit</sup>  
~~of the General Supervisor QA, the Auditor QA has the~~ <sup>Supervisor</sup>  
responsibility to: <sup>↳ Audit Section Staff</sup>

- a. Conduct the auditing program in accordance with the QA Division Procedures and Instructions Manual to ensure compliance with the OQA Plan.
- b. Provide continuing awareness of plant conditions and status of daily on-site activities in order to inform the ~~General Supervisor QA~~ <sup>↳ Site or Corporate Audit</sup> of plant activities affecting quality.
- c. Prepare audit and surveillance checklists and reports.
- d. Identify problems adverse to quality through the auditing program and notify management of the audited organization in accordance with applicable procedures.
- e. Initiate or recommend corrective action through designated channels.
- f. Verify implementation of corrective action of problems adverse to quality.
- g. Verify compliance with quality related procedures and instructions.
- h. <sup>Site or Corporate Audit Supervisor</sup> Keep the ~~General Supervisor QA~~ advised of status of the Quality Assurance Program through the QA Division auditing program.
- i. Conduct independent Hydro and Fossil Plant audits for operations and maintenance activities affecting quality and reliability as required by the departmental or divisional management.

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~~17.2.1.2.3.6~~

~~Under the administration of the General Supervisor QA the Site and Corporate Supervisors have the following responsibilities: Supervise and perform the functions required for the preparation, conduct, and reporting of audits and surveillances of Limerick~~

~~activities as required by regulations, company policies, and QA Division procedures.~~ |

#### 17.2.1.2.4 Services Division

The Services Division is under the supervision of a ~~Superintendent who reports to the Office of the Vice President~~ <sup>Manager, Fossil/</sup> ~~Electric~~ <sup>Hydro</sup> Production. The Division is composed of the Chemistry Section, the Costs Section, and the Computer Applications Section, and has responsibility for administrative and ~~production~~ engineering support <sup>to</sup> for the Electric Production Department.

##### 17.2.1.2.4.1

The Chemistry Section, under the direction of the Chief Chemist, who reports to the Superintendent, Services Division, is responsible for assisting the plant staff in the performance of routine and special tests of a chemical nature.

##### 17.2.1.2.4.2

The Costs Section under the direction of the Engineer-in-Charge, who reports to the Superintendent, Services Division, is responsible for the function of Electric Production Department budgeting, cost analysis, and interconnection accounting. Economic analysis of overall system operation is also a function of this Section. |

##### 17.2.1.2.4.3

The Computer Applications Section is under the Supervision of an Engineer-in-Charge, who reports to the Superintendent, Services Division. The section is responsible for maintenance and improvement of existing computer installations within the Electric Production Department and software design of new installations. |

#### 17.2.1.2.5 Maintenance Division

The Maintenance Division (Figure 17.2-4), under the <sup>supervision of a</sup> ~~Superintendent who reports to the Office of the Vice President~~ <sup>Manager, Fossil/</sup> ~~Electric~~ <sup>Hydro</sup> Production, is responsible for the Maintenance activities at all generating stations, <sup>and</sup> steam plants, and certain <sup>heating</sup> ~~substations~~. The Division is composed of ~~a staff engineer and~~ five sections: Station, Mechanical, Electrical, Engineering, and

Administrative. Maintenance activities at LGS are performed under the cognizance of the LGS Engineer Maintenance and a Maintenance Division Supervising Engineer Maintenance assigned to the site.

17.2.1.2.5.1

→ INSERT 3

The Station Section, under its Superintendent, is made up of Area Groups each of which is under a Supervisor who is responsible for the coordination of work and labor usage within his area.

A Maintenance group, under an Area Supervisor, is assigned to the Limerick Generating Station. This group consists of sufficient qualified craftsmen and supervision as necessary to carry out routine maintenance functions at the station.

The Maintenance Foremen, at the Limerick Generating Station, report to an Area Supervisor and are responsible for planning and supervising maintenance programs which are originated through the Engineer-Maintenance and supervise assigned work.

17.2.1.2.5.2

The interface between station maintenance forces, the operating staff and Maintenance headquarters is shown in Figure 17.2-5.

17.2.1.2.5.3

The Mechanical Section and the Electrical Section, each under a Superintendent, consist of the Mobile Groups, Planning Group, and Electrical Groups. These Maintenance forces, made up of supervisors and craftsmen, are administratively headquartered at the Maintenance Division central repair shop and are available for major outage or emergency work at any of the Company facilities including Limerick Generating Station. The central repair shop has facilities for fabricating components for use at LGS and inspecting or repairing components which are shipped from the site.

17.2.1.2.5.4

The Engineering Section, under the supervision of the Engineer-in-Charge, is located at Maintenance Division Headquarters and reports to the Superintendent, Maintenance Division. This Section is administratively independent from plant operations and

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LGS FSAR

Station maintenance and is responsible for the performance of QC inspections of quality-related maintenance activities and, as delineated in applicable procedures, may stop any maintenance work which judges is being conducted so as to be a serious quality degradation. The QC personnel will be qualified in accordance with Regulatory Guide 1.58 as described in Appendix 17.2A.II. Inspection personnel have sufficient authority and organizational freedom in order to: Identify quality problems; recommend corrective action through designated channels; and verify implementation of corrective action. One or more members of the Section shall be designated to provide technical assistance and engineering support to LGS Maintenance personnel.

17.2.1.2.5.4.1

The In-service Inspection Group is responsible for directing, controlling, and coordinating NDE activities performed in accordance with the ASME B&PV Code, Section XI.

This group is also responsible for performing nondestructive testing and has primary responsibility for QC inspection within the Maintenance Division. This group is administratively independent from cost and scheduling.

The In-service Inspection Group shall review Maintenance and Inspection Procedures for the need for inspection, identification of inspection personnel required, and documentation of inspection results and that the necessary inspection requirements, methods, and acceptance criteria have been identified.

The QC Inspectors are permanently assigned to the In-service Inspection Group and are experienced in various disciplines (e.g. electrical, mechanical, structural, etc). If additional QC personnel are needed, qualified personnel can be assigned from the Nuclear Branch of the Engineering Section. These temporarily assigned personnel shall report to the In-service Inspection Group.

17.2.1.2.5.4.2

The Nuclear Branch provides technical assistance when necessary to all sections of the Maintenance Division. This group also is responsible for writing maintenance procedures and establishing QC inspection hold points.

When necessary, personnel in this group can be used as QC Inspectors. When used as QC Inspectors, such personnel shall be temporarily assigned to the In-service Inspection Group.

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LGS FSAR

~~17.2.1.2.5.5~~

~~The Administrative Section under direction of the Administrative Supervisor consists of the Training and Testing Group, the Clerical Group, and the Safety Group.~~

- ~~a. The Safety Group, under the direction of a Foreman, who reports to the Administrative Assistant, is responsible for the administration of industrial safety, multi-media first aid, cardio-pulmonary resuscitation classes, and the maintenance of safe working conditions and practices for all Maintenance Division employees.~~
- ~~b. The Training and Testing Group, under the direction of a Foreman, who reports to the Administrative Supervisor, provides for training of Helpers and Craftsmen and qualification of Craftsmen in the various crafts. The training is followed by the administration of qualifying examinations. The knowledge and skills required on these tests is typical of the work to be performed by the various Craftsmen.~~

17.2.1.2.6 Fossil/Hydro Generation Division

*Fossil/Hydro* The Fossil/Hydro Generation Division is under the direction of a Superintendent, who reports to the ~~Office of the Vice President, Manager,~~ *Electric Production*. The Fossil-Hydro Generation Division is comprised of Fossil-Hydro Generating Stations and Fossil Services. Fossil Services is under the direction of a Superintendent, who reports to the Superintendent of the Fossil-Hydro Generation Division, and is composed of four sections: Performance, Training, Methods, and Fuels. *, Steam Heat,*

17.2.1.2.6.1

The Training Section, under the supervision of a Superintendent, who reports to the Superintendent, Fossil Services, is responsible for preparing and conducting various training programs in fossil-hydro operations and supports the Nuclear Training Section. In addition, the Training Section administers the PECO qualifying examination program for personnel of the Generation Divisions, as appropriate.

17.2.1.2.6.2

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Under the administration of the General Supervisor-QA, the Site and Corporate Audit Supervisors have the following responsibilities: Supervise and perform the preparation, conduct, and reporting of audits and surveillances of Limerick Generating Station activities as required by regulations, Company policies, and QA Division procedures.

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#### 17.2.1.2.8.4 Quality Control Section

The Quality Control Section is under the direction of the General Supervisor-QC, who reports to the Superintendent, Quality Assurance.

The General Supervisor-QC has the following responsibilities:

- a. Providing administrative supervision and technical direction for the activities of the Quality Assurance Division QC Inspection personnel.
- b. Overseeing the inspection activities and monitoring program in the area of receipt inspection, radwaste packaging and handling, Maintenance Division activities, Health Physics and plant operations, Housekeeping, etc.
- c. Consulting with the Superintendent, Quality Assurance Division, Engineer-QA, and General Supervisor-QA when significant problems affecting quality are identified.

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- d. Overview of the QC monitoring and inspection activities, schedules, and results.
- e. Overall planning for the preparation of Quality Control Instructions (QCIs)
- f. Review of appropriate Maintenance procedures, Health Physics procedures and Startup Test Procedures for implementation of QC Witness and Verification Points.
- g. Assuring that the personnel involved in the implementation of the QC Inspection Activities are trained and qualified.
- h. Assuring that items requiring corrective action identified in monitoring or inspection activities are included in rescheduled monitoring, inspections, audits or surveillances, as appropriate.
- i. Recommending to the Superintendent, Quality Assurance Division, the issuance of Noncompliance Reports (NCRs) as a result of the QC Monitoring and Inspection Programs.
- j. Review procurement documents initiated by the Electric Production Department Organizations for safety-related items and services to ensure that adequate quality requirements are included.

17.2.1.2.3.4.1 Site QC Supervisor

Under the administration of the General Supervisor-QC, the Site QC Supervisor has the following responsibilities: supervise and perform the preparation, conduct and reporting of QC Inspections and Monitoring of Plant Activities as required by regulations, Company policies and QA Division Procedures.

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17.2.1.2.8.4.2 QC Staff

Under the direction of the Site QC Supervisor, the QC Staff (QC Engineers and Inspectors), are responsible for:

- a. Receipt inspection for safety-related items and services procured by the Electric Production Department.
- b. QC inspection and monitoring of radwaste handling, packaging, and shipping.
- c. QC inspection of safety-related equipment maintenance.
- d. QC inspection and monitoring of refueling operations.
- e. QC inspection of minor modifications performed by the Electric Production Department.
- f. As appropriate, QC inspection and monitoring of lifting and handling of heavy loads and safety-related components.
- g. Monitoring of day-to-day activities of plant operations.
- h. Receipt inspection of new fuel.
- i. insert from 17.2.1.2.3.2.m

17.2.1.2.8.5 QA Training Section

The Training Section is under the direction of the Training Coordinator who reports to the Superintendent, Quality Assurance Division. The Training Coordinator has the following responsibilities:

- a. Developing and maintaining a Quality Assurance

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indoctrination and training program for the various employee position levels within the Electric Production Department.

- b. Developing and maintaining a Quality Assurance Training Program for qualifying, certifying, and requalifying QA Division personnel including: QA Engineers, QA Auditors, QA Assistants, QC Engineers, QC Inspectors, and QC Technicians.
- c. Develop QA/QC training programs for QA Division functional areas of responsibility.

- d. Evaluating training requirements for QA/QC personnel and preparing training program outlines, courses, and modules.
- e. Evaluating proposed courses, seminars, and training alternatives against training programs to assure that training offered will meet the training objectives.
- f. Develop, document, and maintain QA training records for QA Division personnel as necessary to meet QA program commitments.

Insert (3)

The Station Section, under the direction of the Superintendent, consists of qualified craftsmen, supervision and technical personnel to carry out maintenance functions at the generating stations.

A Maintenance Group, under a Supervisory Engineer and a Maintenance Supervisor, is assigned to the Limerick Generating Station. This group consists of qualified craftsmen and supervision as necessary

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to carry out routine maintenance functions at the station.

The Maintenance Foremen, at LGS, report to the Maintenance Supervisor and are responsible for planning and supervising maintenance programs which are originated through the LGS Maintenance Engineer.

The Technical Support Group at Limerick Generating Station is under the supervision of an Engineer-Supervisory. This group is responsible for technical support of quality assurance related Maintenance activities. One or more members of this group shall be designated to provide technical assistance and engineering support to Limerick Generating Station Maintenance personnel.

The interface between station maintenance forces, the operating staff and maintenance headquarters is shown in Exhibit VI.

#### 17.2.1.2.5.2 Electrical Section

The Electrical Section, under the direction of a Superintendent, is responsible for the inspection and maintenance of electrical equipment and components. The Electrical Section performs the above functions, as necessary, to support the Limerick Maintenance Group.

#### 17.2.1.2.5.8 Mechanical Section

The Mechanical Section, under the direction of a Superintendent, consists of qualified craftsmen and supervision who support maintenance functions at LGS. The Mechanical Section is divided into seven groups: Mobile Turbine Group, Mobile Boiler Group, Service Group, Oregon Shop, Balance Group, Inservice Inspection (ISI) Group, and the Technical Support Group.

(cont)

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These groups are responsible to a supervisor or a supervising engineer who is responsible to the superintendent. The organization and interface between these groups is shown on Exhibit V.

17.2.1.2.5.3.1 Mobile Turbine Group

The Mobile Turbine Group is under the supervision of a foreman. This group consists of sufficient and qualified craftsmen and supervision to perform maintenance on turbine equipment.

17.2.1.2.5.3.2 Mobile Boiler Group

The Mobile Boiler Group is under the supervision of a foreman. This group consists of sufficient and qualified craftsmen and supervision to perform maintenance on auxiliary boilers and various iron-work projects.

17.2.1.2.5.3.3 Service Group

The Service Group is under the supervision of a foreman. This group consists of sufficient and qualified craftsmen and supervision to perform maintenance service to support other maintenance activities. This service consists of, but is not limited to, scaffold erection and disassembly, insulation removal, and re-insulation.

17.2.1.2.5.3.4 Oregon Shop

The Oregon Shop is under the supervision of a foreman. This group consists of sufficient and qualified craftsmen and supervision to perform off-site machine shop fabrications and repairs.

17.2.1.2.5.3.5 Balance Group

The Balance Group is under the supervision of a foreman. This group consists of sufficient and qualified craftsmen and supervision to

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perform vibration analysis and determine the requirements for balancing rotating equipment.

17.2.1.2.5.3.6 Inservice Inspection Group

The Inservice Inspection Group is under the supervision of an Engineer-Supervisory. This group consists of sufficient and qualified craftsmen and supervision who are responsible for directing, controlling, and coordinating NDE activities performed in accordance with the ASME B&PV Code, Section XI. All NDE inspectors are qualified to ASNT-TC-1A as specified in Section 17.2A.9. There is also an assistant foreman and a sub-foreman under the supervision of the Engineer-Supervisory, who have the responsibility for crane inspections.

17.2.1.2.5.3.7 Technical Support Group

The Technical Support Group is under the supervision of an Engineer-Supervisory. This group provides technical and engineering support to the other groups in the Mechanical Section.

17.2.1.2.5.4 Engineering Section

The Engineering Section, under the supervision of a Senior Engineer, who reports to the Superintendent, Maintenance Division, is located at Maintenance Division Headquarters. This Section is administratively independent from plant operations and station maintenance and is responsible for administrative support to the Maintenance Division. This consists of, but is not limited to, Maintenance Administrative Procedure and Standard Work Instruction development, review, and distribution. The Engineering Section shall review Maintenance and Inspection Procedures for the need for inspection, identification of inspection personnel required, and documentation of inspection results and that the necessary inspection ~~is~~ (cont)

Insert ③ (cont)  
have been identified.

17.2.1.2.5.5 Administrative Section

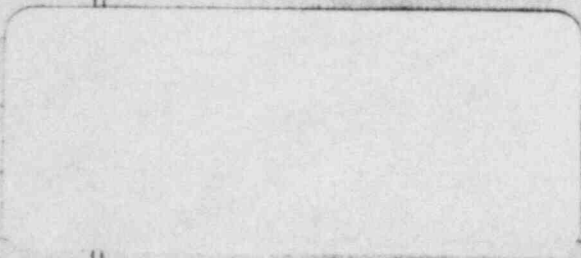
The Administrative Section under the direction of a Supervisor consists of the Safety Group, the Training and Testing Group, and the Clerical Group.

The Safety Group is responsible for the administration of the safety program, and the maintenance of safe working conditions for all Maintenance Division employees.

The Training and Testing Group, provides for the training of Helpers and Craftsmen and qualification of Craftsmen in the various crafts.

The Clerical Group supports the maintenance functions.

requirements, methods, and acceptance criteria



OFFICE OF  
VICE PRESIDENT  
MANAGER

ADMINISTRATIVE  
ASSISTANT

FOSSIL-HYDRO  
GENERATION DIVISION  
Superintendent

SYSTEM  
OPERATION  
DIVISION  
Superintendent  
Ass't Superintendent

QUALITY ASSURANCE  
DIVISION  
Superintendent

STEAM  
HEATING  
DIVISION  
Superintendent

Station	Superintendent	Ass't Superintendent
CONOWINGO		
CROMBY/ BARBADOS		
DECLARRE		
EDDYSTONE		
RICHMOND		
SCHUYLKILL		
SOUTHWARD/ CHESTER		

FOSSIL SERVICES  
Superintendent

PERFORMANCE  
SECTION  
Engineer in Charge

TRAINING  
SECTION  
Superintendent

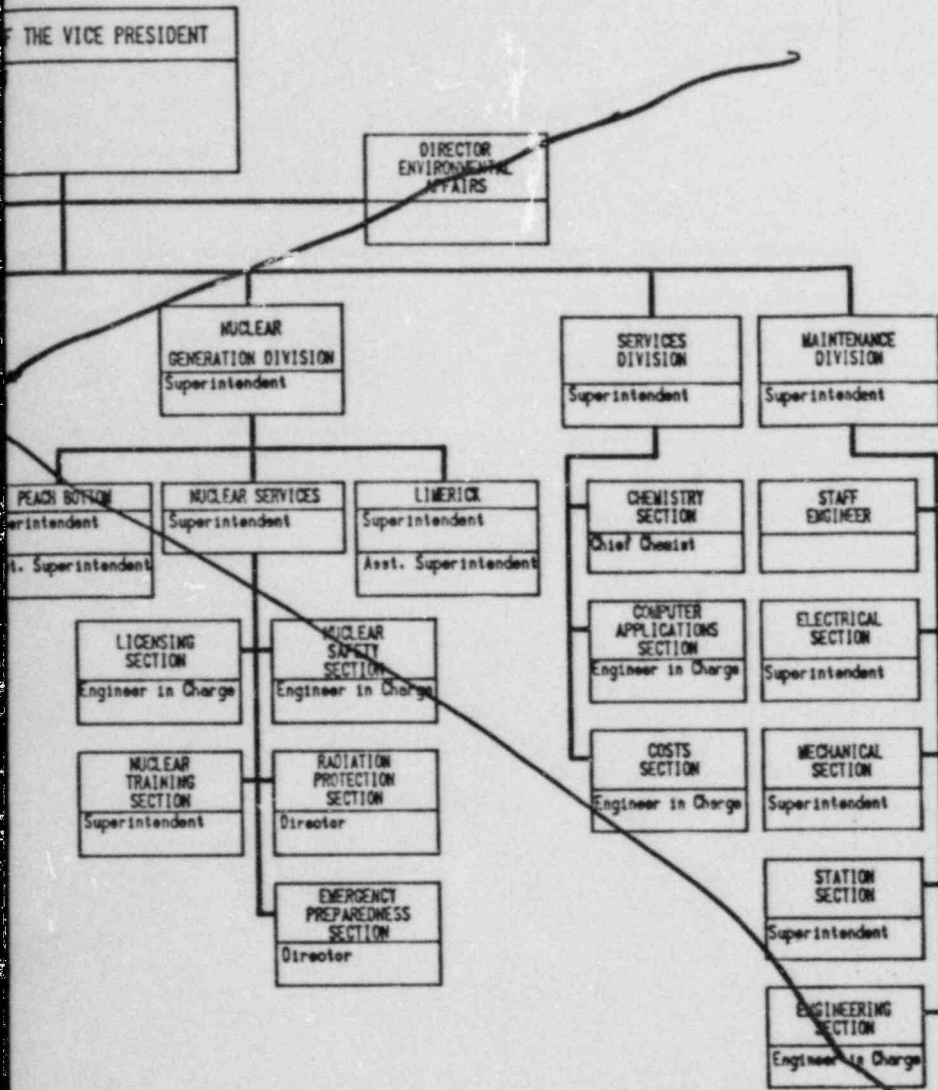
METHODS  
SECTION  
Superintendent

FUELS  
SECTION  
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Also Available On  
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LIMERICK GENERATING STATION  
UNITS 1 AND 2  
FINAL SAFETY ANALYSIS REPORT

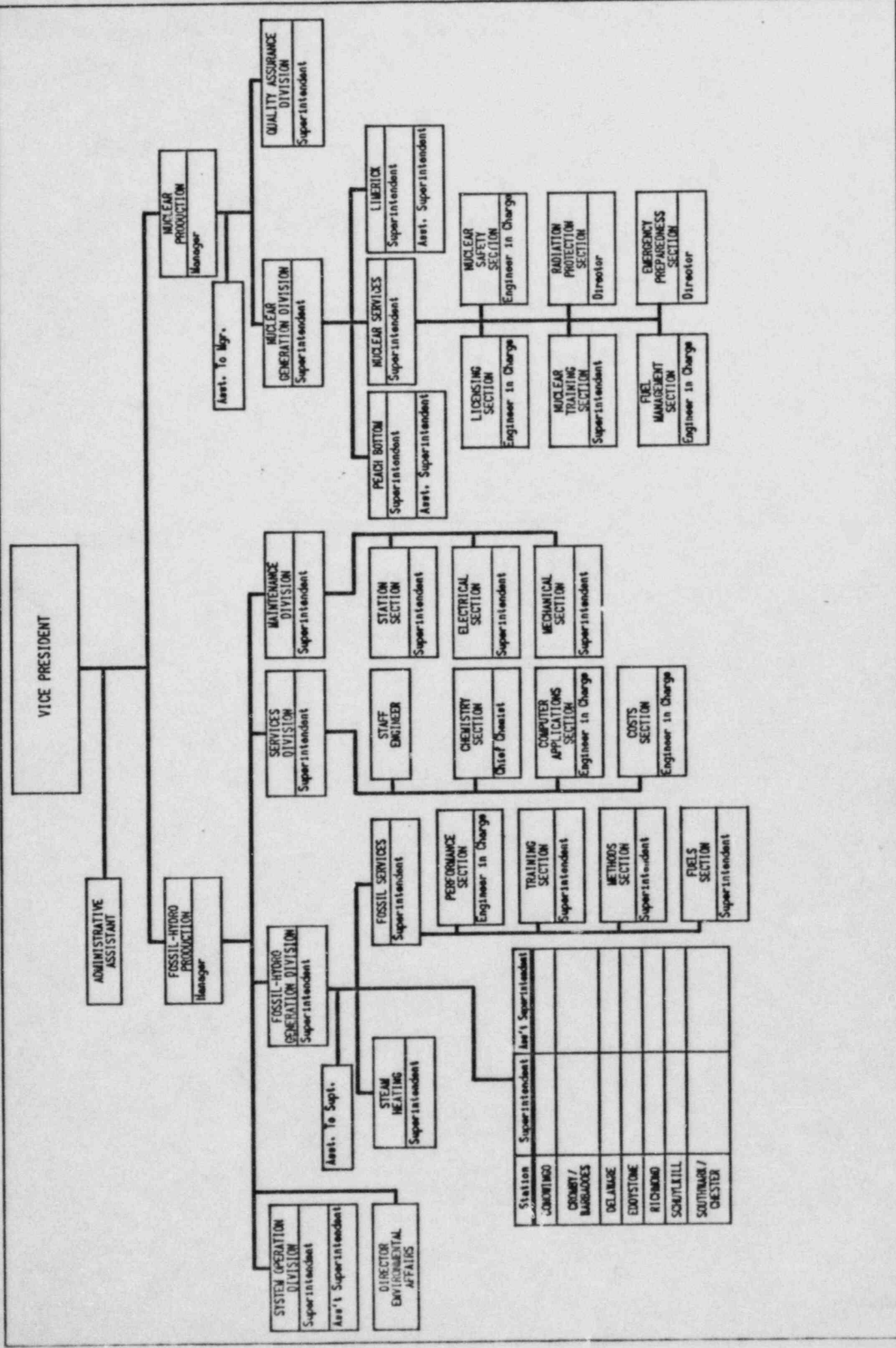
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PRODUCTION DEPARTMENT

FIGURE 17.2-2 REV. 21, 06/83

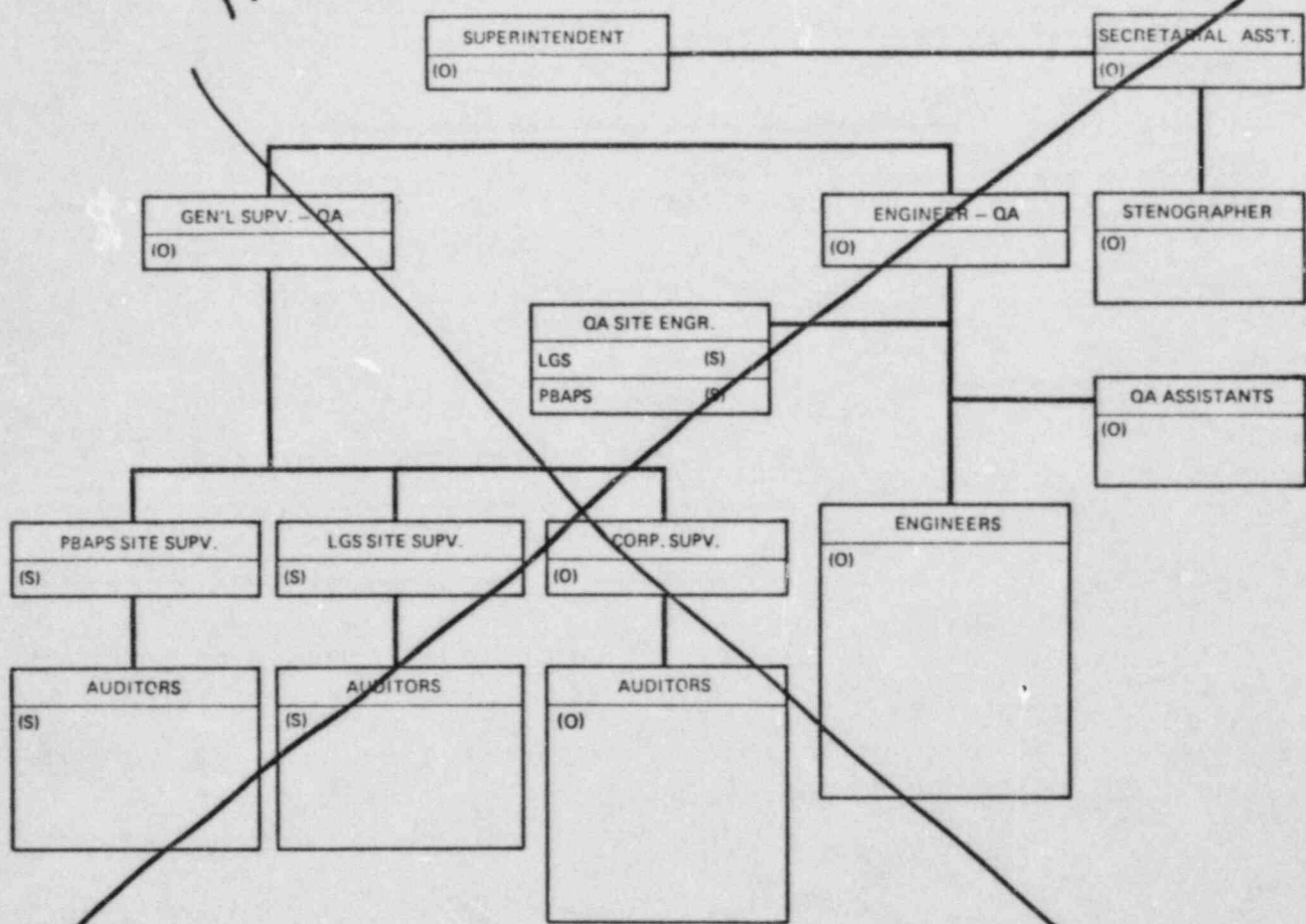
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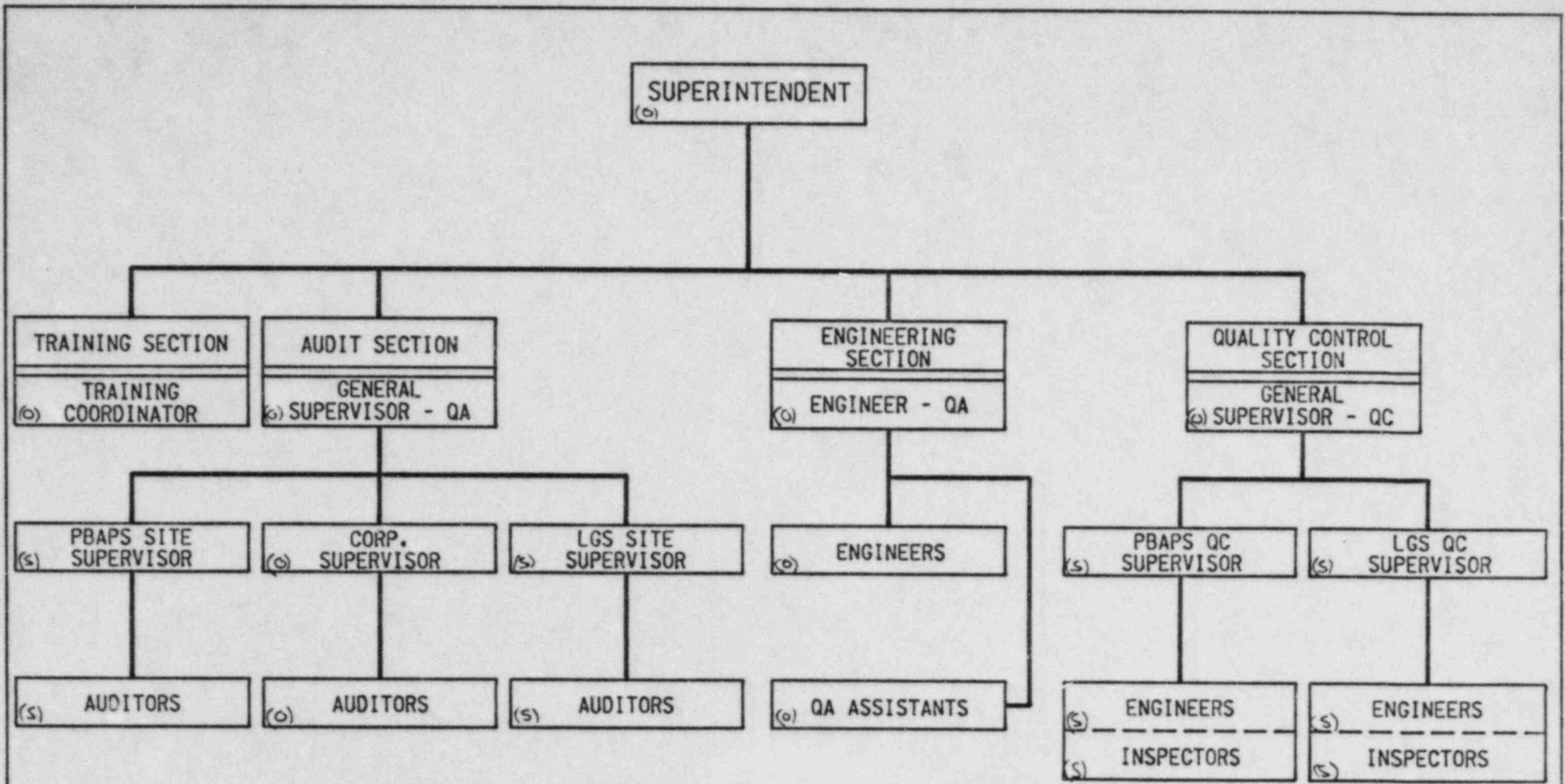
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LIMERICK GENERATING STATION  
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QUALITY ASSURANCE DIVISION  
ELECTRIC PRODUCTION DEPARTMENT

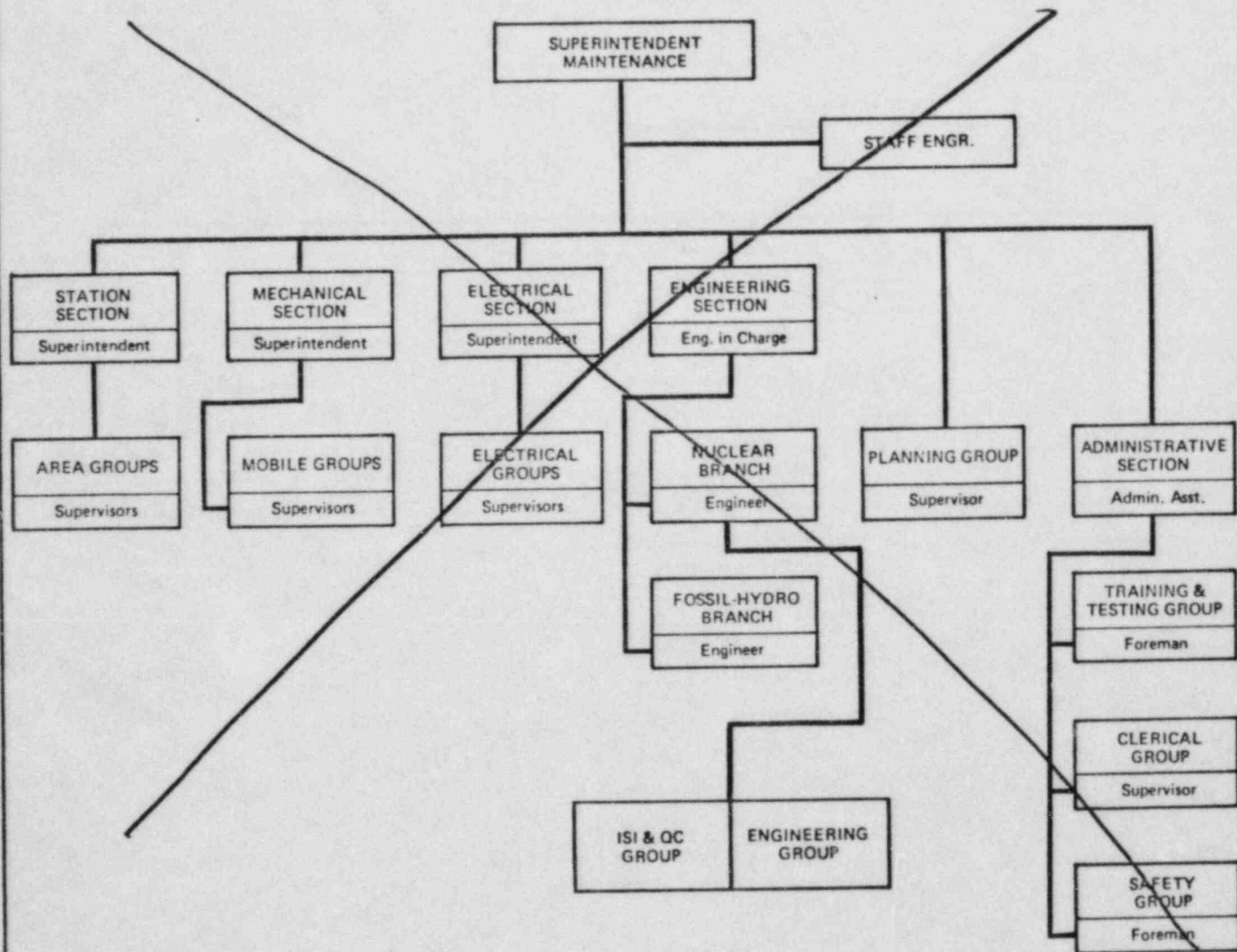
FIGURE 17.2-3 REV. 17, 02/83

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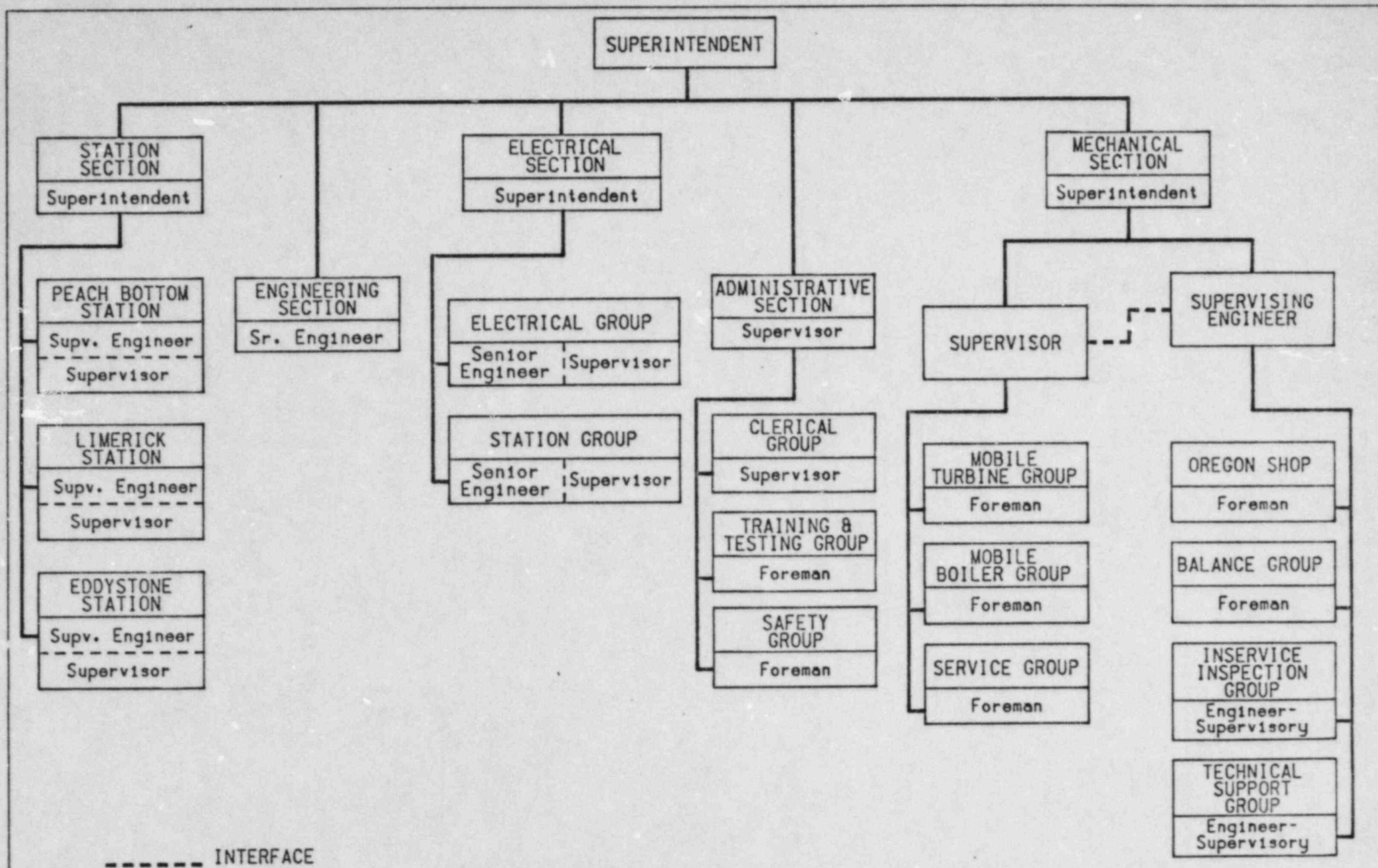
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UNITS 1 AND 2  
FINAL SAFETY ANALYSIS REPORT

MAINTENANCE DIVISION  
ELECTRIC PRODUCTION DEPARTMENT

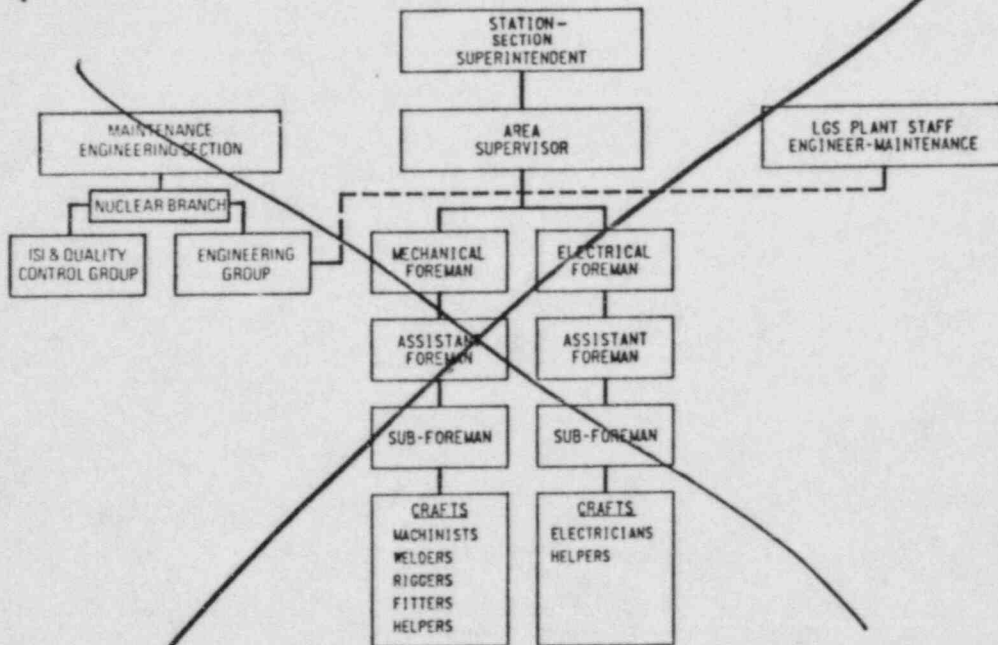
FIGURE 17.24

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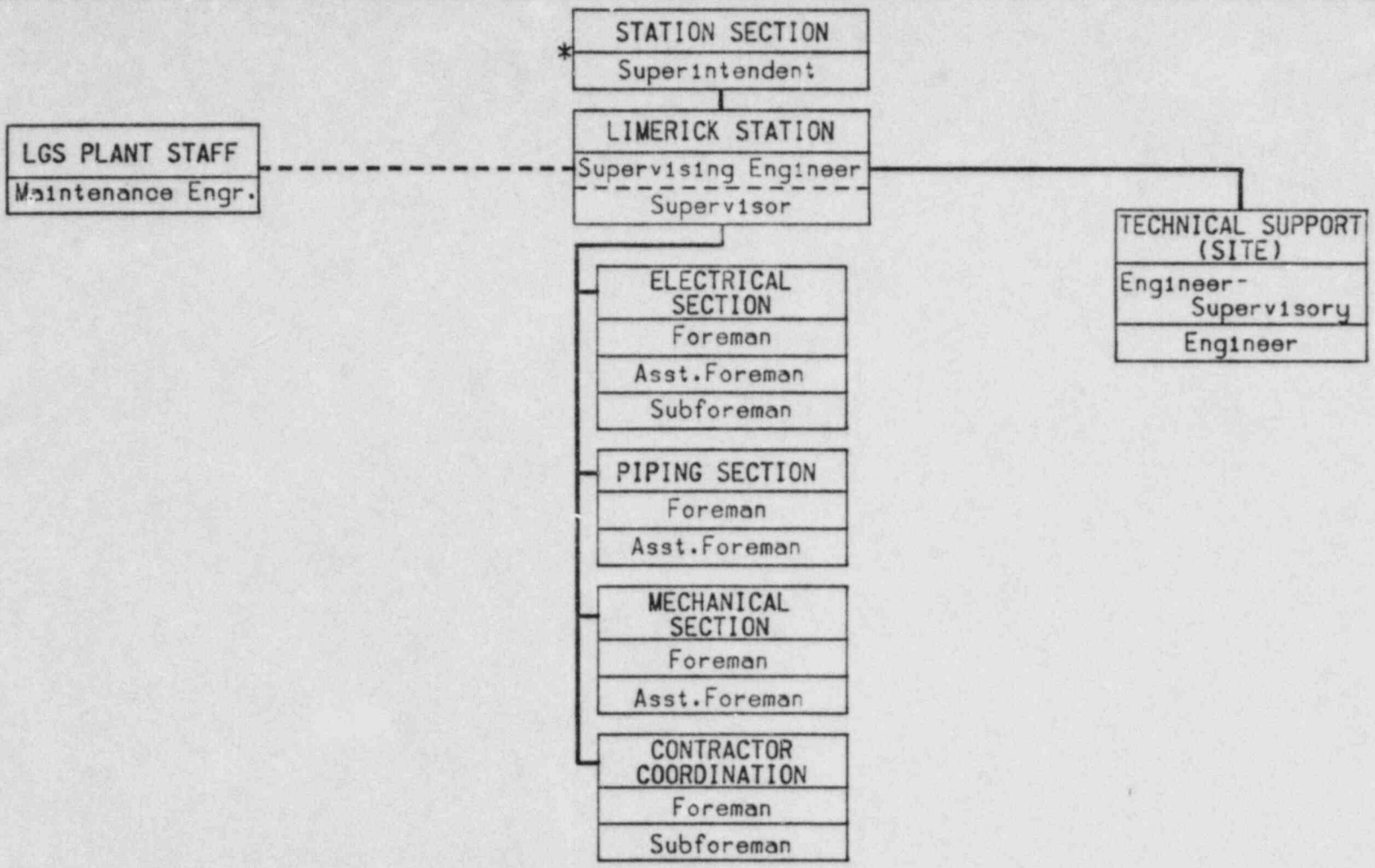
LIMERICK GENERATING STATION  
UNITS 1 AND 2  
FINAL SAFETY ANALYSIS REPORT

LIMERICK MAINTENANCE GROUP  
MAINTENANCE DIVISION  
ELECTRIC PRODUCTION DEPARTMENT

FIGURE 17.2-5

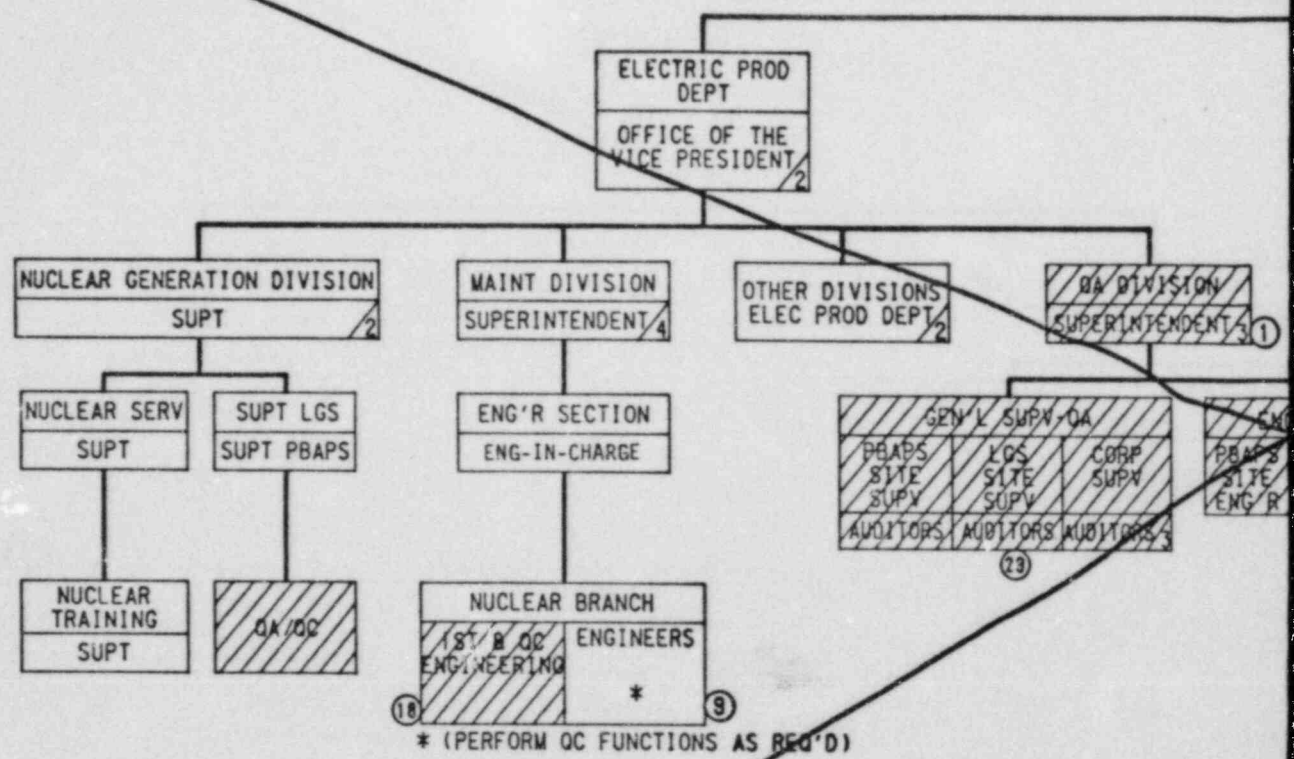
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OPERATIONS AND MINOR MODIFICATIONS

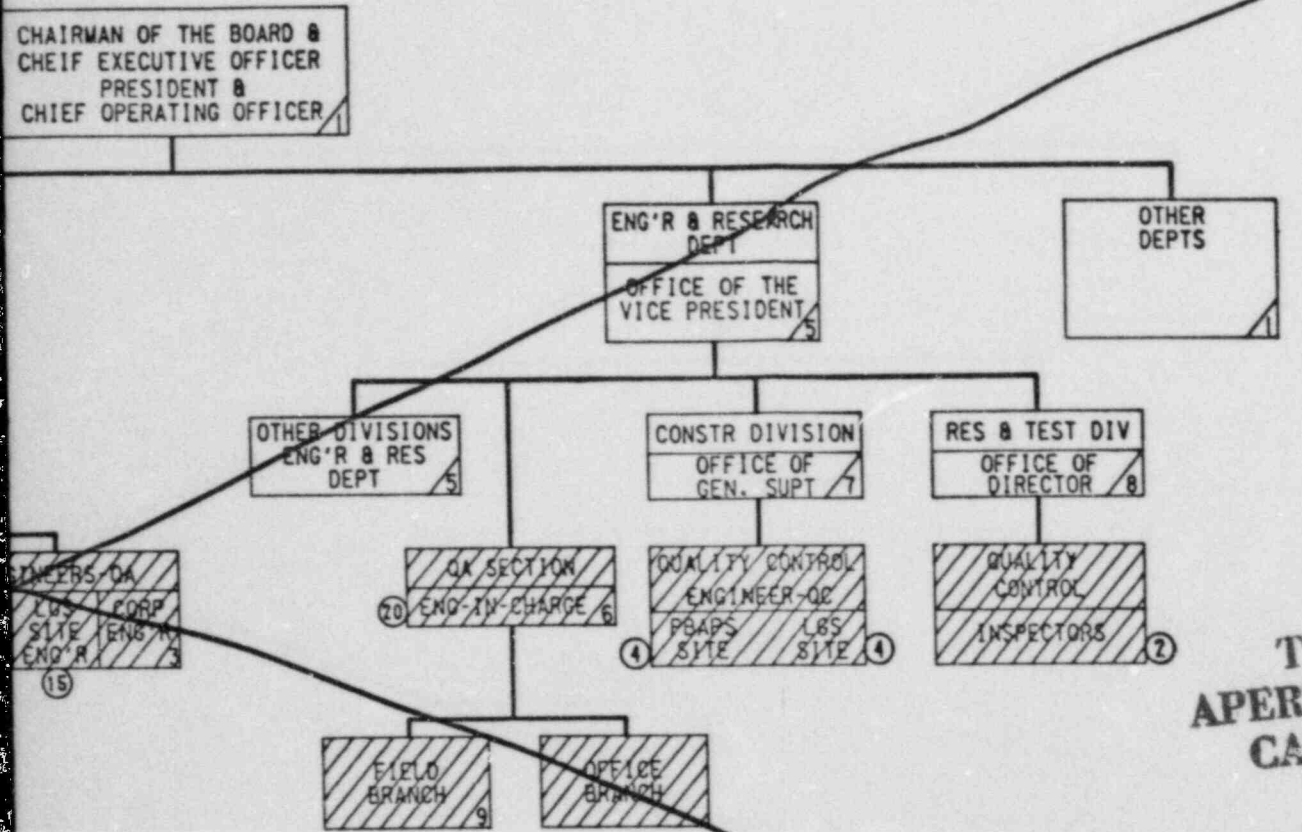
LEGEND

- ▨ INDICATES ORGANIZATIONS PERFORMING QA/QC FUNCTIONS
- APPROXIMATE STAFFING LEVEL
- 1 SEE FIG. 17.2-1 FOR ADD'L DETAIL
- 2 SEE FIG. 17.2-2 FOR ADD'L DETAIL
- 3 SEE FIG. 17.2-3 FOR ADD'L DETAIL
- 4 SEE FIG. 17.2-4 FOR ADD'L DETAIL
- 5 SEE FIG. 17.2-6 FOR ADD'L DETAIL
- 6 SEE FIG. 17.2-7 FOR ADD'L DETAIL
- 7 SEE FIG. 17.2-10 FOR ADD'L DETAIL
- 8 SEE FIG. 17.2-11 FOR ADD'L DETAIL
- 9 FIELD BRANCH EXISTS ONLY DURING ENGINEERING AND CONSTRUCTION

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LIMERICK GENERATING STATION  
UNITS 1 AND 2  
FINAL SAFETY ANALYSIS REPORT

FUNCTIONAL QA/OC DIAGRAM

FIGURE 17.2-15

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17.2A.16.4.2

The status of nonconformances or noncompliances identified by QA Division as a result of the Auditing Program shall be reported to the Manager and Vice President of the Electric Production Department periodically.

and Quality Control

, Nuclear Production,

17.2A.16.5

Corrective action performed in response to an item identified by the QA Division Audit and Surveillance Program shall have the documented concurrence of the QA Division for the adequacy of the corrective action.

ing

17.2A.16.6

Procedures shall be established to ensure that safety-related structures and equipment nonconformances are controlled. These procedures shall include the following:

- a. Identify those individuals or groups who shall authorize the corrective action.
- b. Ensure that the QC Organization that has responsibility for the job performs the review and approves the planned corrective action.
- c. Document the cause of the nonconformance, if it can be identified.
- d. Identify and document, if possible, the root cause.
- e. The appropriate staff engineer shall review the corrective action and equipment history to determine equipment performance trends, to identify repetitive failures and to adjust, if applicable, the preventive maintenance program.

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The QA Division shall verify through the Audit and Surveillance Program that the above controls are adequate.

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Appendix 17.2A.II

ELECTRIC PRODUCTION DEPARTMENT APPLICATION  
OF INDUSTRY STANDARDS AND NRC REGULATORY GUIDES

Philadelphia Electric Company Electric Production Department Quality Assurance Program will follow the guidance contained in NRC Regulatory Guides and the requirements of Industry Standards as described below. When a Regulatory Guide endorses an Industry Standard, compliance with the recommendations of a guide indicates compliance with the requirements of the standard, and those guidelines modified by the guide. Documents referenced in an ANSI Standard are excluded unless they are addressed separately.

- a. Regulatory Guide 1.30, August 1972, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment" Endorses ANSI N45.2.4 - 1972.

PECO shall comply with Regulatory Guide 1.30, August 1972, and ANSI N45.2.4 - 1972 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent~~ <sup>Production Generation and Superintendent, Nuclear</sup> ~~Nuclear Manager, Nuclear~~ <sup>QA</sup>, to related activities occurring during the initial design and construction phase, except for the following alternates:

1. ANSI N45.2.4, Section 1.1, Scope - PECO's alternate to classification of Class I and IE electric power, instrumentation, and control equipment is to apply the requirements of this standard to PECO "Q-listed" items. (Those instruments, equipment and systems that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.)
2. ANSI N45.2.4, Section 3, Preconstruction Verification - Subsection (3) requires the checking of records of protective measures maintained during storage for conformance to storage requirements. ANSI N45.2.2 - 1978, Section 6.4, Control of Items in Storage requires inspections and examination during the storage period. The responsibility within PECO for these inspections rests with the Stores Division. Compliance with these requirements for checking of records is assured through the Auditing Program conducted by Quality Assurance Division Personnel along with the monitoring of Stores Division Activities by Stores Division Supervision.

and Quality Control

17.2A.1 ORGANIZATION

See Section 17.2.1.

17.2A.2 QUALITY ASSURANCE PROGRAM

The operating philosophy of the Electric Production Department places emphasis and primary concern on the safety of its employees and the public. Other considerations such as continuity of service, equipment protection, economic operation, and environmental effects are recognized as important but are secondary to human safety.

The Department's many years of experience operating generating stations has evolved a wide spectrum of management measures directed toward efficient and safe operations.

The Operational Quality Assurance (OQA) Program for the operation of LGS recognizes quality assurance as an interdisciplinary function involving many organizational components (i.e. departments, divisions, sections, groups and individuals) and is not regarded as the sole domain of the Quality Assurance (QA) Division. Quality Assurance encompasses many functions and activities and extends to various levels in all participating organizations. First line supervision is responsible for the quality of the work performed under their supervision. Second line supervision may perform inspections or examinations of work functions associated with normal operation of the plant, routine maintenance, and certain technical services routinely assigned to the onsite operating organization where necessary to assure quality. Independent inspections of non-routine maintenance and plant modifications shall be performed, as required, by qualified individuals who are organizationally independent of the individual or group performing the work. The Station Superintendent has overall responsibility for the execution of the administrative controls at the plant and implementation of responsibilities assigned to plant personnel by the OQA Plan. An overview of the Program is provided by personnel from the QA Division who are organizationally independent of Generation and Maintenance Divisions. QA Division shall assure, through the Auditing Program, that activities affecting quality are accomplished in accordance with the requirements of the OQA Program.

and  
Quality  
Control

Nuclear

LGS FSAR

quality in this activity. Mechanisms such as shift and daily written reports, plots, and log books will be reviewed by appropriate supervision as specified in Administrative Procedures. Inspections and reviews will also be conducted by senior plant supervision as defined in Administrative Procedures.

17.2A.2.5

Mechanical and electrical maintenance at LGS will be performed by the Maintenance Division of the Electric Production Department as a service to the operating organization. The Maintenance Division is organizationally independent of the plant operating staff and reports through its Superintendent to departmental management. The Maintenance Division shall assign personnel to the station to provide quality control checking, inspection, and engineering support. The Engineer-Maintenance who is part of the plant staff coordinates and serves as the operating staff - Maintenance Division interfacing agent. Only qualified craftsmen are utilized to perform maintenance work. First and second level supervision have had specific quality training and are recognized as informal but a most important means of controlling quality. Installation of new components or the physical change in systems of a major nature is considered a modification activity which will normally be implemented by the Engineering and Research Department. Quality assurance measures and organization shall be implemented in a fashion similar to that used during plant design and construction with the additional assurance of review and approval by the Plant Operations Review Committee and, as appropriate, the Nuclear Review Board.

Quality Assurance

and

17.2A.2.6

The procurement of spare parts, materials, and services for LGS is initiated by cognizant personnel in accordance with approved policies and procedures. The Stores Division is an independent organization functioning as a service group to the Electric Production Department. The ordering, receipt, storage and issuance is accomplished in accordance with Stores Division, ~~Systems Corporate~~, QA Division, and plant procedures which incorporate suitable measures to assure quality. Requisitions for materials or services are transmitted from the Stores Division or other authorized PECO entities to the Purchasing Department where buyers execute the orders in accordance with Company purchasing procedures and policies.

17.2A.2.7

Management

~~The Office of the Vice President~~ Electric Production Department is informed on a continuing basis of the status and effectiveness of the quality assurance program through reports at Vice-Presidential Staff Meetings.

17.2A.2.8

The OQA Plan applies to activities affecting the quality of systems, components, and structures installed to prevent or mitigate the consequences of an accident which could be harmful to the public. These structures, systems and components are identified through the LGS Project Q-List and the Quality Assurance Diagrams. Although the measures discussed apply primarily to Q-listed equipment, they may also be applied in varying degrees to non-Q listed equipment. The application of these quality assurance measures to non-Q listed systems will additionally enhance operational safety.

The LGS OQA Plan, <sup>Volume III, including revisions thereto, shall be</sup> approved by the Superintendent, QA Division; ~~Superintendent, Nuclear Generation Division;~~ and the Vice President ~~or Manager~~ of the Electric Production Department, <sup>prior to issue</sup> ~~Manager, Nuclear Production;~~

Revisions to the Plan <sup>may</sup> will be made by the recommendations of the ~~Superintendent, Nuclear Generation Division, and Superintendent, QA Division, with mutual approval, and will be approved by the Vice President or Manager of Electric Production~~ prior to issue. Philadelphia Electric Company personnel.

17.2A.2.9

other Electric Production Department Divisions and other PECO Departments.

The Quality Assurance Division is staffed with trained and qualified personnel, both on and off site, who are organizationally independent of ~~the Generation Divisions.~~ The QA Division has the primary responsibility to verify through the review of objective evidence and the performance of observations that the quality assurance program is being accomplished in accordance with the LGS OQA Plan. This verification is accomplished by means of, planned and periodic, audits and surveillances.

Quality Assurance

Quality Control monitoring and inspections

The Superintendent, QA Division, is responsible for developing and maintaining a quality assurance indoctrination and training program for Division personnel to establish proficiency in quality assurance, and to qualify personnel in accordance with Division requirements and procedures.

quality control

## LGS FSAR

QA Division may involve itself in the planning of quality related activities as they deem necessary to assure that quality assurance requirements are provided consistent with importance to safety.

Resolutions of differences of opinion between audited and auditing personnel, regarding deficiencies or noncompliances identified by QA Division shall be made by Department Management.

QA Division personnel are authorized to stop work when such work is considered to be a serious quality degradation.

### 17.2A.2.10

The quality assurance program for LGS is documented by written policies, procedures and instructions and shall be carried out throughout the life of the plant.

The Superintendent, QA Division, shall review and approve all Administrative Procedures that implement the OQA Plan.

The administrative and implementing procedures and instructions pertaining to quality-related activities are written to accomplish those activities with appropriate equipment under suitable environmental conditions.

### 17.2A.2.11

Information concerning plant conditions and status will be made available to QA Division personnel to enable responsible QA supervision to determine when <sup>audits,</sup> surveillances <sup>, monitorings, or inspections</sup> should be performed. This information may be in the form of communications with plant management or staff personnel through daily or periodic meetings. In addition, during the daily inspection, QA Division personnel shall periodically review operating logs, maintenance work schedules, fuel handling operations schedule, in-service inspection program, and modification proposals, to ensure that QA Division personnel are involved in day-to-day activities that are important to safety.

### 17.2A.3 DESIGN CONTROL



## LGS FSAR

Procedures may also include applicable reference to vendor equipment manuals, design drawings and specifications, prerequisites, special precautions and the delineation of the work to be accomplished.

Equipment manuals and manufacturers' instructions shall be readily available for use.

### 17.2A.5.4

Quality Assurance <sup>Division</sup> personnel shall, in the course of the <sup>Auditing or Quality Control</sup> ~~Programs~~, selectively review the adequacy, completeness, and effectiveness of implementing procedures, instructions, and drawings associated with activities performed under the QA Plan.

Administrative type procedures shall be written by other organizations participating in quality related activities supporting operation of LGS under the OQA Program. These procedures shall contain provisions which clearly delineate the sequence of actions for the conduct of safety-related activities. The Superintendent, QA Division shall review and approve these administrative procedures to assure compliance with the LGS OQA Program.

### 17.2A.6 DOCUMENT CONTROL

#### 17.2A.6.1

Measures shall be established and documented to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and approval unless other organizations are specifically designated. The reviewing organizations shall have access to pertinent background information upon which to base its approval and shall have adequate understanding of the requirements and intent of the original document.

by or for the organization responsible for operation of the plant.

17.2A.10.7

QA Division shall perform surveillance of selected quality related "work-in-progress" activities commensurate with the importance to safety to verify that certain aspects of the Quality Assurance Program are performed adequately and in compliance with program and procedural requirements.

Procedures shall be selectively reviewed in the course of QA Audits and Surveillances *and Quality Control Monitorings and Reviews* to assure that necessary inspection points are included and that a mechanism is provided for the documentation of inspection results.

17.2A.11 TEST CONTROL

17.2A.11.1

A test program shall be established to assure that all testing required to demonstrate that the item will perform satisfactorily in service is identified and documented, and that the testing is performed in accordance with written test procedures which incorporate or reference the requirements and acceptance limits contained in applicable Technical Specifications and design documents. The test program shall cover all required tests, including, as appropriate, qualifications tests, post maintenance or modification tests, and operational surveillance tests to verify continued satisfactory performance during operation.

The program for the control of testing shall be established in accordance with Administrative procedures.

17.2A.11.1.1

Measures shall be established such that when an activity involves breaching a pressure retaining item, the quality of the work can be demonstrated through a functional test. The functional test shall be performed by individuals other than those who performed or directly supervised the work, but from within the same group.

passed the required inspections and tests are used, installed, or operated. These measures shall include procedures for control of status indicators, including the authority for application and removal of tags, markings, labels, and stamps.

17.2A.14.3

Measures shall also provide for indicating the operating status of systems and components of the nuclear power plant, such as by tagging valves and switches, to prevent inadvertent operation.

The operating status of components under test or inspection shall be indicated and controlled through the use of the handbook for permits and blocking, procedure check lists, or logs to prevent inadvertent use.

17.2A.14.4

Defective material, parts or components shall be promptly identified, tagged and recorded or otherwise controlled to indicate operating status of such equipment and to prevent its inadvertent use.

17.2A.14.5

Implementation of <sup>and Quality Control</sup> these measures shall be verified through the QA Division Auditing Program conducted in accordance with the OQA Plan. These activities shall assure that the required inspections and tests are procedurally controlled as required by the OQA Plan.

17.2A.15 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

17.2A.15.1

Measures shall be established and implemented to control materials, parts, or components which do not conform to requirements to prevent their inadvertent use or installation. The measures established shall include, as appropriate, administrative and/or implementing procedures for the following functions for nonconforming materials, parts, or components.

LGS FSAR

deviations, defective material and equipment, and nonconformance to specified requirements. The measures established shall include the following:

- a. In cases of significant conditions adverse to quality, the cause of the condition shall be determined and documented, and corrective action taken and documented to preclude recurrence.
- b. Reports to appropriate levels of management of the significant condition adverse to quality and documentation of such reports.

17.2A.16.2

Administrative Procedures shall require that modification and repair procedures include the reworking of components, systems or structures in accordance with original specifications, instruction manuals, instructions, prints, codes and standards. Appropriate testing and inspection requirements shall be included to verify acceptability of the repairs or modifications.

17.2A.16.3

The responsibility for the above is assigned to the LGS staff members responsible for the various activities.

17.2A.16.4

QA Division through its *Auditing Program* <sup>and Quality Control</sup> may identify conditions which require corrective action. Such conditions shall be reported to responsible management for corrective action in accordance with applicable procedures.

17.2A.16.4.1

Dependent upon factors, such as the nature of the deficiency, the cause, and the corrective action taken, QA Division shall follow-up corrective action of deficiencies identified by the QA Division *Auditing Program* <sup>and Quality Control</sup> to determine the adequacy and effectiveness of such action.

<u>Use(1)</u>	<u>Procedures</u>
L	Preparation and Control System Procedures
L	Preparation and Control Operational Transient Procedures
L	Preparation and Control Alarm Response Cards
L	Preparation and Control Fuel Handling Procedures
L	Preparation and Control Health Physics Procedures
L	Preparation and Control Chemistry Procedures
L	Temporary Changes to Approved Procedures
L, M, R	Training/Qualification Personnel
M	Control of Maintenance
M, R	Control of Measuring Test Equipment
M	Handling/Storage of Equipment
<del>GA, R</del>	QC Inspection/Qualification
M	Welding/Welding Procedure Qualification
R	Control of Maintenance

(1)

L = Limerick Station  
M = Maintenance Division

10 CFR, Part 50 Appendix B Criterion

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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Control of t	X	X		X	X												X (2)
Control of	X	X		X	X												X (2)
Control of ures	X	X		X	X				X								X (2)
Control of dures	X	X		X	X					X							X (2)
Control of	X	X		X	X					X							X (2)
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on of	X	X		X	X												X (2)
nce	X	X		X			X	X	X	X				X	X		X (2)
y and	X	X		X						X				X	X		X (2)
	X	X		X	X			X			X						(2)
ification	X	X							X								X (2)
cedure	X	X		X	X												X (2)
nce	X	X		X	X	X	X		X		X	X	X	X	X	X	X (2)

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Manager, Nuclear Production

PECO shall comply with Regulatory Guide 1.37 - March 1973 and ANSI N45.2.1 - 1973 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent - Nuclear Generation~~ and Superintendent, QA, to related activities occurring during the initial design and construction phase except for the following alternate:

1. ANSI N45.2.1, Section 3.2, Water Quality Requirements - PH measurements are not required for conductivity values of  $\leq 1$  micromho/cm. PECO utilizes PH limits of 5.2 to 8.6 at 25° C, uncorrected for CO<sub>2</sub> and may apply conductivity measurements in place of total dissolved solids.
  2. ANSI N45.2.1, Section 3.1.2, Class B - The flushing velocity may be as specified in other approved documents associated with the maintenance or modification, as well as procurement documents.
- d. Regulatory Guide 1.38, Revision 2, May 1977, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants."  
Endorses ANSI N45.2.2 - 1972.

See discussion under ANSI/ASME N45.2.2 - 1978.

- e. Regulatory Guide 1.39, Revision 2, September 1977, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants."  
Endorses ANSI N45.2.3 - 1973.

PECO shall comply with Regulatory Guide 1.39, September 1977 and ANSI N45.2.3 - 1973 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent - Nuclear Generation~~ and Superintendent, QA, to related activities occurring during the design and construction phase except for the following alternates:

Production Generation Nuclear

1. ANSI N45.2.3, Section 2.1, Planning - Zone II requirements for clean gloves, shoe covers, and head coverings will be determined by health physics personnel

LGS FSAR

latest revision of Regulatory Guides and ANSI Standards, PECO commitments are contained in Section 17.2.

3. ANSI N45.2.6-1978, subsection 3.5, presents experience recommendations for candidates. Experience in maintenance, modification, and operating activities is considered related experience because such experience provides training in the safety aspects of the facility.
- g. Regulatory Guide 1.64, Revision 2, June 1976, "Quality Assurance Requirement for the Design of Nuclear Power Plants."  
Endorses ANSI N45.2.11 - 1974.

PECO shall comply with Regulatory Guide 1.64, June 1976, and ANSI N45.2.11 - 1974 for those Electric Production Department activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Manager, Superintendent - Nuclear Generation~~ <sup>QA</sup> and Superintendents, to related activities occurring during the initial design phase with the following clarification and alternates:

Nuclear  
Production

Clarification -

1. Plant Design changes are categorized into Major and Minor Modifications. Design controls for Major Modifications which are delegated to the Engineering and Research Department are described in Section 17.2B. Major Modifications are defined in LGS Administrative Procedures.
2. Minor Modifications are accomplished under the controls of plant administrative procedures in accordance with the LGS EP Quality Assurance Plan.

Alternate -

Regulatory Guide 1.64, Regulatory Position C.2(1) - Design verification may be performed by the designer's immediate supervisor under the following circumstances:

1. When the supervisor is the only technically qualified individual
2. The need is individually documented and approved in advance by the supervisor's management
3. QA audits cover frequency and effectiveness of use of supervisors as design verifiers to guard against abuse.



LGS FSAR

- h. Regulatory Guide 1.74, Revision 0, February 1974, "Quality Assurance Terms and Definitions."  
Endorses ANSI N45.2.10 - 1973.

PECO shall comply with Regulatory Guide 1.74, Revision 0, February 1974 and ANSI N45.2.10 - 1973 except for the following alternate:

The word "examination" also means an exercise to examine progress or status of knowledge or qualification.

- i. Regulatory Guide 1.88, Revision 2, October 1976, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records."  
Endorses ANSI N45.2.9 - 1974.

See discussion under ANSI/ASME N45.2.9 - 1979.

- j. Regulatory Guide 1.94, Revision 1, April 1976, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structure Steel During the Construction Phase of Nuclear Power Plants."  
Endorses ANSI N45.2.5 - 1974.

PECO shall comply with Regulatory Guide 1.94, April 1976 and ANSI N45.2.5 - 1974 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent Nuclear Generation~~ and Superintendent QA, to related activities occurring during the initial design and construction phase.

Manager, Nuclear Production

- k. Regulatory Guide 1.116, Revision 0-R, May 1977, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems."  
Endorses ANSI N45.2.8 - 1975.

PECO shall comply with Regulatory Guide 1.116, May 1977, and ANSI N45.2.8 - 1975 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent Nuclear Generation~~ and Superintendent QA, to related activities occurring during the initial design and construction phase, except for the following alternates:

Manager, Nuclear Production

LGS FSAR

1. ANSI N45.2.8, Section 2.2, Procedures and Instructions - FSAR Section 13.5 addresses compliance with ANSI N18.7 - 1976/ANS 3.2 and Regulatory Guide 1.33. These requirements provide adequate controls for the Procedures and Instructions addressed in this Section.
2. ANSI N45.2.8, Section 2.3, Results - PECO's commitment to ANSI 18.7 - 1976/ANS 3.2 provides adequate guidance for the documentation and review of the results of inspections and tests.
3. ANSI N45.2.8, Section 3.4, Physical Condition - PECO's response to ANSI N45.2.1, N45.2.2, and N45.2.13 provide adequate guidance and control for the requirement that mechanical items are in accordance with specified requirements and that the quality has been maintained.

1. Regulatory Guide 1.123, Revision 1, July 1977, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants." Endorses ANSI N45.2.13 - 1976.

PECO shall comply with Regulatory Guide 1.123, July 1977, and ANSI N45.2.13 - 1976 for those activities occurring during the operational phase that are comparable in nature and extent, as determined by the ~~Superintendent - Nuclear Manager,~~ <sup>QA</sup> ~~Generation and Superintendents~~, to related activities occurring during the initial design and construction phase.

- m. Regulatory Guide 1.144, September 1980, "Auditing of Quality Assurance Programs for Nuclear Power Plants" endorses ANSI/ASME N45.2.12-1977.

PECO shall comply with Regulatory Guide 1.144, September 1980, and ANSI/ASME N45.2.12-1977 with the clarification discussed in Item 1 under Regulatory Guide 1.33 and with the following alternates:

1. ANSI/ASME N45.2.12, Section 4.2.4, Audit Notification and Section 4.3.1, Pre-Audit Conference - Pre-Audit notification is given to plant management in an informal manner due to daily contact and communications between Quality Assurance Division personnel and plant personnel.

Nuclear  
Production

QUESTION 260.1

Identify in more detail on organizational charts all the "onsite" and "offsite" organizational elements which function under the cognizance of the QA program (such as design, engineering, procurement, manufacturing, construction, inspection, test, instrumentation and control, nuclear engineering, operations, and maintenance). (SRP 17.1, 1A5)

RESPONSE

The Operation and Maintenance divisions of Limerick are part of the Electric Production Department, as shown in Figure 17.2-2. One division of the Electric Production Department is the Quality Assurance Division, as shown in Figure 17.2-3. The Maintenance Division is shown on Figure 17.2-4, with the details of the onsite group shown in Figure 17.2-5. The onsite Operations Group is shown on Figure 13.1-2.

The Engineering and Research organization charts (Figures 17.2-11, 17.2-8, 17.2-12) show the branches, "onsite" (S) or "offsite" (O), which function under the E&R QA program. All onsite organizations are located at the Limerick construction site. Offsite organizations are located in PECO's Main Office in Philadelphia, with the exception of the Plymouth Tests Branch (Research and Testing Division) which, is located in Plymouth Meeting, PA.

Figure 17.2-15 is a functional QA/QC Diagram of organizations performing within the Electric Production Department and the Engineering and Research Department, and its

~~Figure 17.2-15~~ outlines the approximate personnel staffing for QA/QC organizations involved in Peach Bottom and Limerick Stations.

Such activities at

verification activities

QUESTION 260.2

Describe the criteria for determining the size of the QA organization including the inspection staff. (SRP 17.1, 1A5)

RESPONSE

The criteria that is being used to determine the size of the Limerick QA organization is based on the experience obtained from the startup and operations of the Peach Bottom Station.

The Limerick site will have a core group of <sup>QA Division</sup> Auditors dedicated to the site, augmented as required by the corporate auditors. The site auditors will be directed by a dedicated site supervisor. <sup>and QC Inspectors</sup> ~~One of the QC Engineers~~ will also be dedicated to the site.

The QC Inspection Staff for the Construction Division, ~~and Research and Maintenance Division, and Testing Section~~ will be on the site as required. When needed, QC Inspection Staffs will be augmented with qualified vendor personnel. The criteria that is being used to determine the site Radwaste QC Inspection and Receipt Inspection will be based on the experience obtained from the operations of the Peach Bottom Station.

The Site Auditors will be

Division

QUESTION 260.3

Describe those provisions which assure that verification of conformance to established requirements is accomplished by individuals or groups within the QA organization who do not have direct responsibility for performing the work being verified. If this function is performed by individuals other than the QA organization, then identify the organizational position and the QA/QC qualification of that position. (SRP 17.1, 1B2)

RESPONSE

The provisions which assure that verification of conformance to established requirements is accomplished by members of the Construction Division, Maintenance Division, ~~and~~ Research and Testing Division, ~~which are not part of the QA Division. All QC operations are separated from the Electric Production Department, Quality Assurance Division.~~ All QC Inspectors will be qualified to ANSI N45.2.6.

Limerick Operating Shift  
Crew and Quality Assurance  
Division.

All Auditors ~~are part of the QA Division and~~ are qualified to ANSI N45.2.23.

All NDE inspectors are qualified to ASNT-TC-1A.

Maintenance

Sections 17.2.1.2.5.1, <sup>3.6</sup> ~~17.2.1.2.5.4.1, and 17.2.1.2.5.4.2~~ have been changed to provide additional information.

Construction

Sections ~~17.2.1.3.4.1, 17.2.1.3.4.2, and 17.2.1.3.4.3~~ have been changed to provide additional information.

Research and Testing

Section ~~17.2.1.3.5.1, 17.2.1.3.5.2 and 17.2.1.3.5.3~~ have been changed to provide additional information.

Limerick Staff Operating Shift Crew

Section 13.1.2.19 ~~has been changed to provide additional information.~~

Quality Assurance Section 17.2.1.2.3

The following sections of the FSAR provide additional information on the above organizations.

QUESTION 260.4

Describe those provisions which assure that persons and organizations performing QA functions have direct access to management levels which will assure the ability to: (SRP 17.1, 1B3)

- a. Identify quality problems.
- b. Initiate, recommend, or provide solutions through designated channels.
- c. Verify implementation of solutions.

Those persons and organizations with the above authority are identified and a description of how those actions are carried out is provided.

RESPONSE

The following Sections provide the requested information:

~~The responsibilities and authorities of the Superintendent of the Quality Assurance Division state in part from Section 17.2.1.2.3.1 that will assure the ability to:~~

- ~~a. Identify quality problems:~~

~~Section 17.2.1.2.3.1.f~~

~~Determine the ongoing status and adequacy of the EP QA Plan through regular review of the QA Division auditing program, identification and investigation of problem areas, and determination of timely and effective steps taken to correct deficiencies.~~

- ~~b. Initiate, recommend, or provide solutions through designated channels:~~

~~Section 17.2.1.2.3.1.i~~

~~Initiate and recommend corrective action or provide solutions through designated channels.~~

- ~~c. Verify implementation of solutions:~~

~~Section 17.2.1.2.3.1.g~~

~~Require re-audit for the purpose of verification of corrective action and problem resolution for items affecting quality.~~

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~~These actions will be carried out by:~~

~~Section 17.2.1.3.3.1.j~~

~~Apprise the Office of the Vice President of the Electric Production Department periodically of the status of the Quality Assurance aspects of Limerick operation and immediately of significant problems affecting quality.~~

~~Section 17.2.1.2.3.1.h~~

~~Direct immediate cessation of work when such work is considered by the Superintendent, Quality Assurance Division to be a serious quality degradation. This stop work authority will be delineated in applicable procedures.~~

- ~~d. As described in Section 17.2.1.3.2, the E&R QA Organization has direct access to management levels which will ensure the ability to identify quality problems, initiate, recommend, or provide solutions through designated channels, and verify implementation of solutions.~~

Quality Assurance Division

Sections 17.2.1.2.3.1.f, i, g, j, and A

Quality Assurance Section

17.2.1.3.2

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QUESTION 260.5

Describe those provisions which assure that designated QA and QC personnel, sufficiently free from direct pressures for cost/schedule, have the responsibility delineated in writing to stop unsatisfactory work and control further processing, delivery, or installation of nonconforming material. (SRP 17.1, 1B4a)

RESPONSE

The following sections of the FSAR provide the requested information:

~~The provisions which assure that verification of conformance to established requirements is accomplished by members of the Construction Division, Maintenance Division, and Research and Testing Division which are not part of the QA Division. All QC operations are separated from the Electric Production Department, Quality Assurance Division.~~

QC OPERATIONS

~~Quality Assurance Division  
Maintenance~~

Sections 17.2.1.2.5.4 and 17.2.1.2.5.5 <sup>3.1. h</sup> have been changed to provide additional information.

Construction

~~Sections 17.2.1.3.4.2 and 17.2.1.3.4.3 have been changed to provide additional information.~~

Research and Testing

~~Sections 17.2.1.3.5.1, 17.2.1.3.5.2, and 17.2.1.3.5.3 have been changed to provide additional information.~~

QA OPERATIONS

~~Quality Assurance Division~~ . R

~~Section 17.2.1.2.3.1 states in part: The Superintendent, Quality Assurance Division, has the following responsibilities and authorities:~~

- ~~h. Direct immediate cessation of work when such work is considered by the Superintendent, Quality Assurance Division, to be a serious quality degradation. This stop-work authority shall be delineated in applicable procedures.~~



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QUESTION 260.6

Describe those provisions which assure that designated QA/QC individuals are involved in day-to-day plant activities important to safety (i.e., the QA/QC organizations routinely attend and participate in daily plant work schedule and status meetings to assure they are kept abreast of day-to-day work assignment throughout the plant and that there is adequate QA/QC coverage relative to procedural and inspection controls, acceptance criteria, and QA/QC staffing and qualification of personnel to carry out QA assignments). (SRP 17.1, 1B6)

RESPONSE

Section 17.2A.2.11 ~~has been added to provide~~<sup>s</sup> ~~additional~~ the requested information.

~~The provision that assures verification of conformance to established requirements is accomplished by members of the Construction Division, Maintenance Division, and Research and Testing Division, which are not part of the QA Division. All QC functions are separated from the Electric Production Department, Quality Assurance Division.~~

QUESTION 260.8

Identify the position responsible for the onsite QA/QC program and describe those provisions which assure this position has appropriate organizational responsibilities and authority to exercise proper control over the QA program. (SRP 17.1, 1C3)

RESPONSE

The Limerick QA/QC Program has been established by the VP - Electric Production, ~~Superintendent, Nuclear Generation Division,~~ and Superintendent, QA Division. *Manager, Nuclear Production,*

Superintendent, Nuclear Generation Division, the Plant Superintendent, and other organizational superintendents who may be involved in quality related activities are responsible for implementation of the QA Program.

The Superintendent, QA Division, is responsible for verification of compliance to the QA Program through audits and surveillance. *QA* *QA Monitoring and Inspections.*  
The QA Site Supervisor is responsible for the auditing and surveillance program, and the Site ~~QA Engineer~~ *QC Supervisor* is responsible for ~~planning and review functions.~~ *monitorings and inspections*

The Limerick QA Site Supervisor and the Limerick ~~QA Site Engineer~~ *QC Supervisor* are responsible for directing and managing the site QA Division program. These individuals will be free from non-QA duties and will give full attention to assuring that the QA program at the Limerick site is being effectively implemented. These positions are indicated in Figure 17.2-3. Both of these positions are dedicated, full-time QA Division positions located at the Limerick site. *and QA Division Site QC Supervisor.*

Material receipt, ~~radwaste, and security~~ inspection will be under the direction of ~~a Limerick engineering staff.~~ *and* Maintenance QC activities will be under the direction of ~~Maintenance the QA Division Headquarters Group, Engineering Section.~~ *the QA Division Site QC Supervisor* Construction QC Activities will be under the direction of the Engineer - QC, Construction Division, which will include material receipt inspection for material procured for the Engineering & Research Department.

Noncompliances are tracked by the organization responsible for the activity as delineated in the Limerick QA Plan, Volume III (Operations Phase).

*Security inspection will be under the direction of the Limerick engineering staff*

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QUESTION 260.16

Provide a description of how management (above or outside the QA organization) regularly assesses the scope, status, adequacy, and compliance of the QA program to 10 CFR Part 50, Appendix E. These measures should include: (SRP 17.1, 2C1)

- a. Frequent contact with program status through reports, meetings, and/or audits.
- b. Performance of an annual assessment preplanned and documented. Corrective action is identified and tracked.

RESPONSE

Management (EP Vice President <sup>and Generation Division</sup> ~~or Manager~~) regularly assesses the scope, status, adequacy, and compliance of the QA program to 10CFR50, Appendix B.

- a. Management is appraised of QA program status through frequent contacts in staff meetings and audit reports (NRB, Joint Utility Management Audits, INPO, NRC, PECo QA Audits).
- b. An annual assessment and review of the QA program is preplanned and documented. This annual assessment addresses the scope, status, and adequacy of the QA Program, along with the degree of compliance to the program. Corrective action is identified and tracked.

Section 17.2A.2.7 states: "The Office of the Vice President, Electric Production Department is informed on a continuing basis of the status and effectiveness of the quality assurance program through reports at Vice-Presidential Staff Meetings."

17.2A.2.7 and  
Section 17.2B.2.7 ~~has been changed to provide the requested~~  
information. additional

QUESTION 260.27

Describe those provisions which assure that maintenance, modification and inspection procedures are reviewed by qualified personnel knowledgeable in QA disciplines (normally the QA organization) to determine: (SRP Section 17.2.6, item 2)

- a. The need for inspection, identification of inspection personnel, and documentation of inspection results.
- b. That the necessary inspection requirements, methods, and acceptance criteria have been identified.

RESPONSE

~~3.5, 17.2.1.2.5.4, 17.2A.5, 17.2A.10.1, 17.2A.10.3, 17.2B.10.1 and 17.2B.10.3~~

Section ~~17.2.1.2.5.4.1~~ has been changed to provide the requested information.

~~Section 17.2A.5 states in part: Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with them. Quantitative criteria, such as dimensions, tolerances and operating limits, shall be specified, as appropriate, for determining satisfactory work performance and quality compliance.~~

~~...The review and approval of station procedures is described in Section 13.5. In addition, the POR committee, whose members are knowledgeable in quality requirements and administrative controls, review procedures, such as tests and maintenance, which are developed in the modification process. ...Implementing procedures, instructions and drawings shall include, as appropriate, quantitative and qualitative acceptance criteria signoffs, hold points and witness points, to assure that important activities are satisfactorily accomplished. ...Quality Assurance personnel shall, in the course of the auditing program, selectively review the adequacy, completeness, and effectiveness of implementing procedures, instructions, and drawings associated with activities performed under the QA Plan.~~

~~Section 17.2A.10 states in part: A program for inspection of activities affecting quality shall be established and executed... The inspection programs for modifications and non-routine or major maintenance work shall be accomplished by personnel independent of the group performing the work. ...The procedures shall include the characteristics to be inspected, a description of the method of inspection, acceptance/rejection criteria, a~~

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~~description of necessary measuring and test equipment, and the identification of the individual or group responsible for inspection.~~

~~Section 17.2A.10.3 has been changed to provide additional information.~~

~~Sections 17.2B.10.1 and 17.2B.10.3 have been changed to provide the requested information.~~

QUESTION 260.38

Describe the responsibilities of the QA/QC organization for the qualification of special processes, equipment and personnel and in assuring that these qualifications have been satisfactorily performed. (SRP 17.1, 9A2 & 9B1)

RESPONSE

The QA Division Auditing and Quality Control Programs provide assurance that the qualification of special processes, the equipment used, and the qualification of personnel are satisfactorily performed.

~~The provision that assures verification of conformance to established requirements is accomplished by members of the Maintenance Division and Research and Testing Division, which are not part of the QA Division. All QC operations are separated from the Electric Production Department, Quality Assurance Division, and Engineering and Research Department, Quality Assurance Section.~~

~~Audits and surveillances shall be performed to verify compliance to established procedures related to special processes.~~

~~Sections 17.2A.9.1, 17.2A.9.2, and 17.2A.9.3, have been changed to provide the requested information~~  
~~additional~~

~~Section 17.2A.9.4 states in part: Certification of welders performing activities under the EP QA Plan shall be kept current through records of qualifying tests, recording of welds on current work, retraining and qualifying for specialty work in accordance with Maintenance Division Administrative Procedures.~~

~~Section 17.2A.9.5 states in part: The nondestructive examination procedures for the In-Service Inspection shall be written in accordance with applicable codes, standards and specifications.~~

~~NDE procedures shall require that personnel performing these examinations be qualified in accordance with the recommendations of the American Society for Nondestructive Testing Practice No. SNT-TC-1A, "Recommended Practice for Nondestructive Testing Personnel Qualification and Certification."~~

~~Section 17.2A.9.6 states in part: Results of special processes performed shall be documented in accordance with approved instructions and procedures.~~

QUESTION 260.39

Describe those provisions which assure that an effective inspection program has been established which provides criteria for determining the accuracy requirements of inspection equipment and criteria for determining when inspections are required. Describe the responsibilities of the QA/QC organizations in the above functions. (SRP 17.1, 10A)

RESPONSE

The provision that assures verification of quality conformance to established requirements is accomplished by members of the Construction Division, Maintenance Division, and Research and Testing Division, which are not part of the QA Division. All QC functions are separated from the Electric Production Department, Quality Assurance Division.

Section 17.2A.12.1 states in part: Measures shall be established and documented to assure that tools, gages, instruments, and other inspection, measuring, and testing equipment and devices used in activities affecting quality, are of the proper range, type, and accuracy to verify conformance to established requirements. To assure accuracy, inspection, measuring, and test equipment shall be controlled, calibrated, adjusted, and maintained at prescribed intervals or prior to use against certified equipment having known valid relationships to nationally recognized standards. If no national standards exist, the basis for calibration shall be documented. This requirement is not intended to imply a need for special calibration and control measures on rulers, tape measures, levels, and such other devices, if normal commercial practices provide adequate accuracy.

Section 17.2A.12.2 states in part: The method and interval of calibration for each item shall be defined and shall be based on the type of equipment, stability characteristics, required accuracy, and other conditions affecting measurement control.

~~17.2A.12.1, 17.2A.12.2, 17.2B.12.1, 17.2B.12.2~~  
 Sections 17.2.1.2.5.4, ~~17.2.1.2.5.4.1~~, 17.2B.12.1, 17.2B.12.2, 17.2B.12.3, and ~~17.2B.12.4~~ have been changed to provide the requested information.

↓  
 17.2.1.3.2, 17.2.1.2.3.4, 17.2.1.3.4.3  
 and 17.2.1.3.5.3

QUESTION 260.40

Identify the organization responsible for inspection and provide assurance that individuals performing inspections are other than those who performed or directly supervised the activity being inspected and do not report directly to the immediate supervisors who are responsible for the activity being inspected. If the individuals performing inspections are not part of the QA/QC organization, the inspection procedures, personnel qualification criteria, and independence from undue pressure such as cost and schedule should be reviewed and found acceptable by the QA organization prior to the initiation of the activity. (SRP 17.1, 10B1)

RESPONSE

17.2.1.2.3.4, 17.2.1.2.5.3.6

17.2A.10.1, 17.2B.10.1<sup>and</sup>, 17.2B.10.3

Sections ~~17.2.1.2.5.4.1, 17.2.1.3.4.3, and 17.2.1.3.5.3~~ have been changed to provide additional information.

*requested*

Section 17.2B.10.1, Limerick FSAR, states in part: Inspection requirements for purchased materials, parts, and components and for installation activities shall be established to verify conformance of quality affecting activities with established requirements. The inspection requirements and inspection results shall be documented.

Section 17.2B.10.3, Limerick FSAR, states in part: The inspection procedures or instructions shall:

- a. Identify the characteristics and activities to be inspected, including establishment of inspection hold points where appropriate
- b. Identify the individuals or groups responsible for performing the inspection operation
- c. Define the acceptance/rejection criteria
- d. Provide instructions for performing the inspection, including the inspection methods, a description of the necessary measuring and test equipment and the appropriate accuracy requirements
- e. Require recording evidence of completing/verifying the activity and the results
- f. Require identification of the inspector/data recorder and recording the results of the inspection



g. ~~Be reviewed by qualified personnel knowledgeable in QA/QC disciplines to ensure inclusion of the items listed above.~~

~~Section 17.2A.10.1 states in part: A program for inspection of activities affecting quality shall be established and executed by the organization performing the activity to verify conformance to the documented instructions, procedures, and drawings for accomplishing the activity. Inspection activities to verify the quality of work shall be performed by persons other than those who performed the activity being inspected. Such persons shall not report directly to the immediate supervisors who are responsible for the work being inspected.~~

~~The provision that assures verification of conformance is accomplished by members of the Construction Division, Maintenance Division, and Research and Testing Division, and are not part of the QA Division. All QC operations are separated from the Electric Production, Quality Assurance Division.~~

*In addition,*

~~if individuals performing inspections are not part of the QA organization, the QA Division will ensure through audits, and surveillances, that the inspection procedures, personnel qualification/criteria, and independence from undue pressure, such as cost and schedule, are acceptable.~~

*, monitorings, and inspections*

QUESTION 260.41

Describe those provisions which assure that inspection procedures, instructions, or checklists provide for the following as determined by the QA/QC organization: (SRP 17.1, 10C1)

- a. Specifying necessary measuring and test equipment including accuracy requirements.

RESPONSE

Sections 17.2A.10, 17.2A.12, and 17.2B.10.3 provide requested information.

Section 17.2A.10 states in part: A program for inspection of activities affecting quality shall be established and executed by the organization performing the activities to verify conformance to the documented instructions, procedures, and drawings for accomplishing the activity.

A program for the inspection of quality related activities is established through administrative and implementing procedures to verify conformance with applicable procedures, instructions and drawing requirements.

The procedures shall include the characteristics to be inspected, a description of the method of inspection, acceptance/rejection criteria, a description of necessary measuring and test equipment including appropriate accuracy requirements, and the identification of the individual or group responsible for inspection.

Section 17.2A.12 states in part: Measures shall be established and documented to assure that tools, gages, instruments, and other inspection, measuring, and testing equipment and devices used in activities affecting quality are of the proper range, type, and accuracy to verify conformance to established requirements. To assure accuracy, inspection, measuring and test equipment shall be controlled, calibrated, adjusted, and maintained at prescribed intervals or prior to use against certified equipment having known valid relationships to nationally recognized standards. If no national standards exist, the basis for calibration shall be documented. This requirement is not intended to imply a need for special calibration and control measures on rulers, tape measures, levels, and such other devices, if normal commercial practices provide adequate accuracy.

The accuracies of measuring and test equipment and the reference standards shall be chosen such that the equipment being

~~calibrated can be calibrated and maintained within the required tolerances.~~

~~Records shall be maintained and equipment suitably marked, or otherwise controlled, to indicate calibration status. Such records shall be traceable and retrievable.~~

~~The provision that assures verification of conformance is accomplished by members of the Construction Division, Maintenance Division, and Research and Testing Division, and are not part of the QA Division. All QC operations are separated from the Electric Production, Quality Assurance Division.~~

*In addition,*

~~the QA Division will ensure, through audits and surveillances, that the inspection procedures, personnel qualification criteria, and independence from undue pressure, such as, cost and schedule, are acceptable.~~

~~Section 17.2B.10.3 states in part: The inspection procedures or instructions shall:~~

- ~~a. Identify the characteristics and activities to be inspected, including establishment of inspection hold points where appropriate~~
- ~~b. Identify the individuals or groups responsible for performing the inspection operation~~
- ~~c. Define the acceptance/rejection criteria~~
- ~~d. Provide instructions for performing the inspection, including the inspection methods, a description of the necessary measuring and test equipment and the appropriate accuracy requirements.~~
- ~~e. Require recording evidence of completing/verifying the activity and the results~~
- ~~f. Require identification of the inspector/data recorder and recording the results of the inspection~~
- ~~g. Be reviewed by qualified personnel knowledgeable in QA/QC disciplines to ensure inclusion of the items listed above.~~

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QUESTION 260.42

Describe those provisions which assure that inspection results are documented, evaluated and their acceptability determined by a responsible individual or group. (SRP 17.1, 10C3)

RESPONSE

Section 17.2A-10.1 states in part: A program for inspection of activities affecting quality shall be established and executed by the organization performing the activity to verify conformance to the documented instructions, procedures, and drawings for accomplishing the activity. Inspection activities to verify the quality of work shall be performed by qualified persons other than those who performed the activity being inspected. Such persons shall not report directly to the immediate supervisors who are responsible for the work being inspected . . . A program for the inspection of quality related activities is established through administrative and implementing procedures to verify conformance with applicable procedures, instructions, and drawing requirements.

Section 17.2A.10.3 states in part: Satisfactory completion of inspection points shall be documented by a qualified individual and shall be included in the documentation associated with the performance of the work.

Documented results will be evaluated and their acceptability determined by qualified individuals. Evaluation beyond that given by inspection personnel shall not normally be required for go/no-go and pass/fail type inspection.

If individuals performing inspections are not part of the QA organization, the QA division will ensure, through audits, ~~and~~ <sup>monitorings,</sup> or surveillances, that the inspection procedures, personnel <sup>inspections</sup> qualification criteria, and independence from undue pressure, such as cost and schedule, are acceptable.

Section 17.2B.10.2 has been changed to provide additional information.

QUESTION 260.50

Describe those provisions which assure that QA and other organizational responsibilities are described for the definition and implementation of activities related to nonconformance control. This includes identifying those individuals or groups with authority for the disposition of nonconforming items. (SRP 17.1, 152)

RESPONSE

The Limerick QA Plan, Volume III (Operations Phase) will incorporate the following statement:

"QA Division shall be notified of nonconforming materials, parts of components as they occur consistent with their importance to safety."

Section 17.2.1.2.3.1 states in part: <sup>17.2A.16, 17.2A.15.1, 17.2B.15 and 13.4.5 provide additional information</sup> ~~The Superintendent, Quality Assurance Division, has the following responsibilities and authorities:~~

1. Initiate and recommend corrective action or provide solutions through designated channels.

Section 17.2A.16.1 states in part: Measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Conditions adverse to quality are failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance to specified requirements. The measures established shall include the following:

- a. In cases of significant conditions adverse to quality, the cause of the condition shall be determined and documented, and corrective action taken and documented to preclude recurrence.
- b. Reports to appropriate levels of management of the significant condition adverse to quality and documentation of such reports.

Section 17.2A.16.2 states in part: Administrative Procedures shall require that modification and repair procedures include the reworking of components, systems or structures in accordance with original specifications, instruction manuals, instructions, prints, codes and standards. Appropriate testing and inspection requirements shall be included to verify acceptability of the repairs or modifications.

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~~Section 17.2A.16.3 states in part: The responsibility for the above is assigned to the Limerick staff members responsible for the various activities.~~

~~Section 17.2A.16.4 states in part: QA Division through its auditing program may identify conditions which require corrective action. Such conditions shall be reported to responsible management for corrective action in accordance with applicable procedures.~~

~~Section 17.2A.16.4.1 states in part: Dependent upon factors, such as the nature of the deficiency, the cause, and the corrective action taken, QA Division shall follow up corrective action of deficiencies identified by the QA Division auditing program to determine the adequacy and effectiveness of such action.~~

~~Section 17.2A.16.4.2 states in part: The status of nonconformances or noncompliances identified by QA Division as a result of the auditing program shall be reported to the Manager and Vice President of the Electric Production Department periodically.~~

~~Sections 17.2A.16.5, 17.2A.16.6, 17.2A.15.1, 17.2B.15, and 13.4.5 have been changed to provide additional information.~~

QUESTION 260.51

Describe those provisions for analyzing nonconformances for trends and identify the upper levels of management responsible for periodic review and assessment of these quality trends. (SRP 17.1, 15.5)

RESPONSE

~~Section 17.2.1.2.3.1, states in part. The Superintendent, Quality Assurance Division, has the following responsibilities and authorities:~~ <sup>f, 17.2.1.2.3.2.c, 17.2A.16.6, 17.2B.15.1, and 13.4.5</sup> <sup>Provide additional information</sup>

- ~~f. Determine the ongoing status and adequacy of the EP QA Plan through regular review of the QA Auditing Program, identification and investigation of problem areas, and determination of timely and effective steps taken to correct deficiencies.~~

~~Section 17.2.1.2.3.2 states in part: The Engineer-QA is responsible for the following:~~

- ~~c. Keep the Superintendent, Quality Assurance Division, informed of status of Quality Assurance effort and of significant problem areas.~~

Electric Production Staff Meetings are regularly held which assess the status and adequacy of nonconformances, which includes quality trending of audit and surveillance findings, NRC enforcement actions, LERs, and NRC IE inspections, of the QA Program to 10CFR50, Appendix B.

Annual assessment of the status and adequacy of the QA Program is documented and sent to the Vice President, Electric Production, and other cognizant Management and Nuclear Review Board.

Measures shall be established for analyzing trends of nonconformances. The Vice President, Electric Production, shall be notified and periodically review and assess these trends.

~~Sections 17.2A.16.6, 17.2B.15.1 and 13.4.5 have been revised to provide additional information.~~

QUESTION 260.52

Describe those provisions which assure that the QA organization is involved in the documented concurrence of the adequacy of the corrective action and that follow-up action is taken by the QA organization to verify proper implementation of corrective action and to close out the corrective action in a timely manner. (SRP 17.1, 16.2 & 16.3)

RESPONSE

Sections 17.2A.16.1.a, 17.2A.16.4.1, 17.2.1.2.3.1.d, g and i, 17.2A.16.5, 17.2B.16.5 and 17.2B.16.6 provide requested information.

Section 17.2A.16.1 states in part: Measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Conditions adverse to quality are failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance to specified requirements. The measures established shall include the following:

- a. In cases of significant conditions adverse to quality, the cause of the condition shall be determined and documented, and corrective action taken and documented to preclude recurrence.

Section 17.2A.16.4.1 states in part: Dependent upon factors, such as the nature of the deficiency, the cause, and the corrective action taken, QA Division shall follow up corrective action of deficiencies identified by the QA Division Auditing Program to determine the adequacy and effectiveness of such actions.

Section 17.2.1.2.3.1 states in part: The Superintendent, Quality Assurance Division, has the following responsibilities and authorities:

- d. Review and approve administrative procedures which implement the EP Quality Assurance Plan.
- g. Require re-audit for the purpose of verification of corrective action and problem resolution for items affecting quality.
- i. Initiate and recommend corrective action or provide solutions through designated channels.

In addition,

Periodically audits shall be performed by the QA Division to verify that corrective action has occurred as a result of QA Division findings and Noncompliance Reports, NRC IE Inspection Items of Noncompliance, Bulletins, Generic Letters, Information



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Notices, Circulation letters, Licensee Event Report commitments, INPO findings, and other corrective actions taken by other departments.

~~Section 17.2A.16.5 has been changed, Sections 17.2B.16.5 and 17.2B.16.6 have been added to provide additional information.~~