The Topical Quality Assurance Report (FPLTQAR 1-76A) contains the description of the Florida Power & Light Company (FPL) Quality Assurance Program relative to its nuclear power plants. This report consists of three parts: The Introduction, which delineates the purpose and summarizes the scope and applicability of the Topical Quality Assurance Report. The second part, Topical Quality Requirements (TQRs), which delineate Quality Assurance Program requirements and summarizes the FPL approach to activities related to materials, parts, components, systems and services included in the Quality Assurance Program. The third part, Appendices, which provide supporting statements, tabulations, and technical analyses or deviations which are not, in themselves, the subject of the report.

~~The Topical Quality Assurance Report shall be an integral part of the Quality Assurance Manual (FPL-NQA-100A), and shall delineate the generic requirements and responsibilities by which FPL implements the corporate Quality Assurance Program. Revisions and changes to this Report will be made in accordance with a Quality Procedure as outlined in TQR 2.0. The remainder of the Quality Assurance Manual is comprised of Quality Procedures (QPs) which serve as the documents which describe how the interfacing of tasks between departments or organizations is achieved. The Quality Procedures also cover those technical elements which require a common corporate position for interfaces or resolution of problem areas.~~

The corporate Quality Assurance Manual (FPL-NQA-100A) consists of the Topical Quality Assurance Report and a Glossary of commonly used terms. The Topical Quality Assurance Report delineates the generic requirements and responsibilities by which FPL implements the corporate Quality Assurance Program. Revisions and changes to this report are made in accordance with a Quality Instruction outlined in TQR 2.0.

In addition to the Quality Assurance Manual, Quality Instructions (QIs) are developed as required by each of the implementing plants and departments. Quality Instructions describe the measures to be used to implement the quality requirements of the Quality Assurance Manual. The Quality Instructions describe actions and responsibilities to be performed within a department or organization and address the requirements of the appropriate Topical Quality Requirements.

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The FPL Quality Assurance Program meets the requirements provided by the NRC Regulatory Guidance and Industry Standards as listed in Appendix C of this Topical Quality Assurance Report.

The requirements of this Topical Quality Assurance Report apply to safety-related materials, parts, components, systems and structures; services employed for design, procurement construction, operation, maintenance, refueling, repair, and modification; and packaging and shipping of radioactive material (but not design and fabrication of packages for which a license, certificate of compliance, or other approval must be issued by the NRC) in accordance with 10 CFR part 71. The safety-related systems for each plant are specified in the respective plant Safety Analysis Report.

The FPL Quality Assurance Program fully addresses the requirements of Appendix B to 10 CFR Part 50. The Topical Quality Assurance Report shall be applicable to all existing nuclear plants, those under construction, and supporting FPL departments, and will be referenced in the Safety Analysis Report (SAR). For future plants, the description of activities, requirements, and organizations structures that are unique to a particular plant shall be addressed in the respective SAR document.

Vice President Nuclear Assurance

1.1 GENERAL REQUIREMENTS

The Florida Power & Light (FPL) organizational structure shall be defined such that the responsibilities for establishment and implementation of the Quality Assurance Program are clearly identified. The authority and duties of individuals and organizations performing quality assurance and quality control functions shall be described, and shall illustrate the organizational independence and authority necessary to identify problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. In addition, the description shall illustrate that persons or groups responsible for verifying the correct performance of an activity are independent of the person or groups responsible for performing the activity.

1.2 IMPLEMENTATION

The FPL Chairman of the Board and Chief Executive Officer is ultimately responsible for the execution of the Quality Assurance Program for FPL nuclear power plants. The authority for developing and verifying execution of the program is delegated to the President Nuclear Division and the Vice President Nuclear Assurance. The reporting relationship of each department involved with the Quality Assurance Program is shown in Appendix A.

To provide for a review and evaluation of Quality Assurance Program policies and activities, the President Nuclear Division has established the Company Nuclear Review Board (CNRB). This organization's responsibilities are defined in Section 1.~~2~~3.1~~.5.a~~.

In addition, a Quality Assurance Program Review Committee (QAPRC) has been established to review changes to the Quality Assurance Program and to provide an interface for quality matters in each department affecting quality. The QAPRC is an interdepartmental organization with the responsibility to review and resolve recommended changes to the Quality Assurance Program. This committee is administered by the Quality Assurance Services group. Quality Assurance Program changes reviewed by the QAPRC

are reviewed and signed by the affected department heads ~~or individuals listed on each Quality Procedure.~~

A Quality Assurance Program Review Committee (QAPRC) Member shall be designated by the head of each department or organization. The QAPRC Member is the prime interface for coordination of quality matters within the member's department, with the Quality Assurance Department, and with other departments.

The head of each department or organization performing activities affecting quality is responsible for: a) identifying those activities within the organization which affect quality as defined by the Quality Assurance Program; b) establishing and clearly defining the duties and responsibilities of personnel within his organization who execute those activities affecting quality; and c) planning, selecting, and training personnel to meet the requirements of the Quality Assurance Program. The responsibility, authority, and organizational relationship for performing actvities affecting quality within each organization shall be established and delineated in organizational charts and written job or functional descriptions.

Activities affecting quality may be performed by FPL or be contracted. Should any of these functions be contracted, the contractor may perform the activities under his own Quality Assurance Program, which must have prior approval by FPL Quality Assurance, or the contractor may directly adopt the requirements of the FPL Quality Assurance Manual. If the contractor implements the Quality Control function directly to the FPL Quality Assurance Manual requirements, the contractor's Quality Control Supervisor shall have the authority and freedom to administer the Quality Control program.

1.3 RESPONSIBILITIES

The organization charts in Appendix A illustrate the lines of authority and areas of responsibility for each of the organizations that are involved in activities affecting quality. Below are listed the departments and organizations that have ~~Q~~quality ~~A~~assurance responsibilities. ~~Specific o~~Organizational responsibilities for implementation of the Quality Assurance Program are described in ~~the corresponding sections~~ **the Topical Quality Requirements (TQRs).**

1.~~2~~3.1	Nuclear Division	1.~~2~~3.2	Support Departments
1.~~2~~3.1.1	Plant Vice Presidents	1.~~2~~3.2.1	Administrative Services - Corporate Records - Documentary Files
1.~~2~~3.1.2	Nuclear Services		
~~1.2.1.3~~	~~Nuclear Construction Services~~	1.~~2~~3.2.2	Environmental Affairs
1.~~2~~3.1.~~4~~3	Nuclear Engineering and Licensing	1.~~2~~3.2.3	Protection &Control Systems
		1.~~2~~3.2.4	Information Management
1.~~2~~3.1.~~5~~4	Nuclear Assurance		
1.~~2~~3.1.~~6~~5	Nuclear ~~Analysis and Controls~~ **Business Services**		

1.~~2~~3.1 Nuclear Division

Throughout plant life, the Nuclear Division maintains control of and responsibility for nuclear power plant design, preoperational and start-up testing, operation, maintenance, refueling, and modification of the plant in accordance with written and approved procedures.

The President Nuclear Division has overall responsibility for the Nuclear Division's activities including corporate responsibility for overall plant nuclear safety. Reporting to the President Nuclear Division are: the Vice President - Turkey Point Plant, Vice President - St. Lucie Plant, Vice President Nuclear Assurance, Vice President Nuclear Engineering and Licensing, Director Nuclear Services, ~~Director Nuclear Construction Services~~, and the Manager Nuclear ~~Analysis and Controls~~ **Business Services.**

The Company Nuclear Review Board (CNRB), reporting to the President Nuclear Division, is comprised of executive level members of management with responsibilities for the execution of the Quality Assurance Program. The CNRB reviews, or directs the performance of reviews of, activities concerning the technical aspects of the operating nuclear power plant insofar as they impact plant safety, the health and safety of the public, and laws, regulations and licensing commitments. In addition, audits of these areas are performed under the cognizance of the CNRB.

The CNRB composition is described in Section 6.0 of each facility's Technical Specifications. Subjects within the purview of the CNRB are listed in the appropriate plant Technical Specifications. The CNRB has the authority to carry out its responsibilities by way of written action letters, verbal directions, meeting minutes or appointed subcommittees. Where necessary, the CNRB may use consulting services to perform required reviews.

The CNRB is responsible for reviewing and evaluating Quality Assurance Program policies and activities. Quality Assurance Program status reports shall be periodically given by the Quality Assurance Department.

CNRB meetings shall be held by the Chairman to keep members apprised of conditions including significant problems that require management attention. Periodic audits of the Quality Assurance Department shall be performed by a team independent of the Quality Assurance Department. The results of this audit are presented to the Vice President Nuclear Assurance and the CNRB.

1.~~2~~3.1.1 Plant Vice Presidents

The Vice President-St. Lucie Plant and Vice President-Turkey Point Plant are accountable for the operation, maintenance, and modification of their respective nuclear plant, as well as the selection, development and direction of the assigned staff. They will act as liaison between the plants and corporate headquarters, and are accountable for ensuring that company policies and procedures are properly implemented and continued at the nuclear site, **including procurement and control of material. The Plant Vice President has overall responsibility for implementation of the Environmental Protection Plans at their respective sites.**

Reporting to the Plant Vice President - Turkey Point Plant are the Plant General Manager, the Services Manager, the Human Resources Manager, the Business Systems Manager, **the Materials Management Manager,** and the Licensing Manager. Also, the Plant Vice President has functional responsibility over the Site Engineering Manager providing work direction to this group.

Reporting to the Vice President - St. Lucie Plant are the Plant General Manager, the Services Manager, the Licensing Manager, **the Materials Management Manager,** and the Human Resources Manager. Also, the Plant Vice President has functional responsibility over the Site Engineering Manager~~, Manager Nuclear Material Management and the Site Construction Manager~~ providing work direction to ~~those~~ **this** group~~s~~.

The Plant General Manager - PSL and Plant General Manager - PTN, through the respective Plant Vice President, are responsible for the operation of the nuclear plant.

The Plant Nuclear Safety Committee (PNSC) at Turkey Point Plant and the Facility Review Group (FRG) at the St. Lucie Plant are comprised of key plant management and staff personnel as described in the plant Technical Specifications. The PNSC/FRG serves the plant manager in a technical advisory capacity for the review of all safety-related procedures and activities that impact plant safety and the facility operating license.

1.~~2~~3.1.2 Nuclear Services

The Director Nuclear Services is accountable for technical staff support to the Nuclear Plants and certain centralized special functions. Reporting to the Director Nuclear Services are the Manager Nuclear Training, Manager Nuclear Security, Manager Nuclear Health Physics/Chemistry and the Manager Nuclear Emergency Preparedness.

a. The Manager Nuclear Training prepares policy documents regarding nuclear training and provides support to secure the necessary resources to ensure that Nuclear Division personnel are adequately trained. They must have adequate technical and job-related skills to provide safe and efficient operation while complying with NRC requirements.

b. The Manager Nuclear Security is responsible for coordinating the overall development and implementation of the FPL nuclear security program

c. The Manager Nuclear Health Physics/Chemistry provides technical support and assistance to the plants in the areas of health physics, chemistry, radioactive waste and hazardous material control.

d. The Manager Nuclear Emergency Preparedness provides technical support and assistance to plant and corporate management for activities associated with radiological emergency plans and procedures.

~~1.2.1.3 Nuclear Construction Services~~

~~The Director Nuclear Construction Services is responsible for directing and administering effective management of the department to ensure compliance to the corporate policies, practices and procedures; and providing qualified construction support personnel to the Site Construction Managers.~~

~~Reporting to the Director Nuclear Construction Services are the Manager Construction Control and the Site Construction Managers.~~

~~a. The Manager Construction Control is responsible for:~~

- ~~monitoring budget performance against planned engineering activities as budgeted by the Construction Services organization;~~
- ~~monitoring the efficient utilization of resources expended against Construction Services budgeted activities; and~~
- ~~ensuring economic utilization of capital construction equipment at all Construction Services locations.~~

~~b. The Site Construction Manager is responsible for:~~

- ~~completing the assigned project in compliance with technical and other project specifications, and for the application of the provisions of the Quality Assurance Manual during the project;~~
- ~~obtaining corrective action (along with Nuclear Materials Management) from contractor's management and, when necessary, exercising the authority to stop work on project activities adverse to quality.~~

~~Reporting to the Site Construction Manager are the Lead Construction Supervisors. The Lead Construction Supervisor is responsible for conformance of project construction activities to the requirements of specifications, codes, regulations and site procedures. The Lead Construction Supervisor supervises the construction personnel assigned to the project, and coordinates construction activities, including the assignment of construction personnel.~~

~~The overall responsibility for Plant Changes and Modifications to operating plants is defined in each plant's Technical Specifications. The work of installation and administration of Plant Changes and Modifications can be assigned to Nuclear Construction Services. The Site Construction Manager will report to the Director Nuclear Construction Services; however, the Vice President PSL or Services Manager PTN has functional responsibility over the Site Construction Manager by providing work direction.~~

~~Project Team Members are appointed by their home department heads as the departmental representative on the respective project, when requested by the Site Construction Manager. Team Members, other than Quality Assurance, report functionally to the Site Construction Manager, but continue to receive administrative support and technical direction from their home department. Team members are responsible to the Site Construction Manager for home department support to the project.~~

~~Activities affecting quality may be performed by FPL or contracted. Should any of these functions be contracted, the contractor may perform the activities under his own Quality Assurance Program, which must have prior approval by FPL Quality Assurance, or the contractor may directly adopt the requirements of the FPL Quality Assurance Manual. If the contractor implements the Quality Control function directly to the FPL Quality Assurance Manual requirements, the contractor's Quality Control Supervisor shall have the authority and freedom to administer the Quality Control program.~~

1.~~23~~.1.~~43~~ Nuclear Engineering and Licensing

The Vice President Nuclear Engineering and Licensing is responsible for nuclear plant design, materials management **at Juno Beach, contract activities** and maintaining the operating licenses.

Reporting to the Vice President Nuclear Engineering and Licensing are the ~~Director - Nuclear Engineering~~, Manager - Turkey Point Engineering, Manager - St. Lucie Engineering, ~~Director - Nuclear~~ **Manager - Licensing and Special Programs,** ~~Director~~ **Manager** ~~- Nuclear~~ Materials Management, ~~Manager~~ **Director** - ~~Nuclear Information Services~~**Technical Support,** Manager~~ - Project Controls, and the Nuclear Records Official~~ **Component Support and Inspections, and the Manager - St. Lucie Steam Generator Repair Project.**

a. Nuclear Engineering ~~Department~~

~~The~~ Nuclear Engineering ~~Department~~ includes personnel located at both nuclear sites and at the corporate office. Nuclear Engineering performs design-related activities and delegates design-related activities to qualified contractors. For activities performed by Nuclear Engineering, the work is governed by FPL's Quality Assurance Program, and Nuclear Engineering is responsible for approval of the design output. Delegated activities are performed in accordance with an FPL approved Quality Assurance Program and the contractor is responsible for approval of design output. Nuclear Engineering is responsible for defining the scope of delegated activities and the responsibilities of the contractor. Prior to the release of design outputs by contractor organizations, Nuclear Engineering ensures that the contractor is technically qualified to perform the design-related activity.

~~The Director - Nuclear Engineering~~ The Manager - Turkey Point Engineering and the Manager - St. Lucie Engineering **provide on-site engineering support and** direct the engineering aspects of all FPL nuclear power plant projects during construction and operation to assure efficient, economical and reliable power plant design, conformance with engineering schedules and budgets and compliance with regulatory requirements. ~~The Manager - Turkey Point Engineering and Manager - St. Lucie Engineering are responsible for on-site engineering support to the nuclear units. The Director - Nuclear Engineering is responsible for engineering projects and support at the Corporate Nuclear Engineering Office. Project Managers are assigned to provide overall management and control of designated projects as required by the Vice President - Nuclear Engineering and Licensing~~.

~~The~~ Nuclear Engineering ~~Department~~ is responsible for:

- power plant design related aspects of the FPL Quality Assurance Program throughout all phases of plant life. This responsibility extends from initial engineering evaluations of plant design-related site characteristics, through preliminary and detailed design, construction, operation and decommissioning;
- development and maintenance of the design control program governing design-related activities performed by Nuclear Engineering and for providing technical support to the Quality Assurance Department for assessing the adequacy, implementation and effectiveness of contractor design control programs;
- the preparation, revision, approval and distribution of plant design records that are identified to be maintained as "as constructed" drawings during plant operation;
- the development, control, and performance of certain aspects of items and services procurement, including establishment of procurement standards, the technical evaluation, equivalency evaluation, and commercial grade dedication of replacement parts/components for nuclear plants.
- review of the technical and quality requirements in procurement requisitioning documents and changes thereto for safety related and quality related items and services, as well as configuration control activities for controlled design documentation associated with procurement. The review shall be performed by individuals other than the document originator;

Aspects of the above activities are performed by the Juno Beach Engineering organization as determined by the Vice President Engineering and Licensing.

- ~~forecasting FPL's nuclear fuel requirements and the availability of nuclear fuel;~~
- ~~determining sources of supply, evaluating alternatives, and negotiating and establishing arrangements with suppliers for acquisition, processing and delivery of nuclear fuel and related services for the nuclear fuel cycle;~~
- ~~assuring that technical and quality requirements (including inputs from~~

~~other FPL departments) are incorporated in fuel contracts and letters of authorization, and that these documents have the necessary approvals;~~

- ~~administering and managing contracts for nuclear fuel and related services to assure that technical and quality obligations are met, and serving as FPL liaison in all matters of nuclear fuel and fuel related contracts;~~
- ~~administering and managing spent fuel disposal contracts with Department of Energy and serving as FPL liaison in matters of nuclear fuel and high level waste disposal;~~
- ~~performing the project management function with respect to fuel management, design, licensing, delivery and other technical aspects of nuclear fuel;~~
- ~~all fuel related design, analyses, reviews, and technical assistance necessary to ensure the safe, reliable, and economic operation of the nuclear plants;~~
- ~~the optimization of nuclear fuel cycle economics within nuclear safety and operating constraints, as well as providing fuel related information, such as forecasts of nuclear fuel requirements to support licensing and regulatory requirements;~~
- ~~the development and/or review of fuel and nuclear physics design;~~
- ~~implementing and maintaining the FPL corporate nuclear material accountability program as outlined in the FPL Special Nuclear Material Control Manual;~~
- ~~providing support to the Quality Assurance Department for their auditing of nuclear fuel design and fuel assembly manufacturing;~~
- ~~performing audits and coordinating accountability reporting on all nuclear fuel;~~
- ~~developing and providing, to appropriate FPL groups, information necessary to determine FPL's fuel related costs and to finance fuel related expenditures;~~
- ~~providing technical support of activities associated with component reliability, materials evaluations, inspections, corrosion protection, non-destructive examination, and ASME Section XI implementation/problem resolution for nuclear plant components;~~

- ~~providing specific component expertise, metallurgical support, and non-destructive examination and inspections;~~
- ~~establishing the FPL Welding Program to meet the requirements of the Quality Assurance Program and applicable codes and standards;~~
- ~~developing, maintaining, and controlling the FPL Welding Control Manual to implement the FPL Welding Program;~~
- ~~originating and qualifying welding procedure specifications; and~~
- ~~providing technical direction to personnel within the FPL Welding Program.~~

b. ~~Nuclear~~ Licensing and Special Programs ~~Department~~

~~The Nuclear~~ Licensing and Special Programs ~~Department~~ is responsible for engineering activities at the Juno Beach office and licensing activities as follows:

- Engineering assurance;
- Probalistic risk management;
- Electrical engineering support;
- Civil engineering support;
- Mechanical engineering support;
- Configuration management and document control;
- Nuclear Division corporate interface with the NRC;
- Nuclear Division corporate administrative point of contact with INPO;
- Managing NRC safety and regulatory issues and developing effective strategies to resolve them;
- Advising senior Nuclear Division management on a regular basis of important developments in licensing areas which could significantly affect the Nuclear Division;
- Providing Nuclear Division licensing hearing and legal services;
- Providing corporate licensing support and guidance to onsite licensing organizations;
- Administering the Nuclear Problem Reporting System;
- Administering the Commitment Tracking System;
- Administering the Operating Experience and Feedback System.

c. ~~Nuclear~~ Materials Management ~~Department~~

~~The Nuclear~~ Materials Management ~~Department~~ is responsible for:

~~o negotiation, procurement and management of contracts (except nuclear fuel);~~

~~o purchase and control of materials;~~

~~o and the administrative duties to support these activities; Reporting to the Director Nuclear Materials Management are the Supervisors of Contracts (Juno Beach), and the Site Managers of Nuclear Materials Management (Turkey Point and St. Lucie).~~

~~1) Nuclear Contracts~~

~~Nuclear Contracts is responsible for~~

o negotiation, generation, ~~and~~ issuance, **and management** of contracts **(except nuclear fuel)** and purchase orders for required contracted services supporting the operation, licensing, maintenance, modification, and inspection of FPL nuclear plants, and for materials and equipment to support Nuclear Division staff; ~~The Site Managers of Nuclear Materials Management (Turkey Point and St. Lucie) are responsible for Nuclear Contracts activities performed at the respective sites. The Supervisors of Contracts (Juno Beach) are responsible for Nuclear~~

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~~Nuclear Contracts is also responsible for~~

o reviewing procurement documents to assure that technical and quality requirements developed by others are incorporated into the procurement documents which it authorizes;

o ~~and~~ **ensuring** that ~~the~~ requisitioning documents have the required approvals; ~~Services for nuclear safety related applications are secured only from approved suppliers, or as commercial grade, as applicable. Nuclear Contracts is responsible for~~

o maintaining traceability of procurement document records **for which**

they are responsible until transmitted to an approved storage facility.

~~2) Purchasing and Warehousing~~

~~The Site Managers of Materials Management (Turkey Point and St. Lucie) are responsible for the procurement and control of FPL Nuclear Plant materials and equipment.~~

- ~~Purchasing is responsible for the procurement of materials and equipment by FPL for its nuclear power plants with the exception of nuclear fuel procurement. Materials and equipment for nuclear safety related application are secured only from approved suppliers, or as commercial grade, as applicable. Purchasing is responsible for reviewing procurement documents to assure that technical and quality requirements developed by others are incorporated into the procurement document which it authorizes, and that the requisitioning documents have the required approvals. Purchasing is responsible for maintaining traceability of procurement document records until transmitted to an approved storage facility.~~
- ~~Warehousing is responsible for the receipt, handling, storage, issue and shipping of materials and equipment received at the nuclear plant for control by Warehousing. This responsibility encompasses material, parts and components for plant equipment while in their care and custody. During operations, Warehousing also performs additional quality related activities such as receipt inspection of other than safety related materials and equipment and handling and segregation for nonconforming items received for material control.~~

~~d. Project Controls Department~~

~~The Project Controls Department is responsible for:~~

- ~~Coordinating the establishment of scope baseline for the Nuclear Engineering, Nuclear Materials Management, and Nuclear Licensing~~

~~Departments.~~

- ~~Developing estimates for the scope, and annually establishing budgets for the work to be performed.~~
- ~~Monitoring cost and schedule performance.~~
- ~~Reforecasting costs and schedule based on performance history and emergent trends.~~
- ~~Providing management with corrective action recommendations, and implement same into revised scope, cost, and schedule baselines.~~

~~e~~d. Nuclear ~~Information Services Department~~ **Technical Support**

~~The~~ Nuclear ~~Information Services Department~~ **Technical Support** is responsible for the identification, design, development, implementation, on-going maintenance, and control of all Nuclear Division data processing information systems excluding process applications.

This encompasses the following accountabilities:

- o directing the development, implementation, and on-going maintenance of information management systems;
- o coordinat~~e~~ing and directing the computer hardware and telecommunication planning and control within the Nuclear Division;
- o ensur~~e~~ing that the Nuclear Division's information management program is in full compliance with software quality assurance regulations and guidelines;
- o administering and controlling system access;
- o execut~~e~~ing software production release and change control activities;
- o administering physical databases and provid~~e~~ing on-going technical support

Nuclear Technical Support is also responsible for nuclear fuel engineering and procurement activities including the following:

- o **determining sources of supply, evaluating alternatives, and negotiating and establishing arrangements with suppliers for acquisition, processing and delivery of nuclear fuel and**

related services for the nuclear fuel cycle;

- o assuring that technical and quality requirements (including inputs from other FPL departments) are incorporated in fuel contracts and letters of authorization, and that these documents have the necessary approvals;
- o administering and managing contracts for nuclear fuel and related services to assure that technical and quality obligations are met, and serving as FPL liaison in all matters of nuclear fuel and fuel-related contracts;
- o administering and managing spent fuel disposal contracts with Department of Energy and serving as FPL liaison in matters of nuclear fuel and high level waste disposal;
- o performing the project management function with respect to fuel management, design, licensing, delivery and other technical aspects of nuclear fuel;
- o all fuel related design, analyses, reviews, and technical assistance necessary to ensure the safe, reliable, and economic operation of the nuclear plants;
- o the optimization of nuclear fuel cycle economics within nuclear safety and operating constraints, as well as providing fuel related information, such as forecasts of nuclear fuel requirements to support licensing and regulatory requirements;
- o the development and/or review of fuel and nuclear physics design;
- o implementing and maintaining the FPL corporate nuclear material accountability program as outlined in the FPL Special Nuclear Material Control Manual;
- o providing support to the Quality Assurance Department for their auditing of nuclear fuel design and fuel assembly manufacturing;
- o performing audits and coordinating accountability reporting on all nuclear fuel;

~~f. Nuclear Records Official~~

The Nuclear Records Official, **reporting to the Director Technical Support,** is responsible for:

- o ensuring the Quality Assurance records program activities are managed in accordance with applicable laws and regulations;
- o developing, approving, and maintaining record retention schedules;
- o establishing parameters for records indexing;
- o locating acceptable record storage areas when requested;
- o storage, retrieval and control of records/documents as requested by other departments;
- o leading the evaluation of specially designated QARSET approved storage facilities, maintaining ~~the~~ records of this evaluation, and establishing schedules to assure that re-evaluations are performed every two (2) years.

e. Component Support and Inspections

Component Support and Inspections is responsible for providing support to the plants as follows:

- o **providing technical support of activities associated with component reliability, materials evaluations, inspections, corrosion protection, non-destructive examination, and ASME Section XI implementation/problem resolution for nuclear plant components;**
- o **providing specific component expertise, metallurgical support, and non-destructive examination and inspections;**
- o **establishing the FPL Welding Program to meet the requirements of the Quality Assurance Program and applicable codes and standards;**
- o **developing, maintaining, and controlling the procedures and instructions to implement the FPL Welding Program;**
- o **originating and qualifying welding procedure specifications; and**
- o **providing technical direction to personnel within the FPL Welding Program.**

The Vice President Nuclear Assurance is responsible for the selection, technical direction, administrative control (e.g. performance appraisal, salary review, hire/fire, position assignment) staffing, training and development of personnel required for supervisory and operating continuity of the Quality Assurance Department and the Nuclear Safety Assessment Group. The Vice President Nuclear Assurance also initiates QA Program policy changes when necessary. In addition, the Vice President Nuclear Assurance is responsible for selecting a team independent of the Quality Assurance Department to perform periodic audits of the Quality Assurance Department. The results of these audits are presented to the Vice President, Nuclear Assurance and the Company Nuclear Review Board (CNRB).

Reporting to the Vice President Nuclear Assurance are the Director Nuclear Safety Assessment, the Site Quality Manager - Turkey Point, the Site Quality Manager - St. Lucie and the Quality Manager - Juno Beach, ~~and the PSL Steam Generator Project (SGP) Quality Assurance Manager for quality direction.~~

~~b~~a. Nuclear Safety Assessment ~~Group~~

The Director Nuclear Safety Assessment has responsibility for the management and implementation of Nuclear Safety Speakout, PSL and PTN Independent Safety Engineering Groups (ISEG), and the CNRB subcommittee, ~~Additionally, he~~ and serves as the CNRB Chairman. ~~Reporting to the Director Nuclear Safety Assessment are the Chairmen of ISEG at PTN and PSL, the Supervisors Nuclear Safety Speakout at PTN and PSL, the Nuclear Safety Speakout investigators at Juno Beach, and the CNRB Subcommittee Chairman.~~

The Nuclear Safety Speakout Program provides a forum for employees and contractors to communicate their concerns to FPL. Concerns are documented, investigated and corrective actions are taken when necessary. The program offers confidentiality.

~~c~~b. Quality Assurance Department

The Quality Assurance Department shall be responsible for administering the FPL Quality Assurance Program. This includes developing and verifying implementation of corporate policies, plans, requirements, and procedures affecting quality. This is accomplished through the Quality Assurance Department. The Quality Assurance Department retains responsibility for delegated portions of the Quality Assurance Program by performing initial evaluation and subsequent periodic audits of the contractors' Quality Assurance Programs. The Quality Assurance Program responsibility further extends to the performance of audits within the Company to assure management that the established requirements and procedures are being implemented, and that the Program complies with the baseline document requirements.

The organizational freedom of the Quality Assurance function is accomplished through the corporate structure, illustrated in Appendix A, which provides independence from those departments responsible for design, procurement, engineering, construction and operation. With quality assurance as its sole function the Quality Assurance Department, both on-site and off-site, is completely free from the cost and scheduling pressures of design, procurement, construction and operation. The Quality Assurance Department has the freedom and authority to: a) identify quality problems; b) initiate, recommend or provide corrective action; c) verify implementation of the corrective action; and d) recommend the stoppage of work or operations adverse to quality, when necessary. The Quality Manager - Juno Beach, the Site Quality Manager - St. Lucie and the Site Quality Manager - Turkey Point report administratively and functionally to the Vice President Nuclear Assurance. These reporting relationships assure that the Quality Assurance Department has direct access to the levels of management necessary to assure effective implementation of the Quality Assurance Program.

The duties, responsibilities, and authorities of each Quality Assurance group are described in the sections which follow.

1) Quality Assurance Services ~~Group~~

The Quality Manager - Juno Beach directs and administers the Corporate Quality Assurance Program assuring compliance with the baseline documents listed in Appendix C of this Topical Quality Assurance Report. Quality Assurance Services ~~Group~~ activities include the following:

- o develop and maintain the Quality Assurance Department Quality Instructions and the corporate Quality Assurance Manual, including the administration of the Quality Assurance Program Review Committee (QAPRC);
- o assist other departments in the development of Quality Instructions by review and comment and through interpretation of corporate Quality Assurance requirements;
- o develop and implement a Quality Assurance indoctrination program for FPL personnel, and a training program for the Quality Assurance Department;
- o prepare reports on Quality Assurance Program activities for review by the CNRB;
- o review Regulatory Guides, Codes, SAR Document Commitments and Standards for impact on the Quality Assurance Program and recommend appropriate program changes;
- o review documents submitted to the CNRB as requested by the Nuclear Assurance Department CNRB member;
- o plan, coordinate and implement a comprehensive system of periodic internal audits with support from the other Quality Assurance groups, when necessary;
- o review FPL originated design specifications for inclusion of appropriate quality requirements.
- o perform periodic activity audits of FPL procurement and associated documents and changes to these documents to assure that the necessary quality requirements are imposed.
- o assist in the development and implementation of policies, plans, requirements and procedures for the requisition and purchase of materials, equipment and services related to nuclear power plants and to the acceptance and storage of equipment and material;

- o perform appropriate surveillance of hardware during manufacture;
- o develop and implement a program for auditing of supplier Quality Assurance/Quality Control programs including Architect Engineer/Nuclear Steam Supply System Suppliers;
- o assure design-related activities performed by the Architect Engineer meet the quality aspects of the contract;
- o assist other FPL departments in the identification of quality problems associated with procurement and storage; initiate, recommend, or provide solution; and verify implementation of solutions;
- o review, approve and periodically audit the execution of FPL contractor quality assurance programs;
- o assure~~s~~ that the contractors' organizations performing Quality Assurance functions have sufficient authority and organizational freedom to implement effective Quality Assurance programs;
- o evaluate the Quality Assurance capability of suppliers requested by ~~the Nuclear~~ Materials Management ~~Department~~ and maintain the Quality Assurance Department list of ~~A~~approved ~~S~~suppliers ~~List~~;
- o provide NDE Level III services including technical direction and monitoring of NDE activities performed by Quality Control at the plant sites (PTN and PSL); preparation, revision and implementation of NDE procedures; training, testing and qualification of NDE personnel, and providing the programs and direction for NDE activities meeting the ASME, AWS and other NDE code requirements;
- o maintain a file system for documentation of quality assurance activities performed.

For purchased items and services, the responsibility of this group extends through receipt of shipment or performance of contract.

2) Site Quality Assurance ~~Groups~~ - Turkey Point Nuclear (PTN) and St. Lucie (PSL)

Quality Assurance activities at the plant sites (PTN and PSL) are accomplished by the respective site Quality Assurance ~~G~~groups, reporting

to the Site Quality Manager. The Site Quality Manager has responsibility for on-site development and implementation of the Quality Assurance Program, including the following:

- coordinate the development and implementation of policies, plans, requirements, and procedures for portions of the quality assurance program related to the operation and modification of nuclear power plants at the plant site;
- perform audits, assessments and other observations as specified in procedures and instructions to verify compliance with Quality Assurance Program commitments, identify quality problems and ensure timely corrective actions are taken in the areas of plant operation, system turnover, modification and maintenance; including such areas as refueling, inservice inspection and testing, material storage, health physics, chemistry, plant security and fire protection;
- perform periodic activity audits of site generated FPL procurement and associated documents and changes to these documents to assure that the necessary quality requirements are imposed;
- identify requirements, ensure inclusion of commitments in documents and verify implementation of the Quality Assurance Program during construction activities at the plant site through audits of FPL and contractor organizations;
- recommend stoppage of work or operations adverse to quality at the plant site in accordance with the appropriate ~~Quality~~ **instructions** ~~Procedures;~~
- review and comment on Quality Instructions or equivalent quality administrative procedures prior to issue, with respect to the requirements of the FPL Quality Assurance Program, the applicable Final Safety Analysis Report, and the applicable Technical Specifications;
- assure that the status is tracked for all open items identified by the Site Quality Assurance group, and inform appropriate management when there is an indication that a commitment will not be met on time;
- ~~review backfit procedures with respect to the FPL Quality Assurance~~

~~Program (for procedure review requirements see TQR 5.0);~~

- o perform audits of the architect engineer and Nuclear Steam Supply System suppliers both on-site and off-site, in conjunction with the Quality Assurance Services group
- o maintain a file system for documentation of quality assurance activities performed by the Site Quality Assurance group.

The interface with the Quality Assurance Services group ends with the receipt of a shipment of nuclear safety-related equipment at the plant site. The Quality Assurance program for the shipment is then within the purview of the Site Quality Assurance group.

The Quality Manager - Turkey Point and Quality Manager - St. Lucie are additionally responsible for the establishment and implementation of quality control aspects of the Quality Assurance Program at the plant site. Reporting directly to the Site Quality Manager are the Quality Control Supervisors who have the authority and freedom to administer the Quality Control program and, when necessary, to stop activities adverse to quality. The Quality Control Supervisors and personnel performing Quality Control inspection functions are required to be independent of groups or persons performing activities that they may be required to verify or inspect.

Quality Control ~~efforts~~ **responsibilities** include:

- o preparation and review of plant procedures, ~~PCMs~~ **design control documents**, and instructions for activities affecting quality; ~~Quality Control personnel are also responsible for~~
- o inspection, monitoring, surveillance, and review of plant activities to verify compliance with the provision of the facility operating license and the Quality Assurance Manual;
- o inspections ~~are also performed~~ to assure that ~~backfit~~ activities meet the requirements of engineering drawings, specifications, codes and standards;
- o ~~This responsibility extends from~~ receipt inspections of material;

- o ~~on-site to~~ acceptance of the installed items ~~prior to turnover to the Plant; It also includes~~
- o verification of conformance of ~~an~~ items or activit~~y~~ies ~~accomplished during this period~~ to quality requirements (e.g., records review, NDE, inspections); ~~The Quality Control Supervisors shall take~~
- o corrective action for deficiencies identified, where applicable;
- o ~~and shall~~ follow up on corrective action taken by other organizations until close out.

Off-site interfaces for the resolution of quality problems and NRC items are with Nuclear Corporate Staff, FPL support departments as indicated in this Topical Quality Assurance Report, the architect engineer and the Nuclear Steam Supply System (NSSS) Quality Assurance Department. The Site Quality Assurance group interfaces with the Plant Vice President and his staff on-site by assisting in the resolution of quality problems.

1.~~23~~.1.~~65~~ Nuclear ~~Analysis and Controls~~ **Business Services**

The Manager Nuclear ~~Analysis and Controls~~ **Business Services** ~~, reporting to the President Nuclear Division,~~ is responsible for coordinating the budget, rate, and cost control support to the plants and staff organizations; and coordinating Division business planning, target setting and monitoring of key performance indicators, and operations analysis activities.

1.~~23~~.2 Support Departments

Providing support activities for the Nuclear Division are Administrative Services, Environmental Affairs, Protection & Control Systems, and Information Management. The reporting relationship of each department is described in the following sections and is shown in Appendix A.

1.~~23~~.2.1 Administrative Services

~~Reporting to the Manager Administrative Services are the Supervisor Corporate Records~~

~~Services and the Supervisor Documentary Files.~~

~~a. Corporate Records Services~~

The ~~Supervisor Corporate Records~~ **Manager Administrative Services** is responsible for:

- storage, retrieval and control of Quality Assurance records received from other departments;
- assisting with the development and implementation of records and micrographics programs;
- maintaining a QARSET approved storage facility;

~~b. Documentary Files~~

~~The Supervisor Documentary Files is responsible for~~

- receiving, maintaining, retrieving and storing the Quality Assurance records **transmitted from other departments** in connection with licenses and contracts ~~received from other departments~~.

1.~~23~~.2.2 Environmental Affairs

Environmental Affairs is responsible for obtaining the federal and state environmental permits required for FPL facilities and operations. Environmental Affairs is responsible for overall coordination of non-radiological environmental monitoring (federal and state) programs at the nuclear power plant sites.

~~The Manager Hazardous Substances Regulation, the Manager New Construction Licensing and Planning, the Manager Air and Water Permitting and Programs, the Chief Ecologist, and the Environmental Toxicologist report to the Director Environmental Affairs.~~ The Plant Vice President has overall responsibility for implementation of the Environmental Protection Plans at nuclear power plant sites.

The **Director** Environmental Affairs ~~Department~~ through ~~its~~ management of the Company Environmental Review Group (CERG) is responsible for:

- overall coordination of non-radiological environmental monitoring programs and

oversight of other requirements related to the Environmental Protection Plans;

- ~~The CERG~~ provide~~s~~ing review of proposed changes to the Environmental Protection Plans;
- review of any violations of monitoring and/or limitation requirements of federal and state permits and Environmental Protection Plans; ~~and~~
- review of plant activities as described in ~~those~~ Environmental Affairs Department Environmental Procedures subject to QA requirements.

The CERG provides information to the Director Environmental Affairs and the CNRB Chairman on environmental matters for which requirements are included in Environmental Protection Plans.

1.~~2~~3.2.3 Protection & Control Systems

The Director of Protection & Control Systems reports to the Vice President of Power Delivery.

Protection & Control Systems is responsible for:

- test, calibration and maintenance of certain high voltage electrical protective relays for safety-related systems of the nuclear plant;
- ~~Activities of Protection & Control Systems include~~ final wiring connection checks;
- preoperational check-out and test of system protection devices; ~~and~~
- providing inspection of equipment under their cognizance; ~~Additional responsibilities include~~
- providing certain setpoint and checkpoint values for protective devices.

1.~~2~~3.2.4 Information Management

Information Management consists of Computer Operations Services, Client Services, and Quality Management reporting to the Vice President of Information Management.

The Computer Operations Services Department is responsible for the installation and

maintenance of the operating system software and the operation of the computer hardware for FPL's corporate computer systems. The application programs used by the nuclear departments executes on these corporate computers.

~~The Manager Computer Center, the Manager Operations Support Services, and the Manager Technical Systems report to the Director Computer Operations Services.~~

Client Services is responsible for software libraries on FPL's in-house time-sharing Computer System (CMS) that are under its control.

Quality Management provides support to the Nuclear Division in their development and maintenance of computer applications in the area of software library controls.

2.1 GENERAL REQUIREMENTS

Florida Power & Light Company has established a Quality Assurance Program which complies with the criteria of 10 CFR 50 Appendix B, and meets the requirements of Regulatory Guides and Industry Standards referenced in Appendix C of this report. The Topical Quality Requirements and attached Policy Statement, together with ~~the Quality Procedures and~~ Quality Instructions document the Program and the FPL policy with regard to Quality Assurance. This Program shall be instituted for each plant site in a schedule consistent with accomplishing the required activity and shall be carried out throughout the life of FPL nuclear plants.

The requirements of the FPL Quality Assurance Program shall only apply to nuclear safety related structures, systems, and components as identified in the Safety Analysis Report for each nuclear unit. Additionally, the requirements of the FPL Quality Assurance Program shall apply to all FPL, contractor, or consultant organizations performing activities affecting the quality of safety related structures, systems, and components of FPL nuclear power plants. **Portions of the FPL Quality Assurance Program requirements are also applicable to Quality Related items and services. Those portions applicable to specific Quality Related items or services shall be delineated in appropriate instructions.**

Documented procedures shall require and define indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

Periodic program reviews of the status and adequacy of the FPL Quality Assurance Program shall be accomplished by the independent audit team described in Section 2.2.6.d and by Quality Assurance Department audits.

Management of organizations outside Florida Power & Light Company participating in the Program shall be required to regularly review the status and adequacy of that part of the FPL Quality Assurance Program which they are executing. The FPL Quality Assurance Department shall review and concur in the Quality Assurance Program of contractors.

2.2 IMPLEMENTATION

2.2.1 Goals and Objectives

As stated in the Policy Statement of the President of the Nuclear Division, the goal of the FPL Quality Assurance Program is to maintain quality levels in an effective and efficient manner, and to assure the high degree of functional integrity and reliability of nuclear safety related structures, systems, and components. To meet this goal, the following objectives of the FPL Quality Assurance Program have been defined:

a. Define through documented procedures and instructions the quality activities that apply to the design, fabrication, procurement, modification, testing, operation, refueling, maintenance, and repair of nuclear power plants;
b. Establish, assign, and document the responsibilities for those activities affecting quality of safety related structures, systems, and components;
c. Establish confidence that the design, fabrication, modification, and operation of nuclear power generation facilities are performed in a manner consistent with FPL policies by assuring activities affecting quality are performed by responsible personnel;
d. Apprise management of unresolved problems and trends which could have a significant effect on nuclear power plant safety; and
e. Prevent schedule delays and high cost due to poor quality.

2.2.2 Program Documentation

The Topical Quality Assurance Report, which defines the policy, goals, ~~and~~ objectives, **responsibilities and interfaces** regarding the Quality Assurance Program, shall be contained in the FPL Quality Assurance Manual, and used as guidance for the development of ~~corporate-level Quality Procedures~~ **Quality Instructions.** ~~which are also contained in the Quality Assurance Manual,~~ Revisions to the Topical Quality Assurance Report will be made, as needed, to reflect current FPL program requirements

and descriptions of activities. These revisions shall be made in accordance with ~~a Quality Procedure~~ **a Quality Instruction.** If a program reflects a reduction of the commitments from the baseline documents contained in Appendix C, the revision shall be submitted to and approved by the NRC prior to implementation.

In all other cases, amendments to the Topical Quality Assurance Report will be submitted to the NRC to reflect implemented program revisions on an annual or more frequent basis.

~~Quality Procedures shall be written by the department with major responsibilities for an activity, or by the Quality Assurance Department when requested. These procedures shall be reviewed by all the departments with responsibility for some portion of that procedure, and shall be approved by the major implementing departments with co-approval by the Vice President Nuclear Assurance. A listing of corporate level Quality Procedures is contained in Appendix E.~~

~~Each Quality Procedure shall be written to further address criteria contained in the Topical Quality Requirements and to further define the FPL Quality Assurance policies, plans, and program where action is required by more than one department.~~

Each department head shall have the responsibility for implementation of the Quality Assurance Program, which includes compliance with procedure requirements applicable to the department. In addition, each department head shall be responsible for the preparation, approval, and distribution of Quality Instructions, operating procedures, testing procedures, or other instructions where further guidance is necessary for implementation of the Quality Assurance Program requirements within the department. Quality Instructions shall be reviewed by the Quality Assurance Department at each revision.

2.2.3 Structures, Systems, and Components

The requirements of the FPL Quality Assurance Program shall apply to nuclear safety related structures, systems, and components, as defined in the SAR. Safety related structures, systems, and components are listed as those necessary to assure the integrity of the reactor coolant boundary, the capability to shutdown the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in off-site exposures comparable to the guideline exposures of 10 CFR 100.

Control over activities affecting the quality of safety related structures, systems, and components shall be to the extent consistent with their importance to safety. Such control shall include use of appropriate equipment, establishment of suitable environmental conditions, and assurance that all prerequisites for a given activity have been satisfied. The Program shall provide for controls over special processes and skills necessary to attain the required quality, and the need for verification of quality by inspection and test.

~~Advance planning is required, for the control of management and technical interfaces between FPL and contractors, during the phase out of design and construction and during preoperational testing and plant turnover. This is achieved through periodic meetings of concerned organizations and the development of procedures which define responsibilities and interfaces, and control the testing and turnover of plant systems to FPL.~~

2.2.4 Participating Organizations

The FPL organizations with responsibilities for activities affecting quality of nuclear safety related structures, systems, and components are identified in TQR 1.0, which also briefly describes their assigned responsibilities.

Florida Power & Light Company may delegate activities to contractor organizations and equipment vendors. Delegated activities are subject to the external organization's FPL approved Quality Assurance Program or the FPL Quality Assurance Program, or some FPL approved combination thereof.

However, FPL shall retain overall responsibilities for the Quality Assurance Program. Procurement documents shall define the scope of delegated activities, as well as Quality Assurance Program requirements that shall govern these activities.

The Quality Assurance Department shall review and approve the Quality Assurance Program governing contracted activities prior to award of contract except for activities for which the output is of a conceptual and/or prototype nature. In all cases, final approval shall occur at a point in the process to ensure that the output complies with the requirements of the FPL approved Quality Assurance Program. The object of this review shall be to verify that the program is in compliance with the applicable requirements of Appendix B, 10CFR50, and ANSI N45.2. Audits shall be conducted periodically to verify the acceptable implementation of the contractor's FPL approved Quality Assurance Program governing delegated activities. The Quality Assurance Department is responsible for conducting these audits. The initial review and periodic audits shall be performed by qualified Quality Assurance Department personnel, and as appropriate, by technical specialists from other FPL departments and contractor organizations.

2.2.5 Indoctrination and Training

A program shall be established and maintained for quality assurance indoctrination, and for training which assures that the required level of personnel competence and skill is achieved and maintained in the performance of activities affecting quality. ~~Quality Procedures~~ **Instructions** shall delineate the requirements for an indoctrination program to assure that personnel responsible for performing activities affecting quality are instructed in the purpose, scope, and implementation of the manuals, instructions, and procedures and that compliance to these documents is a mandatory requirement.

~~Quality Procedures~~ **Instructions** shall also require the head of each department ~~(including the Quality Assurance Department)~~ to be responsible for a training plan which assures that personnel performing activities affecting quality are trained in the principles and techniques of the activity being performed. This training shall maintain the proficiency of personnel in the skills necessary through retraining, requalification or reexamination, as appropriate. **This training shall be conducted to reflect significant procedure changes, or plant modifications which significantly affect the operation of the department.** When personnel are assigned to perform their functions under the direction of personnel from other than their home department, the department head of the organization providing direction is responsible for the indoctrinaton and training of personnel who perform activities under their direction. ~~Quality Procedures~~ **Instructions** shall specify the requirements for documenting indoctrination and training sessions, including a course description, attendance, location, and date. **Records shall contain sufficient information to identify persons in attendance with the corresponding lesson plans.**

2.2.6 Management Participation

In addition to the involvement of department heads in implementing the Quality Assurance Program within their departments and the involvement of the Vice President Nuclear Assurance and the Quality Manager - Juno Beach in the development, coordination, and review of the Program, the Company Nuclear Review Board (CNRB) shall be apprised of the status and adequacy of the Quality Assurance Program on a periodic basis. The following actions shall be instituted to assure that the CNRB remains informed and meets its Program responsibilities:

a. The CNRB shall review a summary of the results of management level Quality Assurance audits of FPL Departments.

b. The Quality Assurance Department shall circulate monthly reports of activities to members of the CNRB and affected department heads. The monthly reports may include such items as the status of audits, a summary of audit findings, the status of development projects, and descriptions of policy matters or problems requiring management attention.

c. The CNRB shall review the status of the Quality Assurance Program on a semiannual basis. The review will include assessment of the Program goals, objectives, and accomplishments.

d. Periodic audits of the Quality Assurance Department and Program shall be conducted by an independent audit group under the direction of the Vice President Nuclear Assurance. This audit group shall employ FPL audit procedures and shall distribute the audit report to the Vice President Nuclear Assurance, and to the CNRB for review of findings and corrective action. Auditor certifications of independent audit teams will be retained by the Quality Assurance Department.

The programs of contractor organizations that perform activities affecting quality shall be reviewed by Quality Assurance to assure that their management regularly reviews the status and adequacy of that part of the FPL Quality Assurance Program which they are executing.

2.3 RESPONSIBILITIES

2.3.1 Each direct report of the President, Nuclear Division and Department Heads of organizations supporting the Nuclear Division shall be responsible for:

1. Reviewing changes to the FPL QA Manual and determining the need for departmental instructions, revising existing instructions, and approving instructions;
2. Controlling distribution and coordinating the use of the instructions with affected organizations and functions;
3. Submitting Quality Assurance Indoctrination (QAI) lesson plans to the Vice President Nuclear Assurance for approval to conduct their own QAI.

2.3.2 The Vice President Nuclear Assurance has overall responsibility for:

1. Development, coordination, and periodic reviews of the status and adequacy of the FPL Quality Assurance Program;
2. Establishing, conducting, reviewing and authorizing the implementation of FPL's requirements for QAI;
3. Coordinating revisions to the Topical Quality Assurance Report.

3.1 GENERAL REQUIREMENTS

A Quality Assurance Program shall be established for design-related activities. . ~~This~~ The design control program shall ensure that the design is defined, controlled and verified; that applicable design inputs are specified and correctly translated into design output documents; that design interfaces are identified and controlled; that design adequacy is verified by persons other than those who designed the item; and that design changes, including field changes, are governed by control measures commensurate with those applied to the original design.

Design records shall be developed to provide evidence that the design process and design verification were performed in accordance with the requirements of FPL's Quality Assurance Program. ~~The design organization (Nuclear Engineering or designated contractor organization) shall be responsible for the content of these records.~~

Design records shall include design output documents and the important steps in the design effort. The intent of this documentation is to allow a technically qualified person to understand how the design was developed, and to allow that person to verify the design based on the design documentation and engineering data sources referenced therein.

Documents and databases designating safety related and quality related items and any revisions thereto shall be controlled in accordance with the FPL QA Program requirements.

3.2 IMPLEMENTATION

The controlling document for the identification of safety related items shall be the FSAR. Where the FSAR is not definitive for a specified plant, Nuclear Engineering shall develop and maintain documents/databases identifying those items which are safety related (e.g., plant equipment database, Instrument List, Valve List, Line List, drawings, etc). These documents/databases shall clearly identify the boundaries of safety related

systems and may take the form of identifying boundaries on engineering drawings. For quality related items, Nuclear Engineering shall specify explicitly those aspects of design, manufacture, procurement, installation, and testing that shall be subject to the FPL QA Program requirements, as appropriate, in the design output documents (e.g., Plant Change/Modification package).

The design organization's Quality Assurance Program for design control shall be approved by the FPL Quality Assurance Department prior to the release of approved design output by the design organization. The design organization is the organization responsible for approval of design output. ~~Quality Procedures and~~ Quality Instructions shall be developed to delineate design control requirements governing design-related activities performed by Nuclear Engineering and for delegating activities to contractor organizations.

Design data approved by the design organization shall be transmitted in design output documents such as specifications, drawings, and other documents defining technical requirements or in correspondence which may reference these documents. Transmittals shall identify the status of design information or documents provided, and where necessary, identify incomplete items which require further evaluation, review, or approval. A standard PC/M and numbering system shall be established and used at each plant to ensure that all PC/Ms are handled in a uniform manner and properly documented. Nuclear Engineering shall forward the approved PC/M to the applicable Plant Vice President. Internal plant coordination and review of design control documents shall be controlled by approved instructions.

3.2.1 Design Process

The design organization shall specify and document its design activities to the level of detail necessary to permit the design to be developed in a correct manner and to permit verification that design output documents satisfy design input requirements.

Design methods, materials, parts, equipment and processes, including those associated with commercial grade items that are essential to the function of the ~~structure, system or component~~ **item** shall be selected, reviewed and approved for suitability of application by the design organization.

Design inputs shall be identified, documented, reviewed and approved by the design organization. They shall be specified to the level of detail necessary to permit the design activity to be carried out in a correct manner, and to provide a consistent basis for making design-related decisions, performing design verification and evaluating design changes. Changes to approved design inputs, including the reason for the changes, shall be approved, documented and controlled by the design organization.

The design organization shall identify aspects of manufacture, construction, inspection and testing critical to achieving the function of the ~~structure, system or component~~ **item**. Quality standards and quality requirements shall be specified on design output documents. Changes from approved quality-~~related~~ requirements specified in design output, including the reason for the changes, shall be approved, documented and controlled by the design organization.

Design analyses shall be controlled and documented. Approved design output documents and approved changes thereto shall be relatable to the design input by documentation in sufficient detail to permit verification. The design organization shall establish procedures to review industry design experience. As appropriate, this experience shall be made available to cognizant design personnel.

3.2.2 Design Change Control

Changes to approved design output documents, including field changes, shall be justified, subjected to control measures commensurate with those applied to the original design, and shall be reviewed and approved by the same design organization that approved the original design unless other organizations are specifically designated.

Where a significant design change is necessary because of an incorrect design, Nuclear Engineering shall determine the cause of the incorrect design. As necessary, design and verification procedures shall be reviewed and modified to correct the cause of the incorrect design.

~~During the operations phase, d~~Design changes shall ~~also~~ be reviewed~~ by operating plant management and Quality Control. The intent of this review is~~ to ensure that implementation of the design change is coordinated with any necessary changes to operating procedures and practices, and required **Nuclear Assurance**~~ Quality Control Surveillance~~ activities, **such as inspections and surveillances.**

In accordance with plant technical specification requirements, nuclear safety-related design changes are reviewed by the Plant Nuclear Safety Committee (PNSC) or Facility Review Group (FRG) and the Company Nuclear Review Board (CNRB).

3.2.3 Design Interface Control

~~The design organization shall be responsible for identification, control, resolution and documentation of design interface requirements. Procedures~~ **Quality Instructions** shall establish interface controls between participating organizations and between the various technical disciplines within the design organization. These **Quality Instructions** ~~procedures~~ shall include the assignment of responsibility, and be in sufficient detail to cover the preparation, review, approval, release, distribution and revision of design output documents.

For interdisciplinary design, approval documentation of each involved discipline of the design organization shall appear on the design output document or on a separate document directly traceable to the design output. The design organization shall designate a discipline(s) responsible for resolution of the comments of participating organizations. The designated discipline(s) approval of a design output shall also document resolution of the comments of participating organizations.

3.2.4 Design Verification

Design control measures shall be established to independently verify the design inputs, design process, and that design inputs are correctly incorporated into design output. The design organization shall develop ~~procedures~~ **instructions** that govern design verification. These ~~procedures~~ **instructions** shall require that the design organization identify and document the verification method utilized and that the documentation clearly identify those individuals performing the design verification.

Design verification shall be performed by technically qualified individual(s) or group(s) other than those who performed the design. The original designers and verifiers may both be from the design organization. Design verification by the designer's immediate supervisor shall be limited to those instances where the supervisor is the only qualified individual available within the design organization. These instances are further restricted to designs where the supervisor did not specify a singular design approach, or did not restrict design methods or alternatives, or did not specify design inputs (unless the specified design inputs have already been independently verified). Justification for verification by the designer's immediate supervisor should be documented along with the extent of the supervisor's involvement in the design.

The design organization shall be responsible for determining the extent of design verification and methods to be employed. The methods may include one or more of the following: the performance of design reviews, the use of alternate calculations, or the performance of qualification tests. This shall apply to original design and to changes to approved design output.

Where reverification is not required for a design change, the bases shall be documented by the design organization. Cursory supervisory reviews and mathematical checks for calculation accuracy do not satisfy the independent design verification requirement. Design verification shall normally be completed prior to release of design output for procurement, manufacture or release by the design organization for use in design activities by a participating organization. Verification shall be conducted based on the status of

design at the time of release of design documents. Where this timing cannot be met, verification may be deferred provided that the unverified portion of the design output, and all design output documents, structures, systems and components based on the unverified portion of design are identified and controlled. In all cases verification shall be completed prior to relying on any affected items to perform their design functions.

3.2.5 Computer Programs/Software

Organizations utilizing computer programs/software as a method for design shall maintain instructions or procedures to effect the following:

1. That such programs/software are verified for their particular use using benchmark problems, alternate calculations, comparison with other code or experimental results, design review or similar methods,
2. That such programs/software have been qualified for their specific application sufficient to ensure valid results,
3. That such programs/software are provided with user instructions sufficient for a technically competent individual to follow,
4. That configuration controls are provided to assure that such programs/software changes or modifications are documented and controlled.

3.3 RESPONSIBILITIES

3.3.1 The Vice President Nuclear Engineering and Licensing is responsible for:

1) determining and documenting which items are nuclear safety related or quality related;
2) the review and coordination of design interfaces;
3) assuring that design documents are reviewed for possible design interfaces, that interface problems are resolved and that design criteria and design interface changes are reviewed by participating organizations prior to approval of design documents;

4) preparing design documents, including performing the safety evaluation or screening to determine if the proposed design change involves an Unreviewed Safety Question or a change to the Technical Specifications;
5) performing design verification, including evaluation of the effects of proposed design changes on overall design adequacy (design integration);
6) providing Nuclear Engineering approval of design documents;
7) updating design documents and drawings according to applicable procedures;
8) coordinating the NRC interface for 10 CFR 50.59 reports.

3.3.2 The Site Vice President is responsible for:

1) reviewing, tracking the status of, and maintaining a file on proposed PC/Ms;
2) reviewing proposed PC/Ms for inclusion of appropriate quality criteria, standards, and hold points, including human factors considerations for design changes involving the Control Room or Remote Shutdown Panel;
3) reviewing completed PC/Ms, after implementation for compliance with governing procedures, including a review of all endorsements, sign-offs, completion of required acceptance testing/inspection, and any necessary changes to operating practices and procedures;
4) maintaining design documents as Quality Assurance records.
5) assuring that all plant design changes and drawing changes are coordinated through Nuclear Engineering;
6) determining whether or not a proposed design change affects nuclear safety;
7) approving or disapproving implementation of the proposed design change after receipt of a recommendation from the Plant Nuclear Safety Committee, (PNSC) or Facility Review Group (FRG);

9) ensuring the Environmental Affairs Department is included in the proposed PC/M review if the design change may have an adverse impact on the environment;

10) reviewing design changes to ensure that the implementation of the design change is coordinated with any necessary changes to operating practices and procedures;

3.3.3 The Plant Nuclear Safety Committee (PNSC) or Facility Review Group (FRG) is responsible for:

1) reviewing all proposed PC/Ms for plant systems or equipment related to nuclear safety;

2) rendering a determination in writing (PNSC/FRG meeting minutes) as to whether or not the proposed design change constitutes an Unreviewed Safety Question.

3.3.4 The Vice President Nuclear Assurance is responsible for:

1) reviewing PC/Ms for inclusion of appropriate quality criteria, standards, hold points, and Nuclear Assurance activities.

3.3.5 The Company Nuclear Review Board (CNRB) is responsible for:

1) reviewing Safety Evaluations for design changes to verify that the design changes did not constitute an Unreviewed Safety Question. CNRB review of evaluations involving screening rather than Safety Evaluation is not mandatory;

2) reviewing proposed design changes which involve an Unreviewed Safety Question or a change in Technical Specifications or License.

4.1 GENERAL REQUIREMENTS

Procurement of items and services shall be performed in accordance with procedures **and instructions** which assure that applicable regulatory requirements, design bases, code requirements, and other requirements necessary to assure quality shall be included or invoked by reference in the procurement document. These procedures **and instructions** shall delineate the sequence of actions to be accomplished in the preparation, review, approval, and control of procurement documents. Changes to procurement documents shall be subjected to the same degree of control as utilized in the preparation of the original documents.

4.2 IMPLEMENTATION

4.2.1 Procurement Document Provisions

~~Quality Procedures and~~ Quality Instructions shall identify the responsibilities and actions required of the organizations originating, reviewing, approving, and controlling procurement documents. These ~~procedures~~ **instructions** shall require the procurement documents to specify:

a. The scope of work to be performed.

b. Technical requirements (by specifying or referencing) which shall include the applicable components and materials identification requirements, drawings, specifications, procedures, instructions, codes, and regulations and provide for identification of applicable test, inspection and acceptance requirements, or special process instructions.

c. Quality Assurance Program requirements to be imposed on contractors which shall include the applicable portions of 10 CFR 50, Appendix B.

d. Right of access which provides, as appropriate, for access to contractor facilities and records for inspection or audit by FPL or its designated representative, and to access for events such as witness and hold points.

e. The documentation required to be prepared, maintained, and/or submitted to FPL or its representative for review, approval, or historical record. The time of submittal of this documentation and the retention and disposition of Quality Assurance Records which will not be delivered to FPL shall be prescribed.

Consideration shall be given to the need for special requirements in the preparation and review of procurement documents. Procedures and instructions shall be prepared and implemented for special on-site handling or storage requirements. The receiving department shall ~~be responsible for~~ ensure on-site implementation of the special handling, shipping, and storage requirements for items received and controlled by their organization.

Special handling, preservation, storage, cleaning, packaging, and shipping requirements shall be specified, as appropriate, in the design documents or purchase orders. The requirements established in the design documents or purchase orders shall be consistent with industry accepted standards, the importance of equipment or material to nuclear safety, and the material or equipment's sensitivity to damage. The preparation of these design documents or purchase orders may be delegated by FPL to other organizations.

4.2.2 Procurement Document Review

Procurement documents shall be reviewed for correctness, and inspectability and controllability of quality requirements in accordance with ~~Quality Procedures and~~ Quality Instructions to assure that the appropriate provisions of Section 4.2.1 are included. This review shall be documented and performed by designated personnel who have been trained and qualified in quality assurance practices and concepts. These reviewers shall have access to pertinent information and have an adequate understanding of the quality and technical requirements and intent of the procurement documents.

Spare or replacement parts for safety related structures, systems, and components are subject to technical or quality requirements equivalent to, or better than, those used for the original equipment.

Changes to procurement documents, whether initiated by FPL or their representative, are subjected to the same degree of control as that utilized in the preparation of the original document.

4.2.3 Selection of Procurement Sources

The ~~Nuclear Materials Management Department shall verify~~ **It shall be verifed** that the procurement document has been reviewed and approved, and that the supplier has been approved prior to issuing the purchase order for safety related materials or services. **Verbal purshase orders shall be made in accordance with TQAR Appendix C exceptions to ANSI N45.2.13.** Supplier approval is not necessary if the important characteristics of the item can be verified by inspection or test.

The overall procurement requirements, including those related to planning, bid evaluation, and review and concurrence of suppliers Quality Assurance programs, are described in ~~Quality Procedures and~~ Quality Instructions.

4.3 RESPONSIBILITIES

4.3.1 Direct reports of the President , Nuclear Division, and Department Heads of organizations supporting the Nuclear Division originating a procurement requisition shall be responsible for:

1) **clearly describing the technical and quality considerations for the procurement of items or services;**
2) **specifying any special requirements;**
3) **specifying documentation required from the supplier;**
4) **specifying special handling, preservation, storage, cleaning, packaging, and shipping requirements, as appropriate.**

4.3.2 The Vice President Nuclear Engineering and Licensing is responsible for :

1) performing technical evaluations to verify and/or establish technical and quality requirements for permanent and temporary power plant items and services;
2) reviewing procurement documents and changes thereto to assure that ordering requirements are technically correct and complete for items and services as specified in 4.2.1, including quality requirements;
3) evaluating the interchangeability of items that are not identical to what is currently installed.

4.3.3 The Vice President Nuclear Assurance is responsible for:

1) assisting in the resolution of quality requirements;
2) approving suppliers for safety related procurement and commercial grade item procurement (when applicable);
3) identifying surveillance witness and/or hold points at the supplier's facility for safety related procurement when supplier QA program is relied upon and programmatic deficiencies dictate;
4) performing supplier surveillance.

4.3.4 The Plant Vice President and Vice President Nuclear Engineering and Licensing, cognizant for the issuance of a procurement document is responsible for:

1) incorporating requisition technical and quality requirements into the procurement documents;
2) notifying Nuclear Assurance of discrepancies and/or changes in supplier activities which may conflict with the work scope of Nuclear Assurance approved suppliers;
3) reviewing each procurement document to ensure that it is correct, in accordance with Nuclear Assurance approved supplier work scope and restrictions (when applicable) and the originating procurement requisition;

4) referencing and attaching appropriate Quality Assurance Program requirements, as referenced on respective procurement requisitions, requests for bid proposals, purchase orders and contracts;
5) verifying that the procurement document has been reviewed and approved and issuing procurement documents to suppliers, as approved by FPL Nuclear Assurance when supplier QA programs are required;
6) maintaining traceability of procurement document records until transmitted to an approved storage facility.

5.1 GENERAL REQUIREMENTS

Activities affecting quality of nuclear safety-related structures, systems, and components shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. These documents shall include appropriate quantitative criteria such as dimensions, tolerances, and operating limits, and qualitative criteria such as comparative workmanship samples, to assure that the quality assurance activity has been satisfactorily accomplished.

5.2 IMPLEMENTATION

5.2.1 Quality Assurance Program Documents

The FPL Quality Assurance Manual described in TQR 2.0 contains ~~corporate Quality Procedures~~ **the Topical Quality Assurance Report** which compl~~y~~ies with the criteria of 10 CFR 50, Appendix B. ~~Quality Procedures and department level~~ Quality Instructions provide direction for activities affecting quality. The Quality Assurance Department reviews and comments on Quality Instructions written by other departments. Comments concerning compliance with corporate Quality Assurance commitments and regulatory requirements are resolved prior to issuance. The Quality Assurance Department receives controlled copies of Quality Instructions issued by other departments.

5.2.2 Procedures and Instructions

Instructions and procedures for activities affecting quality shall be prepared, reviewed, and approved in accordance with written ~~Quality Procedures or~~ Quality Instructions.

For plant operations, on-site plant procedures shall be prepared, reviewed, and approved in accordance with written instructions which includes a review for concurrence by Quality Assurance or Quality Control personnel **and provisions for temporary changes and temporary procedures.** These plant procedures include operating procedures, off-normal and emergency procedures, test procedures, and calibration

procedures. Also included are maintenance and repair procedures for subcontracted maintenance and repair activities which are outside the normal scope of plant craft capability. **Temporary procedures may be issued during testing, refueling, maintenance, modifications, unusual situations not within the scope of normal procedures, and for short periods when the plant, system or component is performing in a manner not covered by existing detailed procedures or has been modified in such a manner that portions of existing procedures do not apply.**

~~For backfit activities, c~~Contractors shall be required to have Quality Assurance Programs which contain written instructions for preparation, review, and approval of procedures, instructions, and drawings affecting quality. In addition, Contractor's site procedures and Quality Control inspection procedures shall be approved by ~~an FPL Site Construction Services Manager~~ **the Plant General Manager**, or designee, following reviews by Quality Assurance or Quality Control personnel to assure compliance with Corporate commitment and regulatory requirements.

During the design, modification, and procurement phases, the Architect/Engineer or other contractors may be delegated responsibility for maintaining, issuing and verifying the implementation of appropriate program documents. In this case, Quality Assurance **or Quality Control** ~~Department~~ audit ~~and/~~or ~~Quality Control~~ surveillance activities shall assure that such measures are established and implemented. Contractor programs shall clearly delineate the actions to be accomplished in the preparation, review and control of instructions, procedures and drawings, and the methods for complying with the appropriate criteria of 10 CFR 50, Appendix B. ~~A plant change or modification of a magnitude requiring the assignment of a Site Construction Services Manager shall be subject to the Quality Assurance Program as discussed above.~~

5.2.3 Drawings

The design organization is responsible for review and approval of drawings. For delegated design activities, the Nuclear Engineering **and Licensing** Department may approve changes to drawings. The technical control of drawings, i.e., review and approval of the drawing and all changes thereto shall be governed by procedures. A means shall be developed and updated as required to identify approved drawings and revisions thereto. A Master Drawing List is the normal means used for this.

5.2.4 Acceptance Criteria

~~Quality Procedures and~~ Quality Instructions shall require that ~~quality-related~~ instructions, procedures, and drawings **affecting quality** include adequate quantitative and qualitative acceptance criteria, as appropriate, for determining satisfactory work performance and quality compliance. These acceptance criteria requirements apply to important activities such as design, operations, test control, inspection, and plant modifications.

5.3 Responsibilities

5.3.1 Each direct report to the President Nuclear Division and Department Heads of organizations supporting the Nuclear Division is responsible for:

a. Establishment of a documented system for the preparation, review, approval and revision of procedures. This system shall comply with regulatory requirements, the applicable Plant Technical Specifications and Topical Quality Requirements.

5.3.2 The Vice President Nuclear Assurance is responsible for:

a. Review and concurrence of procedures affecting quality in accordance with paragraph 5.2.

6.1 GENERAL REQUIREMENTS

The distribution of documents such as instructions, procedures, drawings, and software which provide guidance, specifications, or requirements affecting the quality of nuclear safety-related structures, systems, and components shall be controlled. These documents shall be prepared, reviewed for adequacy, and approved for release by authorized personnel in the affected organization. These documents shall be distributed to locations where the activity is performed.

Changes to controlled documents shall be so identified and shall be reviewed and approved by the same organization that performed the original review and approval unless otherwise specified in the implementing procedures. In addition, procedures shall preclude the possibility of use of outdated documents.

6.2 IMPLEMENTATION

6.2.1 ~~Responsibility~~

Quality ~~Procedures~~ **Instructions** shall delineate the control measures ~~for controlled documents including direction for the review for adequacy, approval by authorized personnel, distribution of controlled documents and verification that changes are received.~~ **that provide for:**

1. **Identification of individuals or organizations responsible for preparing, reviewing, approving, and issuing documents and revisions thereto.**
2. **Identifying the proper documents to be used in performing the activity.**
3. **Coordination and control of interface documents.**
4. **Ascertaining that proper documents are being used.**
5. **Establishing current and updated distribution lists.**

These control measures shall apply to documents affecting the quality of nuclear safety-related structures, systems, and components such as:

a. design specifications;
b. design, manufacturing, construction, and installation drawings;
c. quality program manuals, procedures, and instructions;
d. inspection, manufacturing, and test procedures and instructions;
e. plant operating and maintenance procedures;
f. plant Safety Analysis Reports and related design criteria documents.

The requirements for control of procurement documents are contained in TQR 4.0.

~~During all phases of the plant life, it shall be the responsibility of each organization issuing and using controlled documents to use document control procedures. Procedures shall document the responsibility for review, approval, maintenance and distribution of documents including assuring revisions are initiated to interfacing documents within their organization.~~

~~During the design and construction phase and for operating plant changes under their cognizance, the Architect/Engineer, Nuclear Steam Supply System vendor, and other contractors shall be responsible for assuring that all revisions required as a result of FPL comments, nonconformances, or engineering work are incorporated into revised documents.~~ *MOVED TO SECTION 6.3.*

~~6.2.2 Distribution of Controlled Documents~~

~~Quality Procedures shall specify that controlled documents and revisions be distributed to locations where the activity is performed.~~

~~6.2.3~~ Drawing Control
6.2.2

FPL assumes control of the drawings and Master Drawing List after initial operation of the facility or delegates this activity to a qualified contractor. Nuclear Engineering shall require that participating design organizations update the drawings and Master Drawing List to reflect the as-built conditions of the facility prior to FPL's acceptance of these documents.

Maintenance, distribution and control of the drawings and the Master Drawing List by FPL during the operation phase shall be assigned to a drawing custodian. Revision to drawings shall be approved prior to release by the drawing custodian. Approval shall be by Nuclear Engineering, or a designated design organization.

~~6.2.3~~
6.2.2

During the operation phase a system shall be established to provide ready access and availability of drawings to engineering and operations personnel; to identify drawings affected by approved plant design changes; and to update drawings and the Master Drawing List to reflect implemented design changes.

~~6.2.4~~ Design Documents Other Than Drawings
6.2.3

Ascertaining that proper design documents are accessible and are being used ~~may~~ shall be accomplished by periodic issuance of master document lists showing the latest applicable revision, or by a document receipting system.

~~6.2.5 Instruction & Procedure Control~~

~~Participating organizations shall be responsible for development, maintenance and control of those documents identified in paragraph 6.2.1 issued by them as controlled documents. Each organization shall be responsible for the adequacy of their procedures.~~
MOVED TO SECTION 6.3.

~~6.2.6 Obsolete Documents~~

- ~~Controls established by Quality Procedures and Quality Instructions shall assure that outdated copies of controlled documents are not inadvertently used.~~ *Moved to Section 6.2.1.*

6.3 **RESPONSIBILITIES:**

6.3.1 Direct reports to the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsible for:

a. the development, maintenance and control of those documents identified in Section 6.2 issued by them as controlled documents.

b. the adequacy of their instructions, including the instructions for control of the documents and changes thereto to preclude the possibility of use of outdated or inappropriate documents.

6.3.2 Each recipient of a controlled document is responsible for ensuring that the appropriate latest revision is being used.

6.3.3 ~~The Director - Nuclear Engineering~~ The Vice President, Nuclear Engineering & Licensing, is responsible for assuring that the Architect-Engineer, Nuclear Steam Supply System vendor, and other contractors, as a minimum,

a. provide for the development, control and distribution of drawings, specifications and procedures; and the development and periodic distribution of a master drawing list for each project.

b. provide for all revisions required as a result of FPL comments, nonconformances, or engineering work are incorporated into revised documents.

6.3.4 ~~The Director Nuclear Construction Services~~ The Site Vice President is responsible for establishing a document distribution and control system to assure that the latest appropriate revisions of documents are used for construction and installation at each project site.

7.1 GENERAL REQUIREMENTS

Measures shall be established to assure that ~~safety-related~~ items or services purchased by or for FPL conform to the requirements of the procurement document. These measures shall include documented evidence of source selection, verification activities and examination of items or services to assure compliance with the procurement document. The effectiveness of the control of quality by contractors and subcontractors shall be assessed at intervals consistent with the importance, complexity, and quantity of the product or service.

7.2 IMPLEMENTATION

7.2.1 ~~Initial~~ Evaluation of Suppliers

Procurement source evaluation and selection measures shall be specified in ~~Quality Procedures and~~ Quality Instructions which shall identify the responsibility of qualified individuals for determining supplier capability. The evaluation may require integrated action involving Quality Assurance and one or more organizations ~~(e.g., Nuclear Engineering, Nuclear Construction Services, or Nuclear Materials Management)~~ based upon the item or service being procured. This evaluation is to ensure that the FPL contractors comply with the applicable portions of 10 CFR 50, Appendix B. Documented evidence of the evaluation, and the acceptance of the contractor's quality program and procedures shall be retained in the Quality Assurance Department files. The determination of supplier approval shall be based on such factors as prior performance, historical quality performance data, source surveys or audits, and evaluation of the supplier's Quality Assurance Program. The basis shall be consistent with the importance, complexity, and quality required for the items or services involved.

7.2.2 Verification Activities

Quality ~~Procedures~~ **Instructions** shall define the requirements for verification activities such as surveillance, inspection, or audit to assure conformance of procured items and services to identified requirements. These verification activities shall be performed in accordance with written procedures, procurement documents and their references, which specify the documentation required and the characteristic or process to be witnessed, inspected, verified, or accepted. FPL verification activities shall be accomplished by qualified personnel to verify that the supplier complies with quality requirements, and depending on the importance/complexity, shall be performed on those items where verification of procurement requirements cannot be determined upon receipt.

7.2.3 Receiving Inspection

~~Quality Procedures and~~ Quality Instructions shall delineate requirements and responsibilities for the performance of receiving inspection. This inspection shall verify that suppliers have fulfilled their contractual obligation and that the procured items meet the appropriate quality requirements. **Receipt inspections shall be planned. The receipt inspection plans shall identify the characteristics to be verified and the documentation to be reviewed at receipt inspection.** Receiving inspection shall include, as appropriate:

a. Measures for verifying that the shipment is complete, properly identified, undamaged, and corresponds with the purchase order documentation;
b. Measures for inspection of the item and review of supporting documentation (e.g., mill test reports, NDE reports) as required by the purchase documents;
c. Measures for disposition of items to inspection instructions;
d. Measures for identifying and controlling items including identification of inspection status prior to release from the receiving inspection area;
e. Measures to ascertain that inspection records or Certificates of Conformance are available prior to release;.
f. Measures verifying completion of Commercial Grade Item dedication requirements.

7.2.4 Supplier Furnished Records

Records required to be furnished by the supplier shall be specified in the procurement document. Certifications or documentation verifying conformance provided by the supplier shall identify the specific procurement requirements met (either by reference to the purchase order or by referenced requirements therein). Such certification shall identify any procurement requirements which have not been met and provide a description of those nonconformances dispositioned "accept as is" or "repair".

7.3 RESPONSIBILITIES

7.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division are responsible for:

1) determining the methods of acceptance for services requested by them;

2) the performance of the acceptance methods selected, when assigned to them.

7.3.2 The Vice President Nuclear Engineering and Licensing is responsible for:

1) requesting that Nuclear Assurance perform a supplier evaluation;

2) determining the methods of acceptance for items and services.

7.3.3 The Vice President Nuclear Assurance is responsible for:

1) assuring that evaluations of suppliers are performed and the results documented in accordance with approved Quality Instructions;

2) determining the methods of source verification;

3) performing receipt inspections in accordance with approved Quality Instructions;

7.3.4 The Site Vice President is responsible for:

1) requesting that Nuclear Assurance perform a supplier evaluation;

2) examining items for shipping damage upon receipt;

3) performing receipt inspection in accordance with approved Quality Instructions;

8.1 GENERAL REQUIREMENTS

Materials, parts, and components, including partially fabricated assemblies, shall be identified and controlled as required throughout fabrication, receipt, handling, storage, installation, and use of the item. The identification of the item shall be maintained by heat number, part number, serial number, FPL M&S number, or other suitable means, and shall be physically marked on the item or on records traceable to the item. The object of these controls shall be to prevent the use of **non-inspected,** incorrect or defective materials, parts, and components. (The FPL Material and Supplies -- M&S number is a number given to each unique type of item in inventory to distinguish it from each other type of item in inventory).

8.2 IMPLEMENTATION

~~Quality Procedures and~~ Quality Instructions shall establish the responsibilities and requirements for the identification, and control of materials, parts and components. The procedures and instructions used by all organizations shall assure that identification and control is maintained throughout fabrication, receipt, handling, storage, installation and use of items. **This shall include welding material traceability to the point of consumption. Provisions include:**

a. **Physical identification shall be used to the maximum extent possible. When physical identification is impractical or insufficient, items shall be physically segregated and identified by batch, lots, etc.**

b. **When items are subdivided, their identification shall be maintained by transferring the identification to each of the subdivided parts or their container.**

c. **Post-installation identification of items that cannot feasibly be physically marked shall be traceable by record verification.**

d. **Items requiring identification, but whose identification was lost during storage, shall be segregated and documented as nonconforming and dispositioned in accordance with established procedures.** ~~Provisions include:~~

~~ae~~. Requirements for traceability to appropriate documentation, such as: procurement documents, manufacturing documents, drawings, specifications, inspection and test records, nonconformance or deficiency reports or other Quality Assurance Records, in sufficient detail to preclude any possibility of doubt or confusion concerning the traceability of an item to the documentation, or the documentation of the item.

~~bf~~. Controls to assure that the correct identification of an item is verified and documented prior to fabrication, receipt, handling, storage, installation and use.

~~cg~~. Requirements which assure that the method or location of markings are not detrimental to, and do not affect the function or quality of an item; are clear, unambiguous and indelible; are in plain unobstructed view; do not provide conflicts with other requirements; are not obliterated by any surface treatment unless other means of identification are substituted; withstand normal shipping, handling and environmental effects and are able to be retained.

~~dh~~. Establishment of identification requirements by specifications, drawings, procurement documents, instructions or procedures during initial planning.

i. Requirements to ensure that dedicated Commercial Grade Items are identifiable to the specific component or equipment for which they are dedicated.

FPL may delegate any portion of the implementation of the identification and control program to the Architect/Engineer, Constructor, Nuclear Steam Supply System vendor or other contractors. If delegated, contracts shall require that the contractor establish an identification and control program which meets the requirements of this TQR.

8.3 RESPONSIBILITIES

8.3.1 The Site Vice President has overall responsibility for:

a) Assuring that an identification and control system is developed and implemented for items to be utilized within the plant;

b) Receiving, controlling and ensuring the security of items;

c) Segregating items until the required receipt inspection is performed;

d) Assuring the placement of any necessary markings on the items as required by applicable procedures or as requested in accordance with applicable purchase orders, specifications or commercial grade dedication packages; and

e) Incorporating applicable pre-installation and/or post-installation inspections, tests, and QC hold points (including Commercial Grade Item Dedication requirements) into applicable work control documents.

8.3.2 The Vice President Engineering and Licensing has overall responsibility for:

a) Determining and specifying end use applications for items.

9.1 GENERAL REQUIREMENTS

Measures shall be established to assure that special processes such as welding, heat treating, and nondestructive examination items , are controlled and accomplished by qualified personnel using qualified procedures and equipment in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

9.2 IMPLEMENTATION

~~Nuclear Engineering or the delegated contractor organization, as appropriate, shall include~~ ~~s~~Special process requirements **shall be included** in ~~their~~ design outputs and changes thereto. Special processes~~s used during plant operations shall be the responsibility of the plant manager, who shall ensure that~~ procedures~~ are~~ **shall be** developed, reviewed, approved and controlled, and ~~that~~ **special process** personnel and equipment ~~are~~ **shall be** qualified.

9.2.1 Identification of Special Processes

Special processes are those processes which must be qualified and controlled where quality is highly dependent on close control of process variables or operator skills, and objective verification (inspection, examination or testing) of end quality is difficult.

~~As a further clarification, s~~Special processes identified ~~as such~~ by applicable codes and standards shall be controlled, qualified, and implemented in accordance with those codes and standards. Examples of special processes include (but are not limited to) welding, heat treating, and nondestructive examination. Others, ~~(i.e.,~~ e.g., flushing, protective coating, plating applications and nuclear cleaning) should be reviewed to determine if they are special processes.

9.2.2 Procedure Qualification and Control

Process control procedures written by FPL organizations or their contractors shall be used and qualified as required by applicable specifications, codes, or standards.

Where FPL assigns work to outside contractors, the contractors shall make their procedures and personnel qualifications available for review to FPL prior to the start of work. The Architect/Engineer, Nuclear Steam Supply System vendor, or other organization designated by FPL shall be responsible for the evaluation and acceptance of on-site contractor special process procedures, and shall interface with the appropriate FPL department, as necessary, to resolve review comments with the contractor. The contractor shall also be responsible for the control and approval of sub-contractor procedures.

Special process procedures shall be:

a. sufficiently detailed for a qualified person to perform the technique and achieve the desired results;

b. reviewed and approved prior to use to ensure the procedure complies with applicable codes, standards, and specifications, and that specified materials, equipment, and techniques are suitable for the intended application;

c. qualified prior to or during initial use.

Special process procedures and revisions thereto which specify acceptance criteria (other than those identified in the ASME code) shall have the concurrence of the acceptance criteria by Nuclear Engineering prior to issuance and use.

9.2.3 Personnel Qualification and Certification

Procedures or instructions shall specify personnel qualification and certification requirements. Personnel responsible for the performance and verification of special processes shall be trained, tested, and certified as required by applicable specifications, codes and standards. Requirements for the period of certification, retesting, and

recertification of personnel shall also be specified. Contractors shall qualify personnel and maintain records of qualified personnel in accordance with applicable codes, standards, specifications, and contract or procurement document requirements.

9.2.4 Control of Equipment

Equipment that must be of a specific type, range, or accuracy to provide conformance to specified requirements shall be controlled to ensure that it is qualified, maintained, and calibrated in accordance with those requirements.

~~9.2.4~~9.2.5 Special Process Records

~~The Services Manager is responsible for retention of records. The Plant General Manager is responsible for the review of records.~~ Records shall provide objective evidence that special processes were performed in compliance with approved procedures by qualified personnel and equipment. Records shall also be maintained for verification activities when required by procedure, code or specification. Results of nondestructive examinations shall be recorded in accordance with applicable specifications, codes and standards. **For contracted work,** ~~T~~these records shall be retained by the vendor or supplied to FPL as required by contract or purchase order ~~s~~. If records are to be retained by the vendor, the contract or purchase order shall specify the retention period and instructions for final disposition of such records.

~~For backfit activities, the Quality Control organization is responsible for the review of nondestructive examination documents for acceptance. The Site Construction Services Manager is responsible for assuring that documents for special processes utilized for modifications are properly collected, reviewed, accepted and transmitted for retention of records.~~

Nondestructive examination documents shall be reviewed for acceptance by an individual who is certified in the applicable method.

9.3 RESPONSIBILITIES

9.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division involved in special process activities are responsible for:

1) ensuring that special process procedures used by their department are reviewed, approved, controlled, and are qualified prior to or during initial use.
2) ensuring that special process personnel in their department are qualified and certified.
3) ensuring that records associated with special processes under their control are reviewed and maintained.
4) performing special process inspections, examinations, and activities, when assigned to their department, as required by applicable codes, standards, criteria, or other special requirements identified.
5) ensuring that work documents under their control contain adequate requirements for the identification and control of special processes.
6) ensuring special process procedures and revisions which specify acceptance criteria (other than identified in the ASME code) have Nuclear Engineering concurrence of acceptance criteria prior to use.
7) ensuring nondestructive examination documents are reviewed by an individual certified in the applicable method.

9.3.2 The Vice President Nuclear Engineering and Licensing is responsible for:

1) determining (as requested) if a specific activity constitutes a special process;

2) identifying applicable codes, standards, specifications, criteria, and other requirements related to special processes;
3) preparation, qualification, issuance, and control of Visual Test (VT) and Nondestructive Examination (NDE) procedures, instructions, and technique sheets for all ASME Section XI examination activities;
4) direction, including technical direction to all personnel, of the welding program to meet the requirements of applicable codes and standards. This shall include the development, maintenance, and control of a welding program;
5) review and approval of contractor welding programs.

9.3.3 The Site Vice President is responsible for:

1) welding activities performed at the site including issuance and control of weld documentation packages, welding material and equipment.
2) maintaining a current report of qualified welders and weld operators and assigning welder symbols.
3) ensuring that the Authorized Nuclear Inspector/Authorized Nuclear Inservice Inspector (ANI/ANII) is permitted access to all parts of the plant site or supplier facilities while work on an item or system is being performed that concerns the welding fabrication, modification, repair, or replacement of the item or system; including inspections, examinations, and tests.

10.1 GENERAL REQUIREMENTS

A program for inspection shall be established and executed by or for FPL to verify conformance with the documented instructions, procedures and drawings for accomplishing an activity. ~~Such~~ Inspections shall be performed by individuals or groups other than those who performed the activity being inspected. Examinations, measurements and tests of materials or products processed shall be performed for each work operation, where necessary, to assure conformance to established requirements. If direct inspection of processed materials or products is impossible or disadvantageous, indirect control by surveillance or monitoring shall be provided. Mandatory inspection, witness, or hold points beyond which work shall not proceed without the consent of FPL or a designated representative shall be indicated in the appropriate documents.

10.2 IMPLEMENTATION

10.2.1 Inspection Program ~~Responsibilities~~

For plant operations, maintenance, or modification activities, a program for on-site inspection of activities affecting quality shall be established. ~~by the Nuclear Assurance Department. Quality Control shall perform~~ **This program shall ensure the performance of** inspections, surveillance and monitoring of plant activities including operations, maintenance or modifications as required by established plans, schedules and/or procedurally required inspection, witness or hold points. In all cases, the personnel performing the inspection shall be independent of the group performing the work.

~~For these plant activities, the Nuclear Assurance Department may delegate the establishment and execution of this program to a contractor or other designated FPL representative, but shall retain ultimate responsibility for the program.~~

~~10.2.1 (Continued)~~

For preoperational start-up and testing of plant modifications, Nuclear Division personnel may report functionally to the ~~Site Construction Services Manager~~ **manager responsible for the start-up and testing** and establish plans, schedules and procedurally required inspection, witness or hold points. In all cases, the personnel performing the inspection shall be independent of the group performing the work.

Protection & Control Systems **personnel** may perform inspections of equipment within their purview during operations. Inspections shall be performed in accordance with approved, written procedures by qualified personnel.

~~Quality Procedures and~~ Quality Instructions shall be written which delineate the requirements and responsibilities for the performance of inspections.

10.2.2 Inspection Plans and Schedules

Documented inspection plans may be either a separate document or an integral part of work instruction documents. The plans shall be based on design specifications, procurement documents, drawings, other specifications or previous experience, as appropriate. **The frequency and timing of inspections** ~~Inspections~~ shall be scheduled ~~to~~ **according to the activities being conducted and to** assure that sufficient time and resources are available, and ~~to assure~~ inspections are not inadvertently omitted or bypassed.

Inspection planning should include a review for the acceptability of sampling. If sampling is permitted, the sampling procedure shall be based on nationally recognized standard practices.

10.2.3 Inspection Personnel

~~a.~~ Inspections shall be performed by individuals other than those who performed or directly supervised the activity being inspected. Inspection personnel shall ~~be~~ **have current qualifications and certifications** ~~qualified and certified~~ in accordance

with appropriate codes, standards and/or company training programs. ~~Qualifications and certifications shall be kept current.~~ **These qualifications and certifications shall be documented.**

~~b.~~ Prior to performing inspections , inspection personnel shall have access to the drawings, procedures, specifications or other documented criteria necessary for performance of the inspection.

10.2.4 Inspection Procedures

~~a.~~Required inspection, surveillance or monitoring activities shall be performed and documented according to written, approved instructions or procedures.

a. Inspection procedures, instructions or checklists shall contain the following:
   - o Identification of characteristics to be inspected;
   - o Identification of the individual or groups responsible for performing the inspection;
   - o Acceptance criteria or reference to the acceptance criteria;
   - o A description of the method of inspection;
   - o Verification of completion and certification of inspection.

b. Inspection records shall identify:
   - o Inspector or data recorder;
   - o Method or type of observations;
   - o Test or inspection results;
   - o Statement of acceptability;
   - o Date of observation;
   - o Deficiencies and nonconformances, and the action taken in connection with these deficient conditions, either by inclusion or by reference to other documents.

c. Inspection procedures shall be reviewed by ~~QC~~ Nuclear Assurance personnel to determine the need for an independent inspection and the degree and method if such an inspection is required, and to assure the identification of inspection personnel and the method of documentation of inspection results.

d. Written approved instructions shall specify surveillance or monitoring of processing methods, or testing and operation of equipment when inspection is impossible, inaccessible or not applicable.

e. Modification, repair, replacement or rework items shall be inspected in accordance with original inspection requirements or acceptable alternatives.

10.2.5 Inspection, Witness, and Hold Point Identification

Appropriate inspection, witness or hold points shall appear in process documents (e.g., construction, testing, operating and maintenance procedures). These process procedures are subject to the review of the Quality Control organization for adequacy of inspection, witness, and hold points.

Mandatory hold points shall be identified in process documents when witnessing and inspecting must be performed and signed-off by the responsible personnel before work can proceed.

FPL procurement documents shall indicate FPL witness or hold points applicable prior to during, or after the manufacture of an item or the performance of a service. A distinction shall be made between witness points and mandatory hold points.

10.3 RESPONSIBILITIES

10.3.1 Direct Reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division that perform inspection activities are responsible for:

1. implementation of a program for inspection activities;

2. ensuring that this program verifies compliance with applicable portions of Technical Specifications, SAR requirements, procurement documents, other operating license requirements and the QA Manual;
3. ensuring coordination with QC for incorporation of QC inspection and hold points into procedures and work documents;
4. ensuring that inspections are not inadvertently omitted or bypassed;
5. ensuring that personnel assigned to perform inspections are appropriately qualified and certified;
6. ensuring inspection procedures are reviewed by Nuclear Assurance personnel to determine the need for an independent inspection and the degree and method if such an inspection is required, and to ensure the identification of inspection personnel and the method of documentation of inspection results.

10.3.2 The Vice President Nuclear Assurance is responsible for:

1. implementation of a program for inspection and surveillance activities;
2. ensuring that required QC inspections are incorporated into inspection/test/maintenance procedures, design change documents, and work process control documents;
3. ensuring that inspections and surveillances are correctly performed and documented;
4. reviewing inspection procedures to determine the need for an independent inspection and the degree and method if such an inspection is required, and to ensure the identification of inspection personnel and the method of documentation of inspection results.

11.1 GENERAL REQUIREMENTS

A test program shall be established to assure that testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified, accomplished, and documented in accordance with written procedures. The test program shall include, as appropriate, proof tests~~,~~ prior to installation, preoperational tests, start-up tests,~~ and~~ operational tests, and retest following repairs, replacements or modifications.

11.2 IMPLEMENTATION

11.2.1 Test Program

Testing requirements shall be identified in the engineering/design documents, SAR documents, procedures, or procurement documents, as appropriate. Retest following repairs, replacements, or modifications shall be performed in accordance with the original design and test requirements or acceptable alternatives. Retest shall be performed when the original test results are invalidated. **A schedule shall be provided and maintained to provide assurance that all tests are performed and properly evaluated on a timely basis.**

~~Quality Procedures and~~ Quality Instructions shall be written which delineate the methods and responsibilities for **scheduling,** controlling, accomplishing, and documenting testing.

FPL may delegate the implementation of all or any part of the test program to other organizations but shall retain ultimate responsibility for the program. The contractor shall be required to control, perform and evaluate tests in accordance with written procedures and shall be required to prepare a written test program detailing the testing required.

11.2.2 Test Procedure Preparation and Test Performance

Testing shall be accomplished in accordance with written approved test procedures which incorporate or reference the requirements and acceptance limits in the applicable design and procurement documents. **Test procedures shall be revised as necessary to assure that tests are performed in accordance with the latest approved information.** The test procedure or test program documents shall include or reference the following as a minimum:

a. Instructions for the testing method used **(including precautions, limitations, and restoration of normal conditions upon test completion);**

b. Required test equipment and instrumentation;

c. Test requirements and acceptance criteria;

d. Hold, witness, inspection and data collection points;

e. Test prerequisites such as: calibrated instrumentation; trained, qualified, and licensed or certified personnel; preparation, condition and completeness of item to be tested; suitable and controlled environmental conditions; **defined system interfaces; initial plant conditions.**

f. Methods for documenting or recording test data and results;

g. Test records shall identify:

1) ~~Inspector or data recorder~~ **Identification of personnel performing the testing activities;**

2) Method or type of observations;

3) Test or inspection results **(to include pertinent test data);**

4) Specific measuring and test equipment utilized for testing;

5) As found and as left condition (as applicable);

~~4)~~6) Statement of acceptability;

~~5)~~7) Date of observation; and

~~6)~~8) Deficiencies and nonconformances, and the action taken in connection with these deficient conditions, either by inclusion or by reference to other documents.

11.2.3 Evaluation of Test Results

The documented test results shall be evaluated against the predetermined acceptance criteria by a group or individual having appropriate qualifications. The acceptance status of the test shall be documented. Deficiencies noted during the evaluation shall be documented and dispositioned in accordance with **TQR 15.0 and** approved ~~Quality Procedures or~~ Quality Instructions.

The evaluation of the test results may be delegated to other organizations; however, FPL shall retain the responsibility for the evaluation. The evaluating organization shall be required to use qualified personnel, evaluate the data against predetermined criteria, and document the results of the evaluation and acceptance status of the test.

11.3 RESPONSIBILITIES

11.3.1 The Site Vice President is responsible for:

1. **Assuring that plant tests are identified, scheduled, controlled, performed and documented;**

2. **Assuring that plant test procedures are reviewed and approved.**

11.3.2 The Vice President Nuclear Assurance is responsible for:

1. Assuring that test procedures specify necessary quality requirements such as witness and hold points, and adequate data sheets.

11.3.3 The Director Protection & Control Systems is responsible for:

1. Assuring the identification, scheduling, control, performance, and documentation of tests performed by Protection & Control Systems;

2. Submitting test procedures to the Plant General Manager for review;

3. Coordinating test schedules with the Plant General Manager.

11.3.4 The Vice President Nuclear Engineering and Licensing is responsible for:

1. Specifying the need for pre-installation and post-installation testing of items within his purview;

2. Writing test procedures as requested;

3. Evaluating test results as requested.

12.1 GENERAL REQUIREMENTS

Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits. It is the responsibility of each department maintaining calibrated instruments to provide for the calibration and control of such instruments.

12.2 IMPLEMENTATION

12.2.1 Calibration and Control of Measuring and Test Equipment

Procedures shall be written to delineate the methods and responsibilities for the control, maintenance, and calibration of measuring and test equipment (M&TE) **and installed plant instrumentation and control equipment.** M&TE control procedures or calibration program documents shall contain the following:

a A **complete** listing of M&TE **and installed plant instrumentation and control equipment** to be controlled;

b. **The** frequency of calibration of listed M&TE **and installed plant instrumentation and control equipment.** The frequency may be based on calendar time or relate to usage~~, and be based on such factors as experience, inherent stability, instrument purpose, or accuracy required;~~ **and shall be based on such factors as licensing commitments, regulatory requirements, experience, inherent stability, manufacturer's recommendations, purpose of use, frequency of service, or company standards. A schedule for calibration shall be established and shall indicate as a minimum the instrument, calibration frequency, and procedure to be used or the identification of the approved supplier qualified to provide calibration services.**

c. A method for controlling issue and recall of portable M&TE;

d. A method to **uniquely** identify controlled M&TE (e.g., labeling), required calibration frequency and calibration test data applicable to the M&TE **and installed plant instrumentation and control equipment;**

e. A ~~M~~method to document and maintain the status of M&TE **and installed plant instrumentation and control equipment.**

M&TE shall be calibrated in environments which will not adversely affect their accuracy. When inaccuracy due to environmental effects cannot be avoided, compensating corrections shall be determined and applied in accordance with the manufacturer technical instructions.

M&TE and reference standards shall be suitably marked so that the calibration status can be determined.

FPL may delegate the control and/or calibration of M&TE to other organizations. FPL, however, retains ultimate responsibility for control and calibration, and the contractor shall meet the requirements of this TQR or an acceptable alternative program as required by the procurement document for the contracted services.

12.2.2 Calibration Procedure

M&TE, reference standards, and listed installed plant instrumentation and control equipment shall be calibrated in accordance with written approved procedures. ~~The~~ Calibration procedures shall contain, **or reference** as a minimum:

a. Identity of M&TE **or equipment** to which the procedure applies;

b. Calibration equipment and reference standards to be used;

c. Acceptance criteria;

d. Sequence of operations;~~ and special instructions~~

e. **Special instructions (such as, prerequisites, power level requirements, precautions, limitations) as applicable.**

~~e.~~**f.** Documentation and data collection requirements;

~~f.~~**g**. A requirement that **equipment to be calibrated** ~~M&TE~~, be checked and results recorded before adjustments or repairs are made;

~~g.~~**h**. Calibration frequency required.

12.2.3 Calibration Standards

M&TE shall be calibrated using reference standards whose calibration has a known, documented, valid relationship to nationally recognized standards or accepted values of natural physical constants. If no national standard exists, the basis for calibration shall be documented. Standards and reference standards shall have an accuracy level, range and stability which are adequate to verify that the equipment being calibrated is within tolerance and adequate for the programmatic requirements of the equipment being calibrated.

M&TE shall be calibrated against working standards having an accuracy of at least four times the required accuracy of the equipment being calibrated. When this is not practical, working standards shall have an accuracy that assures that the M&TE being calibrated will be within required accuracy tolerances and that the basis of acceptance is documented and authorized by designated responsible management.

The meaning of this paragraph may be diagrammed as follows:

— NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
"greater than" tolerance

— PRIMARY STANDARD (if applicable)
"greater than" tolerance

— SECONDARY STANDARD (if applicable)
"greater than" tolerance

— WORKING STANDARD
"1:4 ratio" tolerance (except as noted above)

— M&TE (installed instruments and measuring and test equipment used for inspection, maintenance, etc.)

The accuracies of M&TE and reference standards shall be chosen such that the equipment being calibrated can be calibrated and maintained within the required tolerances.

12.2.4 "Out of Tolerance" Control and Corrective Action

The reporting, follow-up, and correction of conditions adverse to quality found during calibration or calibration checks shall be documented. M&TE and reference standards, when found out of tolerance, shall be so identified and removed from service, **tagged to indicate its status and segregated from M&TE in service, pending disposition of corrective action.. A~~n~~ documented** investigation shall be conducted to determine the validity of previous inspection or test results gained through use of the instrument, and of the acceptability of items previously inspected or tested.

12.3 RESPONSIBILITIES

12.3.1 **Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsibile for:**

a) **assuring that the affected plant departments establish and maintain a calibration control program;**
b) **assuring that written procedures governing calibration activities are reviewed and approved prior to use;**
c) **assuring that documentation of calibration activities are reviewed and approved.**

12.3.2 **The Director Protection & Control Systems is responsible for assuring that calibration control procedures for installed plant instrumentation and control equipment under his control are submitted to the Plant General Manager for review, and for coordination of calibration activity schedules with plant supervisors.**

13.1 GENERAL REQUIREMENTS

Written instructions or procedures shall be established and implemented for the cleaning, shipping, storage, preservation, packaging, and handling of specified items. These instructions and procedures shall delineate measures which prevent degrading an item through damage or deterioration. When necessary for particular products, special protective environments such as inert gas atmosphere, specific moisture content levels, and temperature levels shall be specified and provided.

Housekeeping procedures and instructions shall require cleanness to be maintained at a level consistent with the work performed to prevent the entry of foreign material into safety related systems. Control of personnel, tools, equipment and supplies shall be established with approved procedures or instructions when the safety function of a system, component or item may be jeopardized and also while the reactor system is opened for inspection, maintenance or repair. Documented cleanness inspections shall be performed prior to system closure.

13.2 IMPLEMENTATION

13.2.1 General

Instructions or procedures shall be written to define the requirements and responsibilities for the **housekeeping,** cleaning, packaging, preservation, handling, storage, and shipping of equipment and material, and shall require implementation of the established design and specification requirements by personnel having appropriate qualifications. FPL may delegate any portion of the responsibility for **cleaning, housekeeping,** handling, storage and shipping of material and equipment, but shall retain ultimate responsibility. Where any of the functions in the sections which follow is delegated to a contractor, the contractor shall be required to adhere to the FPL requirements stated herein.

13.2.2 Handling, Storage, and Shipping Procedures

Materials and equipment which are to be incorporated into a safety-related system of a nuclear power plant shall be handled, stored, and shipped in accordance with written procedures, where necessary, to implement the design document and purchase order requirements. These procedures shall assure that cleaning, handling, storing, packaging, shipping, and preserving materials, components and systems will preclude damage, loss, or deterioration by environmental conditions, such as temperature or humidity.

Site specific procedures or specific work instructions shall be developed which provide guidelines in handling heavy loads that are lifted over, or in proximity to, irradiated fuel or safe shutdown equipment/systems.

The preparation and/or implementation of these procedures may be delegated to other organizations, but FPL shall retain the ultimate responsibility for proper material handling, storage, and shipping.

~~13.2.4 Verification of Proper Handling, Storage, and Shipping.~~

~~The Quality Assurance Department shall be responsible for verification of proper handling, storage and shipping at vendor facilities.~~

13.2.3 Cleanness Procedures

Procedures or work instructions for cleaning; cleanness control practices and inspections; examinations or tests to verify cleanness of items; shall be prepared and implemented.

13.2.4 Housekeeping Procedures

Methods and techniques for controlling and maintaining housekeeping and documenting housekeeping surveillances and inspections shall be delineated in procedures or instructions.

13.3 Responsibilities

13.3.1 The Site Vice President has overall responsibility for ensuring that handling, storage, shipping, cleanness and housekeeping requirements are identified, and implemented.

13.3.2 The Vice President Engineering and Licensing is responsible for:

a. Identifying special handling and storage requirements for site fabricated items in applicable design output documents/work instructions.

b. Identifying cleaning and cleanness verification methods in appropriate specifications, drawings or procedures.

13.3.3 The Vice President Nuclear Assurance is responsible for:

a. Verifying proper handling, storage, and shipping activities at supplier facilities.

b. Verification of housekeeping, handling, storage, shipping and cleanness of items through inspections, surveillances, examinations or tests at the plant site.

14.1 GENERAL REQUIREMENTS

Measures shall be established to indicate by the use of markings such as stamps, tags, labels, routing cards or other suitable means, the status of inspections and tests performed on material, equipment, or systems. These measures shall provide for the identification of items which have satisfactorily passed required inspections and tests. Measures shall also be established for indicating the operating status of structures, systems and components to prevent inadvertent operations.

14.2 IMPLEMENTATION

14.2.1 General

~~For operations activities, the Nuclear Division is responsible for establishment and maintenance of a~~ A suitable system for identifying the inspection, test, and operating status of materials, equipment, systems, and components shall be established. ~~For plant modifications assigned to Nuclear Construction Services Department or when requested by the Plant General Manager, the Site Construction Services Manager is responsible for establishing a suitable system for identifying, inspecting and testing for material, equipment, systems and components which is approved by the Plant General Manager.~~ Each system ~~shall be~~ established shall be implemented and maintained in accordance with written ~~Quality Procedures and~~ Quality Instructions. The Architect/Engineer or Contractors shall develop and implement procedures to comply with contractual responsibilities, and applicable codes, standards, specifications, and criteria governing the status identification of procurement items being tested, installed, or fabricated. The Architect/Engineer (where applicable), suppliers and contractors shall be required to maintain a system for identifying the inspection, test and processing status of materials, parts, and components. Elements of this system require that suppliers and contractors have a controlled manufacturing and test operation in order to preclude the inadvertent bypassing of processing, inspections or test, and to provide a positive identification of component status throughout all phases of manufacturing, testing, and

inspecting, by means of tagging, routing cards, stamping, manufacturing or test reports, labeling or other appropriate methods. ~~The Vice President - Turkey Point Plant or St. Lucie Plant and the Quality Assurance Department shall~~ **Methods** to verify adequacy of the controls shall be established and implemented, as appropriate. ~~for their site.~~

14.2.2 Status Identification and Control

~~Quality Procedures and~~ Quality Instructions shall describe control of the application and removal of markings such as stamps, tags, labels, routing cards, and other suitable means to indicate the status of non-operational, nonconforming, or malfunctioning nuclear safety related structures, systems and components to prevent inadvertent operation, and to prevent omission of inspections, tests, or other critical operations. These procedures and instructions shall delineate the requirements, methods and responsibilities for indicating the status of the affected items. These procedures will clearly delineate the individuals or groups responsible for application and removal of status indicators. **These procedures shall require independent verifications, where appropriate, to ensure that necessary measures have been implemented.**

14.3 RESPONSIBILITES

14.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsible for coordinating activities affecting the inspection, test and operating status of material, equipment, systems and components with the appropriate plant organization.

14.3.2 The Site Vice President is responsible for the establishment, maintenance, and implementation of a suitable system for identifying, inspecting, testing, and providing operating status of material, equipment, systems and components in accordance with written and approved procedures and instructions and the approval of other programs utilized on site which provide for inspection, test and operating status.

14.3.3 The Vice President Nuclear Assurance is responsible for assuring that requirements are implemented per written instructions and procedures.

15.1 GENERAL REQUIREMENTS

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

15.2 IMPLEMENTATION

15.2.1 Program

~~Quality Procedures and~~ Quality Instructions shall define the responsibilities and methods for identifying, documenting, segregating and dispositioning nonconforming items. ~~For procedure review requirements, see TQR 2.0 and TQR 5.0. Each department shall be responsible for the identification, control and disposition of nonconformances within the scope of their departmental responsibilities.~~ Throughout plant life, FPL may delegate any portion of the identification and control of nonconforming items and services to an Architect/Engineer (A/E), constructor, NSSS vendor or other contractor~~s~~. In any case, FPL retains the responsibility for assuring that requirements are met, and shall assure that the contractor's actions conform to requirements set by FPL.

15.2.2 Documenting and Controlling Nonconformances

All nonconformances~~ in safety related items~~ shall be documented and reported for corrective action. Measures shall be delineated in ~~Quality Procedures and~~ Quality Instructions which control further processing, installation, or operation of nonconforming items. These measures shall include:

a. Physical identification of the item as nonconforming.
b. Segregation of nonconforming items until properly dispositioned.

Where physical segregation is not practical, suitable tags, marking or documentation shall be used to assure control.

The control of, and the documentation generated by the identification, disposition, correction, and verification of nonconformances may be transferred between processing methods. Adequate controls shall be established to assure traceability between processing methods and the identified nonconforming item and to prevent inadvertent cancellation of the corrective action implementing document.

15.2.3 Documentation

Documentation of the nonconforming item shall: identify the item; describe the nonconformance; show disposition of the nonconformance and inspection requirements; and include the signature of the person approving the disposition.

15.2.4 Evaluation and Disposition

Nuclear Engineering, or ~~the~~ other delegated ~~contractor~~ organizations, as specified by procedure, shall evaluate nonconformances and disposition them based on the results of the evaluations. **Nonconforming conditions which cannot be made acceptable utilizing existing design documents shall be evaluated by Nuclear Engineering for disposition.** These evaluations and dispositions shall be reviewed, approved and documented in accordance with procedures.

An evaluation to determine the disposition of nonconforming items shall be performed. The evaluation shall determine whether an item is to be accepted as-is, repaired, reworked or rejected. A technical evaluation shall be performed when an item is accepted as-is or is repaired to an acceptable condition. Records of the disposition of these items shall be made part of the nonconformance report. This evaluation shall assure that the final condition does not adversely effect safety, operability or maintainability of the item, or of the component or system in which it is installed.

The A/E, or other contractors on-site, shall be required to inform FPL as specified in procurement documents prior to use or installation of a nonconforming item. The nature and extent of a nonconformance and the reason for proposing its use or installation shall be justified. Nonconforming items dispositioned "accept as-is", or repaired to an acceptable condition, shall be so identified. Nonconformance reports for those items shall be made part of the item records and forwarded with the material to FPL.

The determination of the need and the advisability of releasing nonconforming materials or items, ~~is made by the~~ **shall be initiated by the Site Vice President, and approved by** Nuclear Engineering ~~Department.~~ The following factors may be appropriate considerations in making this determination:

a. Effect on the orderly progress of work if material or items are released;
b. Safety of personnel;
c. Suitability of material or items in "as-is" condition, i.e., probability of eventual satisfactory resolution of the nonconformance without repair, rework, or replacement;
d. Accessibility of material or items after release;
e. Cost of removal and repair of replacement should material or items eventually have to be removed, repaired, or replaced;
f. Impact on plant safety.

Items shall be reworked or repaired in accordance with documented procedures and shall be verified by reinspecting the item as originally inspected or by a documented method which is at least equal to the original inspection method.

~~Nuclear Assurance personnel shall periodically review n~~Nonconformance reports **shall be periodically reviewed** to identify quality trends. The results of these analyses shall be reviewed with appropriate members of upper level management.

15.3 RESPONSIBILITIES

15.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division are responsible for:

a) the generation of instructions/procedures to implement requirements for the identification, control, disposition, and verification of nonconformances within their purview;

b) identifying and documenting nonconforming items within the scope of their departmental responsibilities;

c) submitting nonconformances requiring design evaluations to the appropriate engineering organizations;

d) tracking and control of open nonconforming items within the scope of their departmental responsibilities;

e) dispositioning and verifying the resolution of nonconforming items within the scope of their departmental responsibilities;

f) periodically assessing quality trends related to nonconformances.

15.3.2 The Site Vice President is responsible for:

a) supplier notification and follow-up of nonconformances requiring supplier corrective actions.

15.3.3 The Vice President Nuclear Assurance is responsible for:

a) periodically assessing quality trends related to nonconformances and reviewing the results of these assessments with appropriate members of upper level management.

15.3.4 The Vice President Nuclear Engineering and Licensing is responsible for:

a) the review, evaluation, and disposition of nonconformances submitted by other departments;

b) approval of release of nonconforming items

c) supplier notification and follow-up of nonconformances requiring supplier corrective actions.

16.1 GENERAL REQUIREMENTS

Documented measures shall be used to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected as soon as practicable. In the case of significant conditions adverse to quality, the cause of the condition shall be determined and action taken to preclude repetition. The identification of significant conditions adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

16.2 IMPLEMENTATION

16.2.1 Corrective Action and Follow-Up

~~Quality Procedures and~~ Quality Instructions shall define responsibilities and methods for identifying and correcting conditions adverse to quality. When an adverse condition is detected, a determination shall be made by plant supervision or Nuclear Assurance personnel as to whether immediate or routine corrective action is required.

a. "Immediate Corrective Action" applies to conditions which pose a threat to plant safety or to the health and safety of the public, which could result in major equipment and material damage, or could, if not corrected, produce defects of significantly greater consequences than those immediately resulting from the condition. "Immediate Corrective Action" is accomplished through stopwork requests/orders to appropriate levels of management, requiring that work be stopped, the plant be shut down or other appropriate actions be taken.

Specific personnel having stop work authority include the Plant General Manager, Site Quality Manager and Plant Vice President.

b. "Routine Corrective Action" applies to conditions which do not require immediate corrective action. Routine corrective action is assured through the distribution and disposition associated with inspection reports, surveillance reports, nonconformance reports, and audit reports; and the investigation analysis and action associated with reportable ~~conditions~~ **events.**

Interdepartmental corrective action shall be requested by use of written correspondence. Audit reports, nonconformance reports, interoffice letters, and other documents may be used for this purpose.

Follow-up to verify implementation of corrective action and close-out of corrective action documentation is accomplished by the ~~QA or QC~~ organization responsible for verifying the corrective action. The ~~Quality~~ **Nuclear** Assurance Department shall track, follow-up, and closeout open items identified by ~~QA~~ **Nuclear Assurance** Department ~~audits and vendor surveillances~~. The respective department or plant shall track those items charged to its operating license by the NRC. Each department shall be responsible for follow-up and close-out of corrective action resulting from their departmental inspections, tests, or operations.

If corrective action is inadequate or not timely, the follow-up organization shall request corrective action from management, as delineated in procedures. The President Nuclear Division is the final authority in the event that agreement is not reached at lower levels regarding stop work requests or other corrective action.

Where corrective action is required of contractor personnel, FPL shall define in procedures and contracts the corrective action interface between FPL and the contractor. FPL shall require the A/E, NSSS vendor, constructor and other suppliers of safety related materials and services to have a documented corrective action system.

16.2.2 Recurrence Control

It is the responsibility of the organization which identifies the significant condition adverse to quality to verify that corrective action description not only corrects the immediate condition, but also precludes the condition from recurring. The organization(s) that provide(s) the corrective action disposition and implementation is responsible to assure that the corrective action taken not only corrects the immediate condition, but also precludes recurrence.

16.2.3 Incidents and Reportable Events Reporting

Operating reportable events and reports of incidents shall be investigated, documented as to cause and corrective action, and reported to the NRC in accordance with the applicable plant Technical Specifications and Federal Regulations. Reportable events and reports of incidents that are safety related or that result in damage shall be forwarded to the Company Nuclear Review Board (CNRB) for review. Conditions adverse to quality are reported to operating plant management through: distribution of QA audit reports, QC inspection reports, corrective action requests, and the investigation and reporting of reportable events in accordance with plant Technical Specifications.

16.3 Responsibilities

16.3.1 The President Nuclear Division is the final authority in the event agreement relating to stop work requests or other proposed corrective action is not reached at lower management levels.

16.3.2 Direct reports of the President Nuclear Division and Department Heads of organizations supporting the Nuclear Division are responsible for:

a. Assuring that timely corrective action within their respective organization.

b. Follow-up and assuring completion of corrective action resulting from their respective department's audits, inspections, surveillances, tests, or operations.

c. Reviewing and investigating audit findings to determine and schedule appropriate corrective action and responding as requested in the audit report.

16.3.3 The Vice President Nuclear Assurance has the responsibility and authority to recommend that work be stopped or appropriate corrective action taken as a result of QA findings during department audits and reviews or QC activities.

16.3.4 All personnel detecting conditions adverse to quality or significant conditions adverse to quality are responsible for reporting such conditions to the appropriate authority.

17.1 GENERAL REQUIREMENTS

Sufficient records shall be maintained to furnish documented evidence of the quality of safety related structures, systems, and components, and of activities affecting their quality. The records shall include, as appropriate, data such as qualifications of personnel, procedures, and equipment; and other documentation such as inspection or test acceptance criteria, and the action taken in connection with deficiencies noted during inspection.

The records required to furnish documentary evidence of quality, herein called quality assurance records, shall be identifiable and retrievable. These records shall be maintained in facilities that provide a suitable environment to minimize deterioration or damage and to prevent loss.

The requirements and responsibilities for quality assurance record control, transmittal, retention, and maintenance shall be established and documented. These record requirements shall be consistent with applicable design, manufacturing, and installation codes and standards, and with procurement document requirements.

17.2 IMPLEMENTATION

17.2.1 Records Identification

Quality ~~Procedures~~ Instructions shall define the quality assurance records necessary to furnish documentary evidence of the quality of safety related structures, systems, and components; and activities affecting quality. These records shall include plant operating logs; results of design reviews, inspections, tests, audits, and material analyses; qualification of personnel, procedures, and equipment; design records such as drawings and specifications; procurement documents; calibration records; and nonconformance or corrective action reports.

Quality assurance records shall be classified as lifetime or non-permanent as required by the NRC facility operating license, the NRC construction permit, applicable parts of 10CFR, the FSAR, or other NRC commitments.

~~17.2.2 Responsibilities~~

~~Responsibilities shall be established and documented for the control, transfer, maintenance, and retention of quality assurance records. Quality Procedures shall provide guidance for determining the retention requirements of quality assurance records. Each organization responsible for the conduct of a quality activity shall be responsible for the maintenance of the subsequent quality assurance records unless retention responsibilities have been transferred by a prearranged agreement. In any case, the organization initiating the quality assurance records shall be responsible for their validity and approval.~~

17.2.2
~~17.2.3~~ Retrieval

~~Quality Procedures shall require that q~~Quality assurance records submitted for retention **shall** be legible, completely filled out, and adequately identifiable and retrievable for each item. The records shall be filed in a ~~the~~ storage area or facility using a documented system to provide retrievability. Quality ~~Procedures~~ **Instructions shall** ~~additionally~~ require control of corrections and supplements issued for quality assurance records that are previously approved and filed, and that documented methods for control and accountability of records removed from the storage area be instituted.

17.2.~~4~~3 Storage

~~Specified in the Quality Procedures are the c~~Construction features and location requirements for record storage facilities **shall be established to** ~~which~~ assure that quality assurance records are protected from possible destruction by causes such as fire, flooding, theft, tornadoes, insects, rodents, and from possible deterioration by a

combination of extreme variations in temperature and humidity. Specific instructions regarding the storage area ~~are~~ shall be given for special processed records and for temporary storage facilities.

A QA Record Storage Evaluation Team (QARSET) shall be established to determine if the methods utilized to store and protect QA records are adequate. The QARSET shall consist of the following: the Quality Manager - Juno Beach, the Loss Prevention Engineer, and the Nuclear Records Official. The QARSET shall maintain records of evaluations and establish schedules to assure that reevaluations are performed every two (2) years. The QARSET shall evaluate the status of existing facilities and the adequacy of additional records facilities prior to the construction of a new facility or the conversion of existing structures. The requirements of the Topical Quality Assurance Report, Appendix C shall be utilized in the evaluation of potential permanent and temporary record storage facilities.

17.3 RESPONSIBILITIES

17.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division that generate quality assurance records are responsible for:

a) the technical content and accuracy of the records they generate;

b) transmitting records to the appropriate storage facility or requesting approved storage locations from QARSET;

c) establishing a list of quality assurance records generated by the organization and their retention times and assuring that these quality assurance records are identified in the appropriate quality assurance record index;

d) the storage and retrieval of quality assurance records prior to transmittal to permanent record storage facilities;

e) performing periodic surveys to ensure that their record control system is adequate.

17.3.2 The Nuclear Records Official is responsible for:

a) ensuring the quality assurance records program activities are managed in accordance with applicable laws and regulations;

b) developing, approving, and maintaining record retention schedules;

c) establishing parameters for records indexing;

d) locating acceptable record storage areas when requested;

e) storage, retrieval, and control of records/documents as requested by other departments;

f) leading the evaluation of specially designated QARSET approved storage facilities, maintaining records of this evaluation, and establishing schedules to assure that re-evaluations are performed every two (2) years.

17.3.3 The Site Vice President is responsible for:

a) the storage and retrieval of quality assurance records at the site.

17.3.4 The Manager Administrative Services is responsible for:

a) storage, retrieval, and control of records and documents as requested by other departments.

17.3.5 The Quality Assurance Record Storage Evaluation Team (QARSET) is responsible for:

a) evaluating the acceptability of storage locations for quality assurance records;

b) ensuring that evaluations of storage locations are performed every two years.

18.1 GENERAL REQUIREMENTS

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Follow-up action, including reaudit of deficient areas, shall be taken, where necessary.

18.2 IMPLEMENTATION

A comprehensive program of audits is carried out by the Quality Assurance Department during the design, procurement, construction, and operations phase of nuclear power plants. These audits are performed to verify that all safety related activities associated with nuclear power plants are carried out in accordance with the requirements of the FPL QA Program, and that the implementation is effective.

18.2.1 Personnel

Quality ~~Procedures~~ **Instructions shall** provide instructions for the training of QA Department personnel who perform audit activities, to assure that they are adequately indoctrinated and trained, and that they are qualified to carry out these activities. Quality ~~Procedures~~ **Instructions** provide for personnel qualified as Lead Auditors to be formally certified by Quality Assurance Department management. Certification shall be based on education, experience, training and other specified criteria.

18.2.2 Planning and Scheduling

Quality ~~Procedures and Quality Instructions~~ **Instructions** provide requirements for written audit plans and schedules. The audits are planned and scheduled on the basis of the following:

a. Activities shall be audited as early in their life as practicable. Auditing shall be initiated early enough to assure effective quality assurance during the design, procurement and contracting activities.

b. The system of audits devised to verify compliance with ~~safety and quality related~~ aspects of the nuclear plants is described in each unit's technical specifications. Audits of selected aspects of operational phase activities are performed with a frequency commensurate with safety significance. As a minimun, unless otherwise specified by technical specifications, the Code of Federal Regulations or other licensing commitments, these audits are performed at a biennial (2-year) frequency. The audit system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities.

c. An annual evaluation of suppliers' quality performance history shall be performed to determine reaudit requirements. Reaudit requirements for suppliers shall be based on the supplier's quality performance and the complexity and criticality of the equipment or service being procured. A facility evaluation (audit) will be performed at least every three years and shall be conducted in accordance with Quality ~~Procedures and Quality Instructions~~ Instructions for supplier evaluations.

d. Audits shall be regularly scheduled for on-going activities.

e. Regularly scheduled audits shall be supplemented, as required to cover unforeseen events or changes in requirements.

The scope of audit activities shall include, as a minimum:

a. The determination of site features which affect plant safety (e.g., core sampling, site preparation, and meteorology).

b. The preparation, review, approval, and control of the SAR, designs, specifications, procurement documents, instructions, procedures, and drawings.

c. Evaluation of bids.

d. Indoctrination and training programs.

e. Receiving and plant inspections.

f. Operation, maintenance/repair and modification.

g. The implementation of operating and test procedures.

h. All criteria in Appendix B to 10 CFR Part 50.

i. Validity of Certificates of Conformance.

External audits shall be performed by the Quality Assurance Department on Architect/Engineers, NSSS vendors, constructors, and other suppliers of safety related materials and services to evaluate their QA programs, procedures and activities. Procurement documents shall require that FPL suppliers and contractors in turn perform audits on their sub-tier suppliers and contractors.

18.2.3 Conduct of Audits

Quality ~~Procedures and Quality Instructions~~ **Instructions** shall delineate requirements for the conduct of audits. These ~~procedures and~~ instructions shall require that:

a. Audits be conducted by trained and qualified personnel.

b. Personnel conducting audits shall not have direct responsibility in the area audited.

c. Checklists or ~~procedures~~ **instructions** shall be used to ensure depth and continuity of audits.

d. Objective evidence shall be examined for compliance with quality assurance program requirements. This shall include examination of ~~procedures~~ **instructions** and activities to assure that documented objective evidence is meaningful and in compliance with the overall Quality Assurance Program.

e. Audits shall include evaluation of work areas, activities, processes and items; and the review of documents and records.

18.2.4 Reporting of Audit Findings

Audit findings shall be documented in written reports. Audit reports shall be distributed to the responsible management of the audited FPL organization within thirty calendar days after completion of the audit.

18.2.5 Follow-up

Responsible management of the audited organization shall take action to correct the deficiencies identified in the audit report and provide a written response within thirty calendar days after receipt of the report. This response shall include action taken and/or planned to correct deficiencies and to prevent recurrence of the deficiencies, and commitment dates for actions not yet complete. The mechanism for evaluation and follow-up of corrective action is described in TQR 16.0. The status of correction of deficiencies shall be followed until the corrective actions have been accomplished and verified.

18.2.6 Reports to Management

The Quality Assurance ~~Program status reports are periodically prepared by the QA~~ Department **periodically reports on the status of the Quality Program** ~~and routed~~ to the members of the Company Nuclear Review Board (CNRB) ~~for their review.~~ This status report summarizes the results of QA Department audit activities for the period, keeps all CNRB members apprised of current conditions and program effectiveness, and when necessary, directs management attention to significant trends and problems.

18.3 RESPONSIBILITIES

18.3.1 Direct reports to the President, Nuclear Division, and Department Heads of organizations supporting the nuclear division shall be responsible for:

1. Taking action to correct deficiencies identified in audit reports.

2. Providing a written response within thirty (30) calendar days of receipt the audit report.

18.3.2 The Vice President Nuclear Assurance is responsible for the following:

1. Scheduling audits on a regular basis.

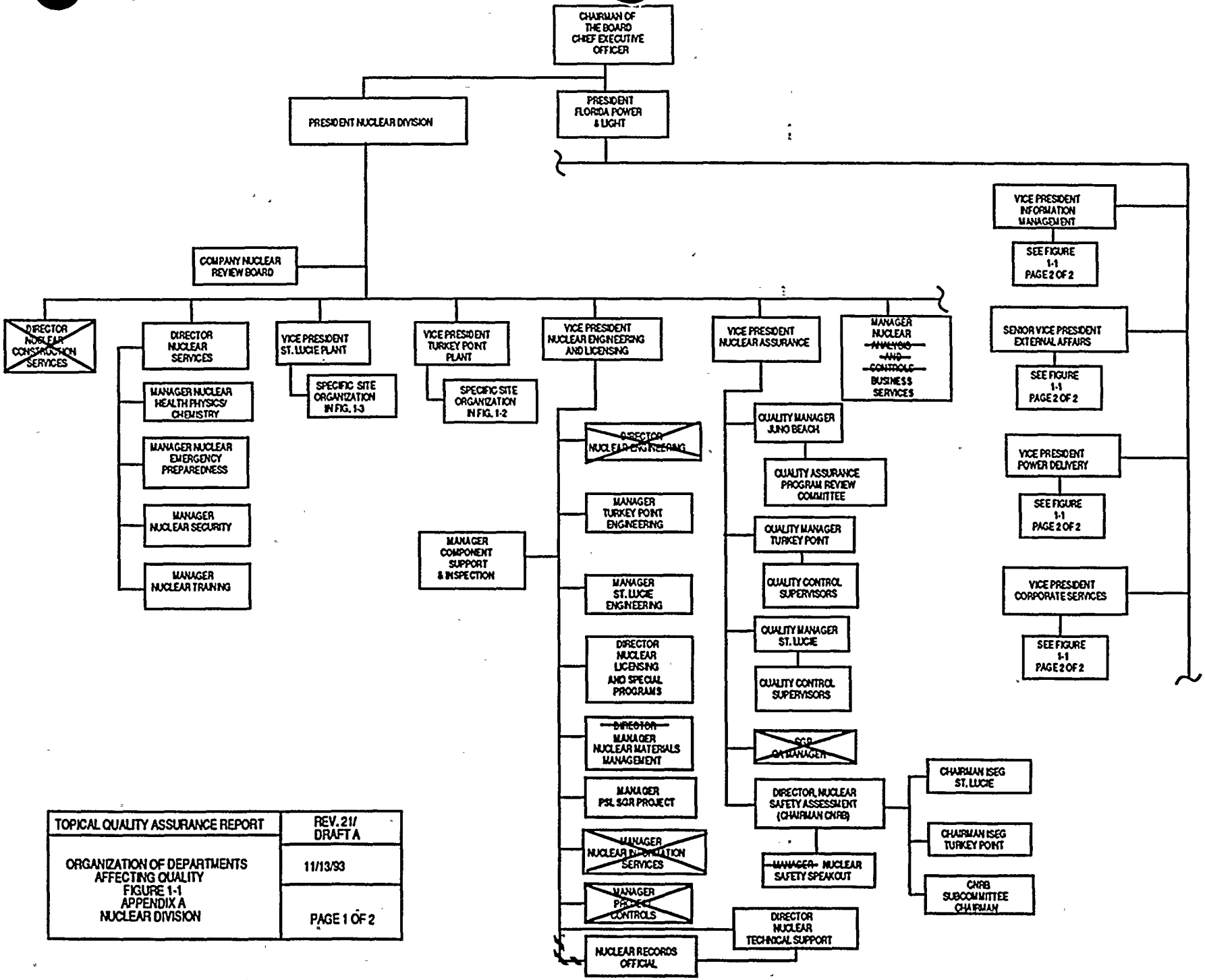
2. Selecting the audit team and the ~~Principal~~ Lead Auditor.

3. Reviewing each audit report for accuracy, completeness, proper format and distribution.

4. Designating a qualified replacement ~~principal~~ Lead Auditor (in writing) if the audit team leader transfers from the respective QA group or is otherwise unable to continue ~~his/her~~ the assigned audit.

5. The qualification of ~~Principal~~ Lead Auditors.

18.3.3 The Chairman, Company Nuclear Review Board (CNRB) is responsible for review and concurrence of Annual Audit Program Plans, review of individual audit scopes and involvement in the audit program for internal audits as defined by CNRB ~~procedures~~ instructions.



TOPICAL QUALITY ASSURANCE REPORT	REV. 21/ DRAFT A
ORGANIZATION OF DEPARTMENTS AFFECTING QUALITY FIGURE 1-1 APPENDIX A NUCLEAR DIVISION	11/13/93
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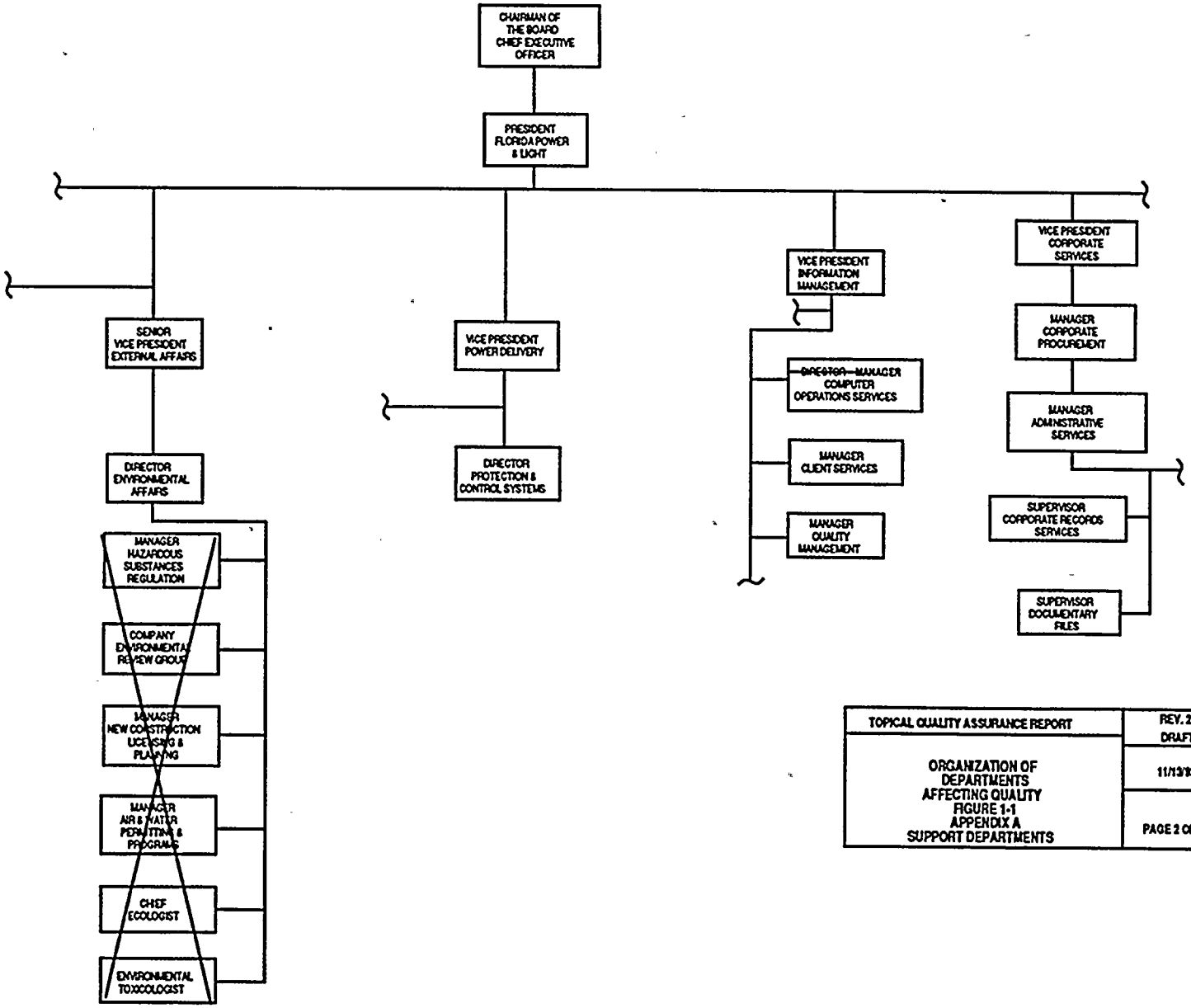

TOPICAL QUALITY ASSURANCE REPORT	REV. 21/ DRAFT A
ORGANIZATION OF DEPARTMENTS AFFECTING QUALITY FIGURE 1-1 APPENDIX A SUPPORT DEPARTMENTS	11/13/93
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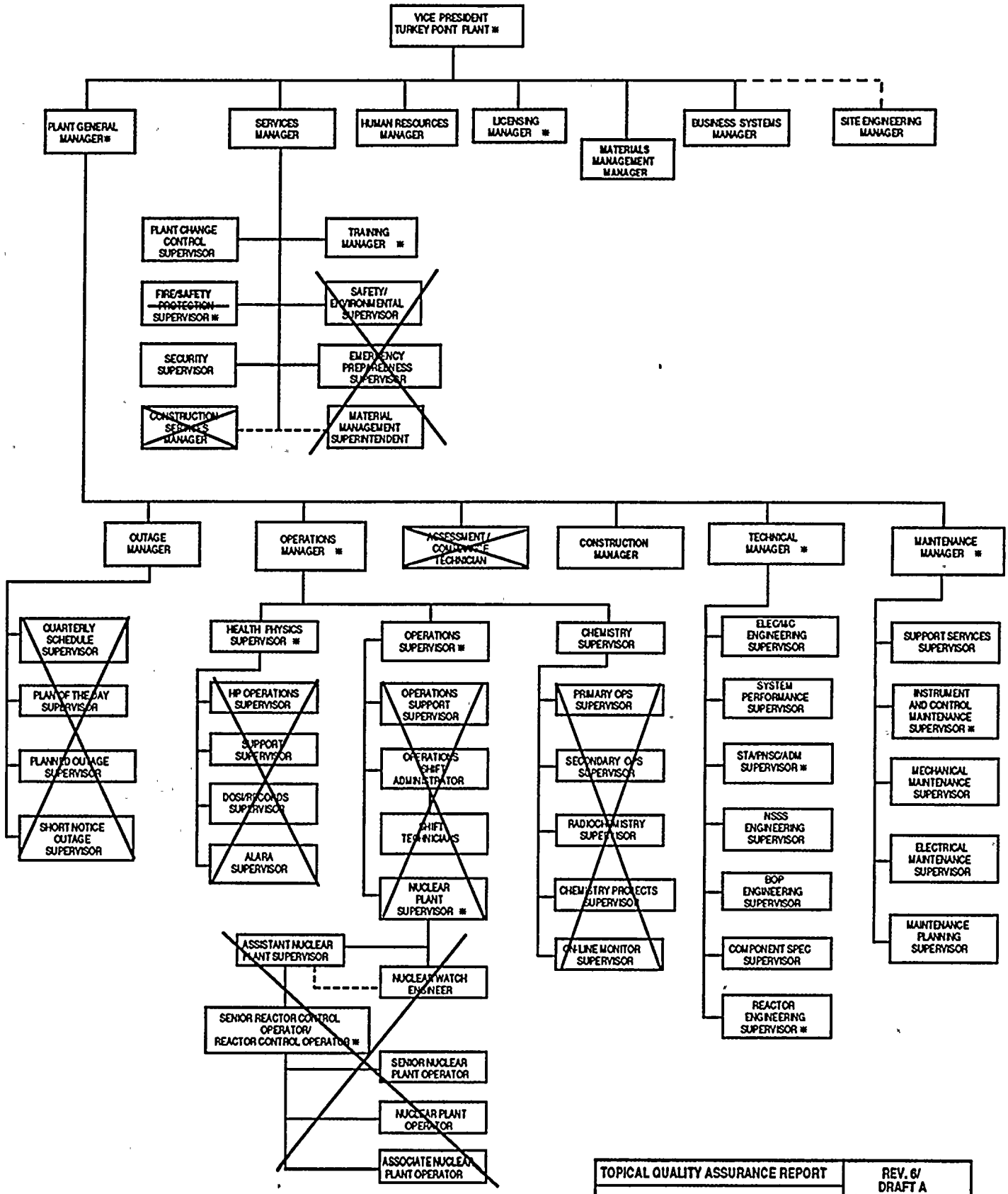

✱ - Indicates position with accountabilities in Technical Specifications.

TOPICAL QUALITY ASSURANCE REPORT	REV. 6/ DRAFT A
TURKEY POINT NUCLEAR SITE ORGANIZATION FIGURE 1-2 APPENDIX A	11/13/93
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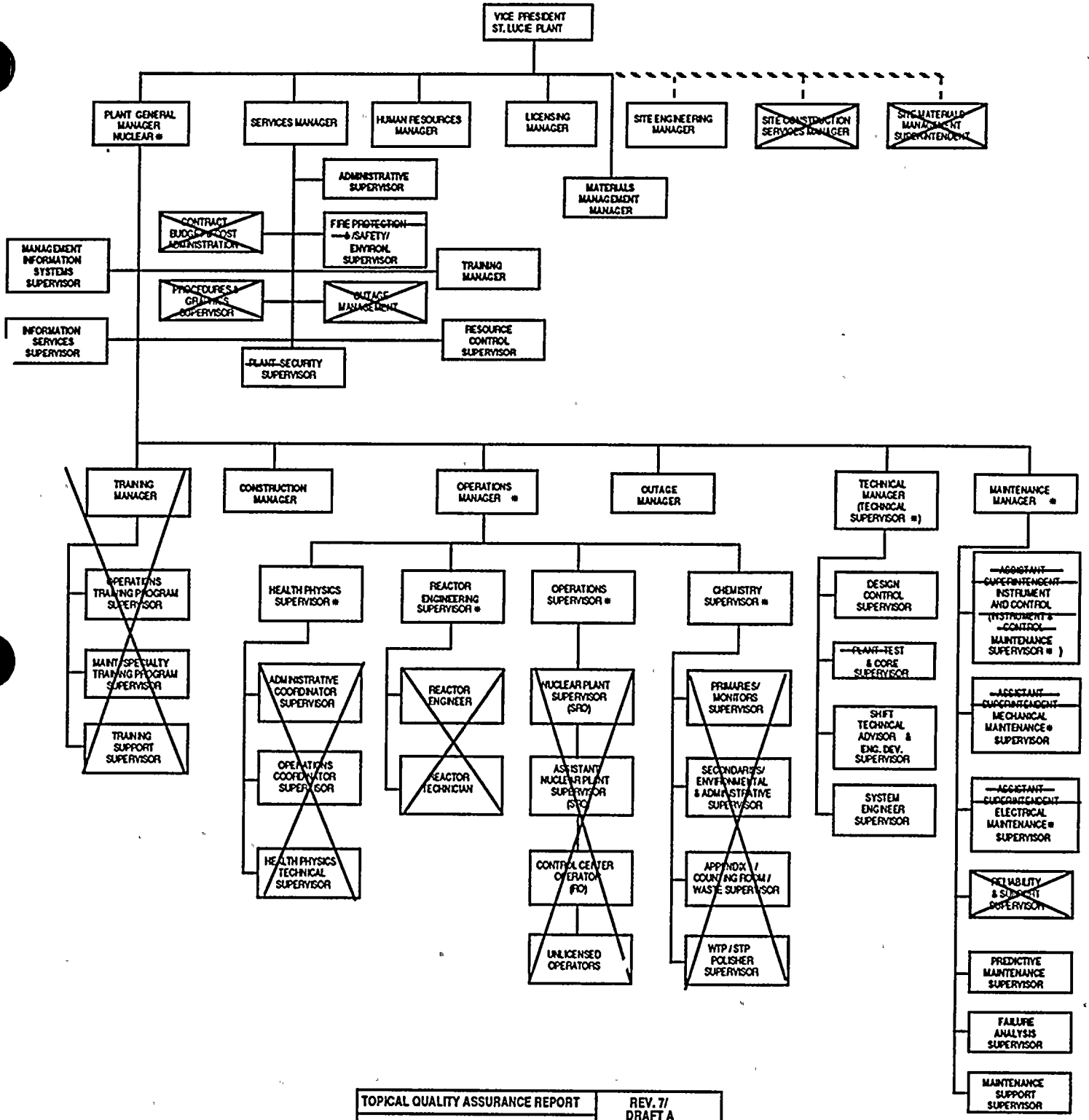

TOPICAL QUALITY ASSURANCE REPORT	REV. 7/ DRAFT A
ST. LUCIE PLANT, UNITS 1 & 2 SITE ORGANIZATION FIGURE 1-3 APPENDIX A	11/13/93
	PAGE 1 OF 1

* - Indicates position with accountabilities in Technical Specifications. Where multiple titles occur, the first position listed shall act in the capacity of the other listed titles.

This Appendix has been deleted in its entirety.

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~1.1 CANCELLED~~	
~~2.1 CANCELLED (Terms and Definitions contained in the QA Manual Glossary)~~	
~~2.2 CANCELLED~~	
~~2.3 QUALITY ASSURANCE PROGRAM REVIEW~~	~~Provides instructions for the revision of the Florida Power & Light Company Topical Quality Assurance Report (FPL TQAR). Describes the instructions and methods used for establishing, preparing, issuing, revising and controlling Quality Procedures employed in supporting quality requirements.~~
~~2.4 PREPARATION AND REVISION OF QUALITY INSTRUCTIONS~~	~~Provides the responsibilities, guidelines and methods used for developing and revising Quality Instructions, based upon QP's, that involve quality activities within a department or organization and are unique to that activity.~~
~~2.5 QUALITY ASSURANCE INDOCTRINATION AND DEPARTMENTAL TRAINING~~	~~Describes the requirements for the indoctrination and training of personnel who perform, or are responsible for activities that affect quality.~~
~~2.6 CANCELLED~~	
~~2.7 IDENTIFICATION OF SAFETY RELATED STRUCTURES, SYSTEMS, AND COMPONENTS~~	~~Describes the development and approval of documents identifying safety related and safety related design feature structures, systems and components.~~
~~2.8 CLEANLINESS CONTROL METHODS~~	~~Provides criteria for securing good housekeeping. Assigns responsibilities for assuring that the cleanliness of material, systems and structures is maintained.~~

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~2.9 QUALIFICATION OF QA AUDIT, QC INSPECTION, CONSTRUCTION & POWER SUPPLY TEST PERSONNEL~~	~~Describes the personnel qualifications that are required to assure that competent QC inspectors, QA auditors, construction and power supply test personnel perform these respective functions.~~
~~2.10 HOUSEKEEPING FOR OPERATING PLANTS~~	~~Describes the responsibilities and controls for housekeeping at operating nuclear power plants.~~
~~2.11 CANCELLED~~	
~~2.12 FPL QA PROGRAM APPLICABILITY FOR QUALITY RELATED ITEMS AND SERVICES~~	~~Identifies the applicability of the Quality Assurance Program for Quality Related Items and Services.~~
~~2.13 PROCESSING OF NRC CORRESPONDENCE~~	~~Describes the system for providing responses to NRC initiated action requests.~~
~~2.14 IMPLEMENTATION OF ASME XI~~	~~Describes the program and responsibilities for controlling activities defined by ASME Section XI.~~
~~2.15 CONTROL OF COMPUTER SOFTWARE~~	~~Specifies basic requirements for control of the lifecycle of computer software on mainframe, stand-alone, and PC computers.~~
~~2.17 ENVIRONMENTAL QUALIFICATION (EQ) OF ELECTRICAL EQUIPMENT~~	~~Delineates the responsibilities and requirements for maintaining the environmental qualifications of nuclear plant components.~~
~~3.1 CANCELLED~~	
~~3.2 IDENTIFICATION AND CONTROL OF DESIGN INTERFACES~~	~~Describes measures employed for identifying and controlling design interfaces, changes in design interfaces, and modifications that affect documents.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~3.4 PLANT CHANGES AND MODIFICATIONS FOR OPERATING PLANTS~~	~~Establishes measures for controlling design changes or modifications in operating nuclear power plants.~~
~~3.5 DESIGN CONTROL AT THE CONSTRUCTION SITE~~	~~Defines the responsibilities and methods employed for the initiation, review, evaluation, approval and disposition of field initiated design changes and miscellaneous design documents such as field sketches and isometrics.~~
~~3.6 CONTROL OF FPL ORIGINATED DESIGN~~	~~Covers the preparation, review, and approval of design input documents, design analysis specifications, and design verification for safety related design work originated by FPL.~~
~~3.7 EVALUATION AND CONTROL OF CONTRACTOR DESIGN FOR NUCLEAR FUEL AND RELATED SYSTEMS~~	~~Describes the evaluation and control of contractor designs for fuel related components and analysis.~~
~~4.1 CANCELLED~~	
~~4.2 CANCELLED~~	
~~4.3 CANCELLED~~	
~~4.4 CANCELLED~~	
~~4.5 CANCELLED~~	
~~4.6 PROCUREMENT CONTROL~~	~~Delineates the sequence of actions in the preparation, review, approval, and control of procurement documents.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~4.7 SPECIAL QUALITY ASSURANCE DOCUMENTS~~	~~Describes the process for development, revision, issuance, and control of Special Quality Assurance Documents (SQADS).~~
~~5.1 OPERATING PLANT PROCEDURES~~	~~Describes measures which ensure that instructions and procedures used in operating plants are identified, prepared, reviewed, approved, issued and revised in accordance with regulatory and FPL requirements.~~
~~5.2 CONSTRUCTION SERVICES PROCEDURES~~	~~Describes the generation, review and control of Construction Services procedures.~~
~~6.1 CONTROL OF CONSTRUCTION PROJECT CONTRACTOR DRAWINGS, SPECIFICATIONS AND PROCEDURES~~	~~Defines responsibilities and methods for the control and issue of contractor drawings, specifications and procedures to be used during the construction phase of nuclear power plants.~~
~~6.2 CONTROL OF DOCUMENTS ISSUED BY FPL~~	~~Instructions are provided for controlling documents issued by FPL which prescribe activities affecting the quality of safety related items.~~
~~6.3 CANCELLED~~	
~~6.4 CANCELLED~~	
~~6.5 CANCELLED~~	
~~6.6 DRAWING CONTROL FOR OPERATING NUCLEAR POWER PLANTS~~	~~Describes the method to be used for controlling and updating nuclear safety related drawings for operating plants after turnover from the design organization.~~
~~6.7 CONTROL OF VENDOR MANUALS AND VENDOR TECHNICAL INFORMATION~~	~~Establishes requirements for controlling technical manuals for operating, maintenance and test equipment.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~7.1 RECEIPT INSPECTION OF ITEMS AT THE PLANT SITE~~	~~Provides instructions for receipt inspection of materials, parts and components which have been obtained for use in nuclear safety applications at the operating plant site.~~
~~7.2 CANCELLED~~	
~~7.3 CANCELLED~~	
~~7.4 EVALUATION OF SUPPLIERS OF SAFETY RELATED ITEMS OR SERVICES~~	~~Provides standards, measures, and guidelines for the evaluation of QA Programs of contractors or suppliers supplying items or services.~~
~~7.5 CANCELLED~~	
~~7.6 ACCEPTANCE OF ITEMS AND SERVICES~~	~~Describes the responsibilities and requirements for accepting nuclear safety related items or services that are being procured for nuclear power plants.~~
~~7.8 CANCELLED~~	
~~7.9 CONTROL OF ON SITE SERVICES~~	~~This procedure provides a system to assure that vendors who provide on-site services by contract or purchase order to FPL at nuclear power plants are controlled.~~
~~8.1 IDENTIFICATION AND CONTROL OF ITEMS AT THE PLANT SITE~~	~~Delineates measures for assuring traceability, identification and control of items from the time they are received through usage at operating plants.~~
~~8.2 CANCELLED~~	
~~9.1 CONTROL OF SPECIAL PROCESSES~~	~~Delineates the responsibilities of organizations and personnel, and the control and documentation of special processes that are applied to safety related items.~~

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~9.2~~ ~~CANCELLED~~ ~~(Combined with 9.1)~~	
~~9.4~~ ~~CONTROL OF WELDING FOR NUCLEAR POWER PLANTS~~	~~Delineates responsibilities and requirements for control FPL welding processes for nuclear power plants.~~
~~10.1~~ ~~CANCELLED~~	
~~10.2~~ ~~CANCELLED~~	
~~10.3~~ ~~INSPECTION AND SURVEILLANCE~~	~~Delineates responsibilities and requirements for the inspection and surveillance of safety related plant maintenance activities, operation of safety related systems, and fuel handling activities.~~
~~10.4~~ ~~CANCELLED~~	
~~10.5~~ ~~CANCELLED~~	
~~10.6~~ ~~CANCELLED~~	
~~11.1~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	
~~11.2~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	
~~11.3~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~11.4 TEST CONTROL~~	~~Defines the measures for control of proof tests prior to installation, construction tests, preoperational tests, startup tests, operational tests and retests following repairs, replacements or modifications for nuclear safety related systems, structures, and components.~~
~~12.1 CALIBRATION AND CONTROL OF MEASURING AND TEST EQUIPMENT~~	~~Delineates the responsibilities for implementing the described program for maintenance, calibration and control of measuring and test equipment (M&TE).~~
~~12.2 CALIBRATION CONTROL OF INSTALLED PLANT INSTRUMENTATION AND CONTROL EQUIPMENT~~	~~Describes the calibration program, delineates responsibilities, and establishes procedures for control over the calibration of install instrumentation and plant control equipment.~~
~~13.1 HANDLING, STORAGE AND SHIPPING OF ITEMS~~	~~Establishes responsibilities and procedures to assure that measures are employed by FPL and contractors to: (1) control the handling, shipping and storage of material; (2) protect the quality of material by using proper handling, shipping, and storage techniques; (3) effectively control the disposition of discrepant items.~~
~~13.2 CANCELLED~~	
~~13.3 CANCELLED (Combined with 13.1)~~	
~~14.1 CANCELLED (Combined with 14.3)~~	
~~14.2 CANCELLED (Combined with 14.3)~~	

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~14.3~~ ~~INSPECTION, TEST AND OPERATING STATUS DURING PLANT OPERATION~~	~~Defines the measures and responsibilities for the identification of the inspection, test and operating status of structures, systems, and components.~~
~~15.1~~ ~~CANCELLED~~ ~~(Combined with 15.2)~~	
~~15.2~~ ~~CONTROL OF NONCONFORMING MATERIALS, PARTS, COMPONENTS AND SERVICES FOR ST. LUCIE PLANT~~	~~Defines the objectives and responsibilities for controlling nonconforming items or services in order to prevent their inadvertent use, installation or application to St. Lucie nuclear power plant.~~
~~15.3~~ ~~CONTROL OF NONCONFORMING MATERIALS, PARTS, COMPONENTS AND SERVICES FOR TURKEY POINT PLANT~~	~~Defines the objectives and responsibilities for controlling nonconforming items or services in order to prevent their inadvertent use, installation or application to Turkey Point nuclear power plant.~~
~~16.1~~ ~~CORRECTIVE ACTION~~	~~Establishes the respective responsibilities of FPL personnel and the procedure for assuring that conditions identified by the FPL QA Department as being adverse to quality, are corrected.~~
~~16.2~~ ~~CANCELLED~~ ~~(Combined with 16.1)~~	
~~16.3~~ ~~CANCELLED~~ ~~(Combined with 16.1)~~	
~~16.4~~ ~~EVALUATING AND REPORTING DEFECTS AND FAILURE TO COMPLY FOR SUBSTANTIAL SAFETY HAZARDS IN ACCORDANCE WITH 10 CFR PART 21~~	~~Specifies the measures and responsibilities within Florida Power & Light to assure compliance to 10 CFR Part 21.~~
~~16.6~~ ~~CANCELLED~~	

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~17.1 QUALITY ASSURANCE RECORDS~~	~~Identifies records and documents required to substantiate quality; and, describes measures employed for their maintenance, retention and retrieval.~~
~~18.1 PERFORMANCE OF QUALITY ASSURANCE AUDITS~~	~~Provides instructions for conducting audits of FPL Quality Assurance Program activities.~~
~~18.2 CANCELLED~~	
~~18.3 CANCELLED~~	
~~18.4 CANCELLED~~	

5.0 DEFINITIONS: (Cont'd)

1.0 APPROVAL:

Vice President Nuclear Assurance

2.0 PURPOSE:

This glossary provides terms that are used by FPL personnel in the performance of Quality activities ~~during the design, construction and operation of~~ for nuclear power plants.

3.0 SCOPE:

The terms and definitions appearing in this compilation apply to those that are used in this manual and in documentation resulting from FPL Quality Program activities.

4.0 RESPONSIBILITY:

It is the responsibility of the Quality Manager Juno Beach to maintain and update this glossary. It is the responsibility of the user to ascertain that these definitions are appropriate.

5.0 DEFINITIONS:

Abnormal Occurrence	An unscheduled incident or event which the NRC determines is significant from the standpoint of public health or safety.
Acceptance	The act of assenting to ownership of an item, structure or service as conforming to specified requirements.
Acceptance Criteria	A limit or limits placed on the variation permitted in the characteristics of an item expressed in definitive engineering terms such as dimensional tolerances, chemical composition limits, density and size of defects, temperature ranges, time limits, operating parameters, and other similar characteristics.

FOOTNOTE:
(1) - ANSI 45.2.10 Definition
(2) - QA Manual Appendix C Definition
(3) - ANSI N.18.7 Definition
(4) - ANSI NQA-1 Definition
(5) - NSAC 125 Definition/Excerpt

5.0 **DEFINITIONS:** (Cont'd)

Accepted Industry Standard	A standard established by a group representing different members of an industry who normally are those engaged in manufacturing. This standard is "accepted" by the responsible organization. Examples are: AGMA - American Gear Manufacturers Association, AISC - American Institute of Steel Construction, AISE - Association of Iron and Steel Engineers.
Accuracy	The degree of conformity of a measured value to an accepted standard value.
Activity Audits	Performed supplemental to Program Audit to verify procedure development and/or implementation of specific activities by plants/departments in accordance with Quality Instructions or other implementing procedures. Activity Audits may be planned so that a series of such audits will verify the development and implementation of a portion of the Quality Assurance Program.
Analysis	A process of mathematical or other logical reasoning that leads from stated premises to the conclusion concerning specific capabilities of equipment and its adequacy for a particular application.
(1)Approval	An act of endorsing or adding positive authorization, or both.
Approved As-Built Marked Up Drawings	Drawings marked up per plant change/modification documentation by Nuclear Engineering and field checked by Nuclear Energy. The drawings have received proper review and are approved by signature from Nuclear Energy and Nuclear Engineering.
Approved Inspector (AI)	See "Inspector" (State or Code)
(1)Appurtenance	A part that is attached to a component which has been completed.
As-Built	The plant configuration after implementation of any specific plant construction or plant change, as approved by Nuclear Engineering.
(1) As-Built Data	Documented data that describes the condition actually achieved in a product.
As Constructed	The plant configuration after implementation of any specific plant construction or plant change.

5.0 **DEFINITIONS:** (Cont'd)

(2) Assembly	A combination of subassemblies or components or both, fitted together to form a workable unit.
(2) Audit	A documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the Quality Assurance Program have been developed, documented and effectively implemented in accordance with specified requirements. An audit does not include surveillance or inspection for the purpose of process control or product acceptance.
Auditable Justification	When compliance to 10 CFR 50.49 requirements is not complete, a technical evaluation is provided to demonstrate that the item can perform the required quality related function when subjected to the applicable 10 CFR 50.49 harsh environmental conditions.
Audit Finding	Deviation from specified audit criteria which is based on objective evidence.
Auditor	Any individual who participates in an audit, including lead auditors, technical specialists and others such as management representatives and auditors in training.
Audit Program Plan (APP)	Developed in accordance with department instructions to assure coverage of all activities required by license commitments to be included in the audit program and to demonstrate that this coverage has been achieved.
Augmented Quality Procurement Classification (PC-3)	1. PC-3 items and services are not subject to 10CFR 21 by the supplier. 2. This classification may be applied to any item or service that is subject to non-safety related regulatory requirements or special requirements imposed by FPL, which include those items and services defined as quality related. NOTE: Basic components cannot be procured PC-3.
Availability	The characteristic of an item expressed by the probability that it will be operational at a randomly selected future instant in time.
~~Backfit~~	~~Work performed at an operating plant under the direction of the Nuclear Construction Services organization.~~

5.0 **DEFINITIONS:** (Cont'd)

Backfitting	**Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the NRC rules or the imposition of a regulatory staff position interpreting the NRC rules that is either new or different from a previously applicable staff position.**
Basic Components	Those components, structures, and equipment, as well as their associated design, testing, inspection, and consulting services which are nuclear safety related. See Safety Related.
Bid Package	Proposal by prospective contractor/supplier in response to a request for bid. It includes exceptions to requirements stated in drawings, specifications, codes, standards, quality and other requirements incorporated in or referenced in the request for bid.
Blanket Purchase Order (BPO)	A Purchase Order issued to a firm to supply specified items or services to FPL for a specified period of time on an "as requested" basis. Specific Items or Services are requested to be delivered or supplied by use of a Delivery and Work Authorization (DWA) form which delineates the specific scope of work.
Blanket Purchase Order Release (BPOR)	A release or authorization to a supplier who holds a Blanket Purchase Order to provide specific items as defined in the Blanket Purchase Order. This is a PMIS generated document.
Break-In Period	That early period, beginning at some stated time, during which the failure rate of some items is decreasing rapidly; also called, "early failure" period.
Calibration	Comparison of an item of Measuring and Test Equipment (M&TE) with a reference standard or item of M&TE of equal or closer tolerances to detect and quantify inaccuracies and to report and eliminate those inaccuracies by adjustment.
Carrier	The transporting agency.

5.0 **DEFINITIONS:** (Cont'd)

(1)Certificate of Compliance	A written statement, signed by a qualified party, attesting that the items or services are in accordance with specified requirements and accompanied by additional information to substantiate the statement.
(1)Certificate of Conformance	A written statement, signed by a qualified party, certifying that items or services comply with specific requirements.
(1)Certification	The action of determining, verifying and attesting, in writing, to the qualifications of personnel or material; i.e, a written testimony of qualification.
Certified Personnel	Persons who are periodically certified by their respective employers as being qualified to perform assigned work. Certification is substantiated by documentation that verifies education or training, testing, evaluation and periodic review to assure initial and continuing proficiencies.
Certified As-Constructed	Documentation provided by and approved by Nuclear Energy or FPL Construction, to provide objective evidence as to the as-constructed configuration.
Certified Standards	Standards of measurement whose accuracy can be traced to standards at the National Institute of Standards and Technology.
(1)Certified Test Report	A written and signed document, approved by a qualified party, that contains sufficient data and information to verify the actual properties of items and the actual results of all required tests.
Channel	An arrangement of components and modules as required to generate a single protective action signal when required by a generating station condition. A channel loses its identity where single action signals are combined.
(1)Characteristic	Any property or attribute of an item, process, or service that is distinct, describable, and measurable, as conforming or nonconforming to specified quality requirements. Quality characteristics are generally identified in specifications and drawings which describe the item, process, or service.
(1)Checks	The tests, measurements, verifications or controls placed on an activity by means of investigations, comparisons, or examinations to determine satisfactory condition, accuracy, safety or performance.
Chemical Conditioning	The addition of chemicals to flush, rinse, or layup water to prevent precipitation of dissolved solids, inhibit corrosion, etc.

5.0 **DEFINITIONS:** (Cont'd)

Class IE	The safety classification of the electric equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal, or otherwise essential in preventing significant release of radioactive material to the environment.
Class I Structures and Equipment	Structures and equipment that are essential to the safe shutdown and isolation of the reactor or whose failure or damage could result in a significant release of radioactive material.
Class II Structures and Equipment	Structures and equipment that are important to reactor operation but are not essential to the safe shutdown and isolation of the reactor, and whose failure cannot result in a significant release of radioactive material.
Cleaning	The removal of any contaminants that might have a deleterious effect on safe and reliable operation of the plant.
(1)Cleanness	A state of being clean in accordance with predetermined standards, and usually implies freedom from dirt, scale, heavy rust, oil or other contaminating impurities.
Code	A recognized standard to be followed when using or processing materials, or for specifying the skills involved when using or processing materials.
Code Classes	The ASME Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Power Plant Components," has four classifications: Code Classes 1,2, and 3 for fluid system components covered by the Code, and MC for reactor containment components. These classifications specify design and quality assurance requirements.
Cognizant Engineer	The engineer (or engineering organization) assigned Engineer specific task or responsibility to design, install or document an item, structure or system.
~~Commencement of Construction~~	~~Any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.~~

5.0 **DEFINITIONS:** (Cont'd)

Commercial (4) Grade Item	An item that is (1) not subject to design or specification requirements that are unique to facilities or activities licensed by the NRC, and (2) used in applications other than facilities or activities licensed by the NRC, and (3) to be ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (for example, a catalog).
Common Failure Mode	A mechanism by which a single design basis event can cause redundant equipment to be inoperable.
Company Nuclear Review Board (CNRB)	A group established to assist Company Management in assuring that nuclear generating facilities are operated and maintained in compliance with NRC license requirements.
Completely Filled Out Quality Assurance Record	A Quality Assurance Record is completely filled out when it has all necessary or normal parts, elements, or steps; it lacks nothing essential.
(1) Component	A piece of equipment such as a vessel, piping, pump, valve or core support structure, which will be combined with other components to form an assembly.
Component Identification Number	An identification number assigned to an item for use throughout its lifetime.
Computer Program	A sequence of instructions suitable for processing by a computer. Processing may include the use of an assembler, a compiler, an interpreter, or a translator to prepare the program for execution.
Computer Software	Computer programs, procedures, rules, and possibly associated documentation and data pertaining to the operation of a computer system.

5.0 **DEFINITIONS:** (Cont'd)

Conditions Adverse To Quality	Failures, malfunctions, deficiencies or deviations in material and equipment and other nonconformances which are corrected by taking action to correct the immediate condition only. Such nonconforming conditions do not require engineering evaluation or are not reportable as 10 CFR 50.55(e), 10 CFR 50.73, or 10 CFR 21 deficiencies.
Condition Report	A nonconformance reporting document used for processing nonconformances at PTN including nonconforming conditions that cannot be made acceptable utilizing existing design documents thereby requiring engineering disposition.
Configuration	The physical arrangement of components, systems and structures.
Configuration Control	Measures taken to assure that the physical arrangement of structures, systems and components are compatible with the documentation of those structures, systems and components.
Configuration Documentation	Current and applicable documentation of the physical arrangement of structures, systems and components.
Confirming Purchase Order	A written purchase order issued to a supplier as a confirmation to an oral commitment to buy item(s) or services. The orally stated order becomes a commitment to purchase when a P.O. number is given to the supplier. The written (confirming) order must bear the identified P.O. number and have a reference that shows it to be a confirming order. The same technical and quality requirements stated orally shall be specified on the confirming order.
Conforming Characteristic	A characteristic of an item whose measured value lies within specified limits.
Consensus Standard	A standard established by a group representing a cross section of a particular industry or trade or a part thereof. A cross section includes those who purchase or use products of the industry or trade as well as those who produce these products. Examples are: American National Standards Institute, American Society of Mechanical Engineers, American Society for Testing and Materials, Institute of Electrical and Electronic Engineers.

5.0 **DEFINITIONS:** (Cont'd)

Construction Phase	Includes those construction activities that occur from issuance of the Construction Permit to issuance of the Operating License for large permitted projects. Also, from start of physical implementation to system acceptance turnover for inplant projects.
Construction Tests	Those tests (including "flushes and hydros") that are made during the construction phase and are necessary to verify that the installation of each component of a system is complete and complies with the applicable specifications, standards, codes, drawings, and engineering information.
Construction Work Order (CWO)	The release and authorization to perform specific work on a specific item or system.
(1) Containment	The principal design feature of a nuclear power generating station that is provided for the specified purpose of preventing the release, even under conditions of a reactor accident, of unacceptable quantities of radioactive material beyond a controlled zone.
Contaminants	Foreign materials such as mill scale, dirt, oil, chemicals, and any matter that renders a fluid, solid or surface impure and unclean according to preset standards of acceptable cleanness.
Contract (Involving Purchase Order)	A binding agreement between two or more persons or companies.
Contract Change Order (CCO)	A serially numbered (preprinted) document, which when properly executed, authorizes required contract scope changes or gives notice to ~~the Nuclear~~ Materials Management ~~Department~~ of the need for a supplement or amendment to an existing contract.
(1) Contractor	Any organization under contract for furnishing items or services. It includes the terms A/E, NSSS, Vendor, Supplier, Subcontractor, Fabricator and Subtier levels of these where appropriate.
Controlled Area	A specified area in which exposure of personnel to radiation or radioactive material is controlled and which is under the supervision of a person who has knowledge of the appropriate radiation protection practices, including pertinent regulations, and who has responsibility for applying them.

5.0 **DEFINITIONS:** (Cont'd)

Controlled Documents — Controlled documents are defined as those documents which require accountability and provide guidance, requirements, or instruction affecting quality such that lack of up-to-date revisions may affect quality. Controlled documents include documents such as the following:

a. design specifications,
b. design, manufacturing, construction, and installation drawings,
c. quality program manuals, procedures, and instructions,
d. inspection, manufacturing, and test procedures and instructions,
e. plant operating and maintenance procedures,
f. plant Safety Analysis Reports and related design criteria documents.

Control Point — In a sequential operation, a checkpoint at which certain data are taken, inspection made or approvals required.

Corrective Action — Action taken to correct a nonconforming condition with specific emphasis on prevention of recurrence.

Critical Design Review — Evaluates the technical adequacy, completeness, and correctness of the detailed design before the start of the actual coding.

Curing — The process of maintaining a satisfactory moisture content and a favorable temperature in concrete during hydration of the cementitious materials so that desired properties of the concrete are developed.

Dead Leg — Any area that does not have flow during the cleaning operation or which cannot be drained without special provision.

Defect

1. A deviation in a basic component delivered to a purchaser for use in a facility or an activity subject to the regulation in 10 CFR Part 21 if, on the basis of an evaluation the deviation could create a Substantial Safety Hazard; or

2. The installation, use, or operation of a basic component containing a defect as defined above; or

3. A deviation in a portion of a facility subject to the construction permit or manufacturing licensing requirements of 10 CFR Part 50 provided the deviation could, on the basis of an evaluation, create a Substantial Safety Hazard and the portion of the facility containing the deviation has been offered to the purchaser for acceptance; or

5.0 **DEFINITIONS:** (Cont'd)

4. A condition or circumstance involving a basic component that could contribute to the exceeding of a safety limit, as defined in the technical specifications of a license for operation issued pursuant to 10 CFR Part 50.

(1) Defective Material — A material or component which has one or more characteristics that do not comply with specified requirements.

Deficiency — An observed condition that is, or appears to be adverse to quality or beyond a defined or approved qualitative or quantitative acceptance criterion.

Delivery & Work Authorization (DWA) — The release and authorization to a supplier who holds a Blanket Purchase Order (BPO) to perform specific work or to provide specific items as defined in the Blanket Purchase Order.

Design — Technical and management processes which commence with identification of design input and which lead to and include the issuance of design output documents.

Design Bases — That information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values, or ranges of values chosen for controlling parameters as reference bounds for design.

Design Basis Earthquake (DBE) — That earthquake which produces the maximum vibratory ground motion that the nuclear power generating station is designed to withstand, without functional impairment of those features necessary to shutdown the reactor, maintain the station in a safe condition, and prevent undue risk to the health and safety of the public.

Design Basis Event — A postulated abnormal event used in the design of nuclear power generating stations to establish the performance requirements of the structures and systems of the station.

Design Basis Event Conditions — Conditions calculated to occur as a result of the design basis event.

Design Controls — Methods for assuring that basic design requirements are formalized and translated into design documents with proper review to assure the scheduled release of a valid design.

5.0 **DEFINITIONS:** (Cont'd)

Design Control Document	Documents that control the proposal of a plant change or modification, the initial evaluations, the design, review, authorization, and implementation of a plant change or modification, as required by this procedure.
Design Criteria	The summation of knowledge about a thing, technique, or process which defines its nature, purpose and limits so that it may be developed, modified, manufactured, fabricated, applied, used or maintained toward the satisfaction of an established need.
Design Input	Those criteria, parameters, bases or other design requirements upon which detailed final design is based.
Design Interface	The common boundary within or between components, systems or structures in which the expertise of two or more engineering disciplines (fields of study) are shared to assure the functional adequacy of the items.
Design Interface External	Relationship between design groups from different companies. Examples are the interfaces between the plant owner and the architect engineer or the plant owner and the NSSS (Nuclear Steam Supply System) supplier, or the architect engineer and the NSSS supplier.
Design Interface Internal	Relationship between design groups or organizations within a company.
Design Life	The time during which satisfactory performance can be expected for a specific set of service conditions.
Design Output	Documents such as drawings, specifications and other documents defining technical requirements of structures, systems and components.
Design Requirements	Documents that set the functional requirements, operating conditions, safety requirements, performance objectives, design margins, and design life. Included are any special requirements for size, weight, ruggedness, materials, fabrications or construction, testing, maintenance, operating environments, safety margins, and derating factors.
Design Review	An analysis of design with respect to technical adequacy, interface control, inspectability, reliability, maintainability; and conformance to applicable codes, standards, regulations, and design criteria.

5.0 DEFINITIONS: (Cont'd)

Design Verification	Checking or verifying the adequacy of design, such as by the performance of design reviews, the use of simplified or alternate calculation methods or by the performance of a suitable test program. The design verification shall be performed and documented by a person other than the originator of the design. If necessary, the verification may be performed by the originator's supervisor, provided the supervisor did not specify a singular design approach or rule out certain design considerations, and did not establish the design inputs used in the design. The use of the originator's supervisor for design verification should be restricted to special situations where the supervisor is the only individual within the design organization competent to perform the verification.
Designated Design Organization	The engineering organization that is assigned by FPL to perform the design work for a particular item or service. This includes FPL Nuclear Engineering or any of Nuclear Engineering's contractors.
Desk Survey	An evaluation of a supplier's quality control capability made from documented procedures and records of past performance.
(1) Deviation	A nonconformance or departure of a characteristic from a specified requirements.
Document	A written or printed paper bearing the original, official, or legal form of something that can be used to provide decisive information or proof.
(1) Documentation	Any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures or results.
Drawing Manifest	A document for transmitting drawings released for construction, to Engineering, Construction and Production.
Dynamic Load Test	A test wherein designated loads are hoisted, lowered, rotated or transported through all motions required to simulate handling of the intended items.
(3) Emergency Procedure	Written instruction that specify actions, including manipulation of plant controls, to avoid further degradation of off-normal which in themselves do not constitute an accident but could lead to an accident, reduce the consequences of an accident or hazardous condition that has already occurred, implement the emergency plan, or prepare for possible hazardous natural occurrences.

5.0 **DEFINITIONS:** (Cont'd)

Engineer	The person responsible for the technical aspects of the work.
Engineered Safety Features	Features for mitigating the consequences of postulated accidents, including for example, containment, emergency core cooling, and containment atmospheric cleanup systems.
Engineering Hold	A request by Engineering to place material or implementation on hold until Engineering releases the item in writing. An engineering hold typically occurs when design documentation needs to be reviewed or issued prior to releasing an item for use.
Engineering Limitations	Restrictions which, if disregarded, may result in damage to the item, shortening the life of the item, or preventing the item from functioning as intended.
Equipment Qualification	The generation and maintenance of evidence to assure that the equipment will operate on demand to meet the system performance requirements.
(1) Examination	An element of inspection consisting of investigation of materials, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gaging, and measurement.
(3) Experiments	Performance of those plant operations carried out under controlled conditions in order to establish characteristics or values not previously known.
(4) External Audit	An audit of those portions of another organizations's quality assurance program not under the direct control or within the organizational structure of FPL.
External Coordination	Planning, follow-up and documentation of activities among different participating companies.
Facility	A building installation, or established area that is used for material storage or protection.
Failure	The termination of the ability of an item to perform its required function. Failures may be announced and not detected until the next test (unannounced failure), or they may be announced and detected by any number of methods at the instant of occurrence (announced failure).

5.0 **DEFINITIONS:** (Cont'd)

Failure Stress	That stress at which failure is imminent due to direct loads, excessive deflections or vibrations, or permanent deformations that may lead to unsafe conditions.
Field Check	The act of verifying that the current plant configuration is accurately reflected on the drawing.
(4) Final Design	Approved design output documents and approved changes thereto.
Final Safety Analysis Report (FSAR)	Describes the facility, presents the design bases and limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole.
First Level Design Review	A review conducted by the responsible engineer within the design agency for specific design discipline.
Flame Retardant	Capable of preventing the propagation of a fire beyond the area of influence of the energy source that initiated the fire.
Flow Chart	A representation of the sequence of activities such as procurement, fabrication, processing, assembly, inspection and test, or the sequence of individual operations within one or more of those functions.
Fluid	Any gas or liquid.
Flushing	Flowing fluid through a component or system at adequate velocity to suspend and carry away contaminants.
FPL Company Technical Representative	FPL's designated representative having responsibilities and authority for administration of a purchase order or contract but not having authority to waive any obligations of FPL or the contractor provided in the purchase order or contract. The on-site coordinator, as designated by the FPL Company Technical Representative, may be assigned to assist with these responsibilities.
Fuel Element	The smallest structurally discrete part of a fuel assembly that contains nuclear materials, such as a fuel rod or fuel pin.
Generating Plant	A utility company complex, constructed and operated for the purpose of producing electric power.

5.0 **DEFINITIONS:** (Cont'd)

(2)Guidelines	Particular provisions which are considered good practice but which are not mandatory in programs intended to comply with Standards. The term "should" denotes a guideline; the term "shall" denotes a requirement; and the word "may" denotes permission, neither a requirement nor a recommendation. (See definition of Requirement)
G Force	A unit of acceleration equal to the acceleration of gravity (i.e., 32 ft/sec.^{2}) used to measure the force on an item undergoing acceleration and expressed as a multiple of the item's weight.
Handled Load	The weight of the item to be lifted plus the weight of any required rigging such as lifting beam, slings, hooks, and blocks.
(1) Handling	An act of physically moving items by hand or mechanical means, but not including transport modes.
Heavy Load	Any load carried in a given area after a plant becomes operational, that weighs more than the combined weight of a single spent fuel assembly and its associated handling tool for the specific plant in question.
Hoisting Equipment	Machinery used to physically move an item. This includes cranes, chainfalls, ratchet hoists, etc. This does not include movement via transportation modes such as fork lifts and motor vehicles.
Hold Point	An intermediate step in a step-by-step Procedure, Work Record or Checklist, where an inspection, test, or verification must be performed. Examples range from a check for cleanliness to Non-Destructive Examination of individual weld passes.
Housekeeping	Encompasses all activities related to control of cleanliness of facilities, cleanness of material and equipment, fire prevention and fire protection including disposal of combustible materials and debris, control of access, and protection of materials.
Independent Review & Audit Group (IRAG)	Personnel performing the independent review and audit function, regardless of whether they operate as part of an organizational unit or as a committee.
Initial Start-Up Testing	Testing conducted at and after fuel loading and before commercial operation that confirm the design bases and demonstrate, where practical, that the plant is capable of withstanding the anticipated transients and postulated accidents. The initial start-up tests consists of such activities as precritical tests, low power test (including critical test), and power ascension tests.

5.0 **DEFINITIONS:** (Cont'd)

Input Organization	The organization responsible for providing inputs to Nuclear Licensing for preparation of outgoing Nuclear Regulatory Commission correspondence.
In-Process Tests	Tests performed during the course of fabrication and construction to maintain control of items and materials. These tests may be performed by the manufacturer or supplier, but samples for these tests must be taken from items and materials that are supplied to the site for use.
Inspector	The person who performs inspections or examinations to determine compliance with specifications, procedures, drawings, and applicable standards.
(1)Inspector (State or Code)	A qualified inspector employed by a legally constituted agency of a Municipality or state of the United States, or regularly employed by an Authorized Inspection agency and having authorized jurisdiction at the site of manufacture or installation. Also is known as the "Authorized Inspector" or "(AI)".
(2) Inspector (Owner's or Installer's)	A qualified inspector employed by the Owner or Installer, whose duties include the verification of quality related activities on installations.
(2) Inspection (3)	Examination, observations, or measurement to determine the conformance of materials, supplies, components, parts, appurtenances, systems, processes, or structures to predetermined requirements.
Inspection and Test Plan	A listing of all the inspections and tests required to be performed for a specific item, component, structure or service.
Installed Life	The time interval for which an equipment or component thereof will be installed; e.g., a motor may have an installed life of 40 years with certain components of the motor being replaced periodically; thus, the installed life of the components would be less than 40 years.
Instructions	A series of logical and well defined steps which are usually, but not necessarily limited to, written descriptions that provide an efficient and uniform method for achieving an objective.
Interface Control	The steps that are taken to assure that structural, mechanical, electrical, and environmental common boundaries between adjacent regions are geometrically and functionally compatible.

5.0 **DEFINITIONS:** (Cont'd)

(4) Internal Audit	An audit of those portions of the FPL Quality Assurance Program retained under it's direct control and within the organizational structure of FPL.
Internal Coordination	Planning, follow-up and documentation of activities among participating organizations within a company.
Internal Design Interface	Relationship between design groups or organizations within a company.
Isolation Device	A device placed in a circuit to prevent malfunctions in one section to cause unacceptable influences in other sections of the circuit or other circuits.
(1) Item	Any level of unit assembly, including structure,system, subsystem, subassembly, component, part or material.
Item Control Area (ICA)	A defined area within the nuclear power plant for which the nuclear materials records are maintained in such a way that, at any time, an item count and related quantities of nuclear materials can be obtained from the records for the nuclear materials located within the area. ICA's shall have physical boundaries. ICA's generally consist of new fuel storage areas, reactors, and irradiated fuel storage areas.
Lay-up	The protection of an item after it has been cleaned, to prevent deterioration while the item is out of service or awaiting subsequent operations.
Lead Auditor	An individual whose experience and training qualifies him to organize and direct an audit, report audit findings, and evaluate corrective action.
Lifetime Records	Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10 CFR, the FSAR, or other NRC commitments to be retained for the life of the plant.
Limiting Conditions for Operations	Lowest functional capability or performance levels of equipment required for safe operation of a nuclear facility.
Limiting Safety System Settings	Settings for automatic protective devices related to those variable having significant safety functions.

5.0 **DEFINITIONS:** (Cont'd)

Lower Tier Procurement	Procurement by a Supplier from a subsupplier of items or services.
(3) Maintenance & Modification Procedures	Written instructions defining the policies and practices by which mechanical, electrical, and instrumentation and control systems of a nuclear power plant are kept in a condition of good repair or efficiency so they may satisfactorily perform their intended functions. These procedures include those activities performed by maintenance or contractor personnel to maintain repair or modify safety-related equipment. Related activities are those actions taken by operating personnel to determine that a planned activity can be performed safely under the existing plant operating conditions, to authorize the equipment to be maintained in accordance with equipment control procedures, and to assure that the equipment has been returned to normal operating status at the completion of the maintenance work including verification of functional acceptability. Procedures for these related activities by operating personnel are considered to be operating procedures, but may be included in maintenance procedures.
Malfunction	An occurrence, either catastrophic or a gradual deterioration, which causes the performance of an item to deviate from limits detailed in the item's specification. It is a condition that requires the services of maintenance personnel to return the item to a satisfactory condition.
(1) Manufacturer	One who constructs any class of component, part, or appurtenance to meet prescribed design requirements.
Master Drawing Index	A list which identifies current or archived drawing numbers, drawing revisions and the plant to which the drawing applies.
(1) Material	A substance or combination of substances forming components, parts, pieces, and equipment items. (Intended to include such as machinery, casting, liquids, formed steel shapes, aggregates, and cements.)
May	It is used to denote permission, neither a requirement nor a recommendation.
Measuring & Test Equipment (M&TE)	Devices or systems used to calibrate, measure, gauge, test, inspect, or control in order to acquire research, development, test or operational data; to determine compliance with design specifications, or other technical requirements. M&TE does not include permanently-installed operating equipment or test equipment used for preliminary checks where accuracy is not required; e.g., circuit checking multimeters.

5.0 DEFINITIONS: (Cont'd)

Mechanical Cleaning	A method in which contaminant removal is accomplished solely by mechanical means, including wiping, abrasive blasting, brushing, grinding, sanding, chipping, etc.
Mechanical Items	Parts, components, or systems that function primarily for pressure retaining, mass moving, or heat exchange purposes. Examples of mechanical items are rotating equipment (motors, pumps, blowers), handling equipment (cranes, hoists, conveyors), piping systems (pipe, valves, hangers), fuel handling systems, and waste effluent systems.
(1) Modifications	A planned change in plant design or operation and accomplished in accordance with the requirements and limitations of applicable codes, standards, specifications, licenses and predetermined safety restrictions.
Module	Any assembly of interconnected components which constitutes an identifiable device, instrument, or piece of equipment. A module can be disconnected, removed as a unit, and replaced with a spare. It has definable performance characteristics which permit it to be tested as a unit. A module could be a card or other subassembly of a larger device provided it meets the requirements of this definition.
National Standards	Standard practices, codes, and specifications developed and published by the National Institute of Standards and Technology (NIST), the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), the American Society of Mechanical Engineers (ASME), the American Society for Nondestructive Testing (ASNT), the Institute of Electrical and Electronics Engineers (IEEE), and other institutions of similar character.
(1) Nonconformance (4)	A deficiency in characteristic, process, service, documentation, or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformance include (but are not limited to) physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed processing, inspection, or test procedures.
Non-Permanent Record	Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10 CFR, the FSAR, or other NRC commitments to be retained for periods of time less than the life of the plant.

5.0 DEFINITIONS: (Cont'd)

~~Not QL-1, QL-2, or QL-3 Classification~~

~~"Not QL-1, QL-2, or QL-3" Procurement Classification: This classification may be used in lieu of the above classifications when the following condition exists:~~

~~The item or service is not for use in or in conjunction with a safety related system or quality related system, and does not meet the procurement classifications of QL-1, QL-2, or QL-3.~~

~~"Not QL-1, QL-2, or QL-3" items are not subject to 10CFR-21.~~

Nuclear Plant Drawing Index

A list of all drawings for a nuclear power plant which are required for plant operation, maintenance or design.

(3) Nuclear Power Plant

Any plant using a nuclear reactor and associated equipment necessary to produce electric power, and includes those structures, systems and components required to provide reasonable assurance the facility can be operated without undue risk to the health and safety of people.

Nuclear Reactor

An apparatus, other than an atomic weapon, designed and used to sustain nuclear fission in a self-supporting chain reaction.

Nuclear Steam Supply System (NSSS)

That portion of the nuclear generating plant which provides steam from nuclear heat. It includes the reactor, its control systems, main coolant and steam generation systems, fuel handling equipment, emergency core cooling system; and other safeguards, associated electrical equipment, instrumentation, spent fuel handling, and radioactive waste disposal system.

(1) Objective
(4) Evidence

Any statement of fact, information, or record, either quantitative or qualitative, pertaining to the quality of an item or service based on observations, measurements, or tests which can be verified.

(3) Off-Normal Condition Procedures

Written instructions, whether included in system procedures or as separate procedures, that specify operator actions for restoring an operating variable to its normal controlled value when it departs from its range or to restore normal operating conditions following a perturbation. Such actions are invoked following an operator observation or an alarm of a condition that, if not corrected, could degenerate into a condition requiring action under an emergency procedure.

5.0 **DEFINITIONS:** (Cont'd)

On-Site Services	Services provided by a company under contract to FPL to perform a specific nuclear plant site task.
Operating Experience	Accumulation of verifiable service data for conditions equivalent to those for the equipment to be qualified.
Operating Organization	On-site personnel concerned with day-today operation, maintenance, and certain technical services.
(3) Operating Procedures	Written instructions defining the normal method, means and limits of operation of a nuclear power plant, a plant system or systems, or processes, including actions to be taken by operating personnel for removal from and return to service of equipment on which maintenance is to be or has been performed.
Operational Tests	Tests that are performed during the operation of the plant to verify continued satisfactory performance of safety related structures, systems, and components.
Operations	Includes those operations activities which occur from the issuance of the Operating license to Decommissioning of the Plant.
Original Drawing	The drawing used by JPN as the master copy.
(1) Owner	The person, group, company or corporation who will have or has title to the facility or installation under construction.
(3) Owner Organization	The organization, including the on-site operating organization, that has overall legal, financial, and technical responsibility for the operation of one or more nuclear power plants.
(1) Package	A wrapping or container, including its contents of material or equipment.
(1) Packaged Unit	An assembly of items and parts which can be disassembled without destroying the integrity of the individual parts.
(1) Part	An item which has work performed on it and which is attached to and becomes part of a component before completion of the component.
Period of Manufacture	The period which begins with the design of the equipment or system and ends when equipment has been prepared for shipment; it will include design, procurement of materials, shop fabrications and assembly, shop testing and preparation for shipment.

5.0 **DEFINITIONS:** (Cont'd)

Physical Walk-Through	Visual check for damage, cleanness and weatherproofing, using the latest engineering document (including isometrics and P&ID's) for guidance and to verify the configuration and condition of the system and systems.
(1) Plant	The equipment, piping, structures, buildings and property that comprise an installation or facility.
Plant Change Design Package	The file containing the appropriate design control document (Plant Change/Modification PC/M Form, or Control Plant Work Order CPWO) and all pertinent documentation to support the plant changes (ie., Project Authorization Request, the Safety Evaluation, all required written reviews, design material, acceptance tests and procedures, and relevant correspondence or material applicable to the change). ~~This package is assembled as the various tasks required by this procedure are performed.~~
(5) Plant Change or Modification (PC/M)	Changes or modifications to plant systems or equipment. Changes or modifications affecting nuclear safety related systems or adversely impacting the environment are considered to be safety related. This does not include replacements of parts/components which are identical or have been demonstrated and documented as equivalent.
Plant Change/ Modification Implementation	Completion of construction/installation affecting plant drawings.
Plant Protection System	Systems provided to act, if needed, to avoid exceeding a safety limit in anticipated operational transients and to activate appropriate engineered safety features as necessary.
Precision	The degree of resolution of a measurement; for example, readability.
~~Preconstruction Phase~~	~~That period of time prior to the commencement of construction, when activities such as planning, financing, designing, procuring, and the satisfying of local, state, and Federal Governmental codes and regulations pertaining to the securing of construction permits are accomplished.~~
Preliminary Design Review	Assesses the technical adequacy of the selected design approach; checks the design compatibility with the functional and performance requirements of the Software Requirements Specification (SRS); and verifies the existence and compatibility of the interfaces between software, hardware, and user.

5.0 **DEFINITIONS:** (Cont'd)

Preliminary Safety Analysis Report (PSAR)	The detailed safety evaluation prepared for the U.S. Nuclear Regulatory Commission prior to issuance of the site construction permit. The PSAR delineates design, normal and emergency operation, potential accidents, predicted consequences of such accidents, and the means proposed to prevent these accidents and to reduce the consequences to an acceptable level.
Preoperational Testing	The tests that are conducted prior to fuel loading to demonstrate the capability of structures, systems, and components to meet safety-related performance requirements.
Principal Auditor	See "Lead Auditor".
Principal Load Carrying Members	Those components of a system whose structural integrity must be maintained to insure a safe operation.
Principal Structural Weld	Those welds which join or affect the integrity of principal load carrying members.
(1) Procedure	A document that specifies or describes how an activity is to be performed. It may include methods to be employed, the equipment or materials to be used and a sequence of operations.
Procurement Agent (PA)	See "Purchasing Agent"
Procurement Classification (PC-1)	PC-1 items and services are subject to 10CFR 21 by the supplier. This classification shall be used when one or more of the following conditions exist: a. The item or service is for use in or in conjunction with a safety related system and the item or service does not meet the definition of a commercial grade item and the work that is to be performed is safety related and any portion of the work is to be performed under the supplier's Nuclear QA Program.

5.0 **DEFINITIONS:** (Cont'd)

b. For training, when associated with a basic component as defined in paragraph 21.3(a)(1) of 10CFR 21 (for example, nondestructive examination training, in-service inspection (ISI) or testing (IST) training).

Procurement Classification (PC-2) - Commercial Grade

PC-2 items and services are not subject to 10CFR21 by the supplier. (FPL assumes 10CFR21 responsibility.)

This classification should be used when the item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item.

Procurement Classification (PC-3) Augmented Quality

PC-3 items and services are not subject to 10CFR 21 by the supplier.

This classification may be applied to any item or service that is subject to non-safety related regulatory requirements or special requirements imposed by FPL, which include those items and services defined as quality related.

NOTE: Basic components cannot be procured PC-3.

Procurement Classification (PC-4) Commercial

PC-4 items and services are not subject to 10CFR21 by the supplier. (For safety related services under this classification, FPL assumes 10CFR21 responsibility.)

This classification may be used when one or more of the following conditions are met:

a. The item or service is not safety related nor augmented quality.

b. The service to be provided is safety related to FPL, but commercial to the supplier and all of the work is performed under the FPL QA Program.

(2) Procurement
(4) Documents

Contractually binding documents, including such documents as contracts, letters of intent, work orders, purchase orders or proposals and their acceptances which authorize the seller to perform services or supply equipment, material or facilities on behalf of the purchaser. For control purposes, procurement requisitions are considered procurement documents in the context of this definition.

5.0 **DEFINITIONS:** (Cont'd)

Procurement Requisition	Request and authorization for purchase of items and/or services. A procurement requisition consists of a Form 1 RPA, Form 2 RPA (BAR), or Contract Change Order (CCO), and any referenced attachments thereto.
Program Deficiencies	The failure to develop, document or implement effectively any applicable element of the quality assurance program.
Program Audits	Performed to verify that a program is in effect and followed to implement the FPL QA Program and to satisfy plant specific audit requirements.
(1) Project	A planned series of activities including all of the actions necessary to provide, utilize, and maintain a facility or a portion thereof.
Protection System	The electrical and mechanical devices and circuitry (from sensors to actuation device input terminals) involved in generating those signals associated with the protective function. These signals include those that actuate reactor trip and that, in the event of a serious reactor accident, actuate engineered safeguards including safety injection, recirculation, containment spray, containment isolation, and main steam isolation.
(1) Purchaser	The organization or organizations responsible for issuance and administration of a contract, subcontract, or purchase order.
Purchasing Agent	The FPL Representative designated to act in FPL's behalf on a specific procurement.
QAPRC Representative	An individual designated by the head of each department or organization who is the prime interface for coordination of quality related matter within their department, with the QA Department, or with other departments. The Quality Manager - Juno Beach or designee is the Chairman of this group.
QAPRC Meeting	Periodic meetings which are conducted by the QAPRC Chairperson to which all QAPRC members are invited.
(2) Qualification (Personnel)	The characteristics or abilities gained through training or experience or both as measured against established requirements such as standards or tests that qualify an individual to perform a required function.

5.0 **DEFINITIONS:** (Cont'd)

Qualification Tests	Tests performed to qualify the basic material source or manufacturer. These tests are mandatory unless current documentary test data are available to establish complete confidence in conformance to specification requirements.
Qualified Life	The period of time for which satisfactory performance can be demonstrated for a specific set of service conditions. The qualified life of particular equipment or item may be changed during its installed life where justified.
(1) Qualified Party	A person or organization competent and recognized as knowledgeable to perform certain functions.
(1) Qualified Procedure	A procedure which incorporates all applicable codes and standards, manufacturer's parameters, and engineering specifications and has been proven adequate for its intended purpose.
Qualitative Acceptance Criteria	Those acceptance criteria pertaining to quality, kind or character.
Quality	That aspect of an item, operation, process, or service which conforms to specified requirements, codes, or standards.
Quality Achievement Functions	Designing, purchasing, fabricating, handling, shipping, storing, cleaning, directing and installing.
(2) Quality (3) Assurance	All those planned and systematic actions necessary to provide adequate confidence that a structure, system or component will perform satisfactorily in service. Quality Assurance includes quality control.
QA Approved Suppliers List (QA-ASL)	The QA-ASL identifies the name, locations, scope, quality approval level and limitations of products of firms approved by QA supplying nuclear safety-related and commercial grade items or services.
Quality Assurance Indoctrination	Those instruction periods used to describe the FPL Quality Assurance Program including the administrative controls; licensing commitments to the Nuclear Regulatory Commission with 10CFR50 Appendix B; the overall company policies; FPL Topical Quality Assurance Report; a general description of the **quality instructions and procedures** ~~Quality Procedures~~ which establish the program and the organizations within FPL which have responsibilities in the program.

5.0 DEFINITIONS: (Cont'd)

Quality Assurance Program

The policies and procedures for **activities affecting** quality ~~related activities~~ established in documented form to meet specified requirements; and the implementation of those policies and procedures.

Quality Assurance Records

Those records which furnish documentary evidence of the quality of items and of activities affecting quality.

(2) Quality Control

Those quality assurance actions related to the physical characteristics or material, structure, component or system, which provide a means to control the quality of the material, structure, component or system to predetermined requirements.

Quality Control Notice (QCN)

Specific quality requirements which may be used for nuclear plant purchases. Each QCN identifies a particular certification or documentation requirement which may be applied to procurement documents. Each QCN is represented by a unique alphanumeric codes number. Copies of the QCNs are available from Nuclear Materials Management.

~~**Quality Level 1 (QL 1)**~~

~~QL 1 items and services are subject to 10CFR Part 21 requirements.~~

~~QL 1 Procurement Classification~~
~~This classification shall be used when one or more of the following conditions exist:~~

~~1. The item is for use in or in conjunction with a safety related system and the item or service does not meet the definition of a commercial grade item.~~

~~2. It is desired to upgrade an item from QL 2, 3, or Not QL 1, QL 2, or QL 3 for stock items that are known to have multiple safety classification applications, including QL 1, e.g., for reduced cost or increased material control considerations.~~

~~3. For training, when associated with a basic component as defined in paragraph 21.3(a)(1) of 10CFR 21 (for example, nondestructive examination training, in service inspection (ISI) or testing (IST) training).~~

5.0 DEFINITIONS: (Cont'd)

~~4. The item is ASME Section III or Section XI. Quality Related items and services may be procured QL-1 with 10CFR21 not required when engineering specifies that the safety class is not safety related and the purchase order specifies the vendor's 10CFR 50 Appendix B program.~~

~~Quality Level 2 (QL 2)~~

~~QL 2 items are not subject to 10CFR21 by the vendor. Basic components that cannot be procured QL-1 due to a lack of an acceptable program and/or the vendor will not accept 10CFR21 and there is no alternate source, may be procured QL 2 using the Commercial Grade Dedication Package process even though the item does not meet the definition of commercial grade.~~

~~QL 2 Procurement Classification: This classification should be used when one of the following conditions exist:~~

~~1. The item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item and documentation (e.g., mill test reports, certification of compliance, chemical or physical test reports, heat treat certification, reports of inspection, etc.) is required.~~

~~2. The item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item and the functional or material characteristics of the item cannot be verified upon receipt inspection or post installation testing.~~

~~3. The RPA Originator desires to upgrade the procurement classification from QL 3 or Not QL 1, QL 2, or QL 3 in order to gain an FPL Quality Assurance audit and approval of the vendor's program and a QC receiving inspection of an item meeting the definition of commercial grade item or to assure that only suppliers approved by QA are used for the purchase.~~

~~Quality Level 3 (QL 3)~~

~~QL 3 items are not subject to 10CFR Part 21 by the vendor.~~

~~(QL 3) Procurement Classification: This classification may be used when one or more of the following conditions are met:~~

~~1. The item is for use in, or in conjunction with, a safety related system and meets the definition of a commercial grade item."; and the functional or material characteristics of the item can be verified after receipt by inspection or test. Therefore, if the acceptance of the item cannot be completely dedicated by inspection and/or test of the item after receipt, the item cannot be procured QL 3.~~

5.0 DEFINITIONS: (Cont'd)

~~2. Fire protection components and parts~~

~~3. It is desired to upgrade the item from Not QL-1, QL-2, or QL-3 to obtain a Quality Control receiving inspection.~~

~~NOTE: Documentation, if requested, is for commercial considerations only; it may not be used as part of the acceptance.~~

~~4. On site safety related services performed under FPL's QA Program where Quality Control inspection/surveillance is required.~~

~~5. Basic components that cannot be procured QL-1 or QL-2 due to a lack of an acceptable program, and/or the vendor will not accept 10 CFR 21 and there is no alternate QL-1 source may be procured QL-3 using the Commercial Grade Dedication Package.~~

Quality Manager

This title refers, collectively or in part, to the Quality Manager Juno Beach, Quality Manager St. Lucie or the Quality Manager Turkey Point.

Quality Related

Quality Related is defined as those **items or related services** ~~structures, systems or components~~ which are not safety related and are in one or more of the following categories:

1. Equipment, components and structures designed to meet seismic requirements or whose failure could:
   (1) damage safety related equipment such that the equipment would be prevented from performing its safety function or
   (2) result in releases exceeding the exposure guidelines of Technical Specifications.

2. Fire protection equipment
   (1) required to protect safety related equipment,

   or

   (2) whose failure could result in water damage to safety related equipment which could prevent the equipment from performing its safety function,
   or

   (3) required to maintain the integrity of a fire barrier necessary to protect safety related equipment.

5.0 **DEFINITIONS:** (Cont'd)

3. A partial or total loss of function of a radioactive confinement system that could result in an accidental, unplanned, or uncontrolled release of radioactivity exceeding Technical Specification limits.

4. Equipment whose failure under normal operating conditions or an anticipated transient, results in:

   (1) exceeding a safety limit specified in the Technical Specifications, or

   (2) initiation of a FSAR Design Basis Accident,
   or
   (3) the reactor coolant system not being in a controlled or design condition while operating or shutdown.

5. Instrumentation, equipment, components, or structures required to be operable by the Technical Specifications.

6. Instrumentation that is essential to preventing or monitoring release of radioactive material to the environment which could exceed the guidelines of Technical Specifications.

Quality Verification Functions

The act of examining, reviewing, inspecting, testing, checking, auditing, or otherwise verifying and documenting that a **an activity affecting quality** ~~quality related activity~~ has been performed in accordance with specified requirements.

Reactor Coolant Pressure Boundary

Reactor coolant pressure boundary means all those pressure containing components such as pressure vessels, piping, pumps, and valves which are:

1. part of the reactor coolant system or,

2. connected to the reactor coolant system up to and including any and all of the following:

   1) the outermost containment isolation valve in system piping which penetrates primary reactor containment,

   2) the second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment,

5.0 DEFINITIONS: (Cont'd)

3) the reactor coolant system safety and relief valves.

(1) Receiving (4)	Taking delivery of an item at a designated location.
Redundant Equipment or System	An equipment or system that duplicates the essential function of another equipment or system to the extent that either may perform the required function regardless of the state of operation or failure of the other.
Records Center	An information center for the storage of duplicate QA records.
Record Design	Current approved design configuration of a licensed operating nuclear power plant.
Record Tracing	The master of the FPL approved record design.
Record Drawing	A copy of the record tracing.
Reference Standards	Standards of prescribed accuracy (ie., primary, secondary and working standards, where appropriate) that are used in a calibration program. These standards establish the basic accuracy limits for that program.
Regulatory Guides	A continuing series of NRC publications that are issued ~~sporadically~~ to describe ~~and make available to the public,~~ methods which are acceptable to the NRC Regulatory staff for implementing specific parts of NRC regulations.
Reliability	The characteristics of an item expressed by the probability that it will perform a required function under stated conditions for a stated period of time.
(1) Repair (4)	The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still may not conform to the original requirement.
Reportable Event	An event of the type defined in the Code of Federal Regulations (10 CFR 50.73) requiring submittal of a Licensee Event Report (LER) to the Nuclear Regulatory Commission (NRC).
Requirement	A mandatory action, denoted by the word "shall" (See definition of Guideline). Requirements are typically based on statutes or regulations, but may be internally generated within the Company.

5.0 DEFINITIONS: (Cont'd)

Requisition and Purchasing Authorization (RPA)	A document that is prepared to identify and obtain management approval for the purchase of items/services. The term RPA includes revisions of the Form 1 & 2 RPA, the Contract Change Order (CCO), and the Buyer Action Report (BAR). Form 1 is intended for non-inventoried items and services, and is usually initiated for the requisition of an item/service for a specific work order. Form 2 is a computer generated requisition for an item maintained in Material and Supplies inventory printed to requisition quantities of the item.
Request for Bid/ Request for Quotation/ Request for Proposals	Invitation to prospective contractor or supplier to provide a proposal for requisitioned materials, goods, or services.
Responsible Organization	An organization which is in direct charge of the equipment and manpower actually engaged in an operation.
(3) Review	A deliberately critical examination; including, but not limited to, monitoring of plan operation, formal independent evaluations of certain contemplated actions, and after-the-fact investigations of abnormal conditions.
(1) Rework	The process by which a nonconforming item is made to conform to a prior specified requirement by completion, remachining, reassembling or other corrective means.
Rigging Equipment	Equipment used to connect handling equipment to an item. This includes slings, shackles, turnbuckles, special tools, etc.
(4)Right of Access	The right of a Purchaser or designated representative to enter the premises of a Supplier for the purpose of inspection, surveillance, or quality assurance audit.
Safe Load Path	A path defined for transport of a heavy load that will minimize adverse effects, if the load is dropped, in terms of releases of radioactive material and damage to safety systems. This path shall be administratively controlled by procedures or instructions and/or sketches and training. It may also be enforced by mechanical stops and/or electrical interlocks.
Safety Evaluation	A written record which provides the basis for the determination that the plant change or modification, test or experiment does or does not involve an Unreviewed Safety Question.

5.0 DEFINITIONS: (Cont'd)

Safety Limits	Limits (placed upon important process variables) which are necessary to reasonably protect the integrity of those physical barriers that are guarding against uncontrolled release of radioactivity.
Safety Related	Those plant features necessary to assure the integrity of the reactor coolant pressure boundary, the capability to shutdown the reactor and maintain it in a safely shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in off-site exposures comparable to the guideline exposure described in 10 CFR Part 100, "Reactor Site Criteria".
Safe Shutdown Earthquake (SSE)	That earthquake which is based upon an evaluation of the maximum earthquake potential considering the regional and local geology, seismology and specific characteristics of load subsurface material. It is that earthquake which produces the maximum vibratory ground motion for which certain structures, systems, and components are designed to remain functional (Seismic Category I). SSE has commonly been referred to as the "Design Basis Earthquake".
Services	The performance by a supplier.
Seismic Category I	Those structures, systems, and components that should be designed to remain functional if the Safe Shutdown Earthquake (SSE) occurs.
Setpoint	A predetermined control setting, at which point a bistable device changes state to indicate that the parameter being controlled has reached the selected value.
Shall	It is used to denote a requirement.
Should	It is used to denote a recommendation.
Significant Conditions Adverse To Quality	Failures, malfunctions, deficiencies or deviations in material and equipment and other nonconformances which require engineering evaluation for reportability as 10 CFR 50.55(e), 10 CR 50.73 or 10 CFR 21 deficiencies. In addition to correcting the immediate condition, corrective action for such nonconforming conditions shall identify and document the cause and include action to preclude repetition.

5.0 **DEFINITIONS:** (Cont'd)

Significant Deficiency	A deficiency, which, to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant. These deficiencies are reportable to the NRC as delineated in 10 CFR 50.55(e). Significant deficiencies include, but are not limited to, a breakdown in any portion of the quality assurance program; final design(s) not conforming to established criteria; faulty construction; damage to a structure, system, or component; and deviation from performance.
Significant Incident	Any incident which is reportable to the NRC in accordance with the requirements of 10 CFR 50.55(e), Regulatory Guide 1.16, and Appendices A & B (Technical Specifications) of the Operating License. Such incidents usually involve safety implications.
Single Failure	Includes such events as the shorting or open-circuiting of interconnecting signal or power cables. It also includes single credible malfunctions or events that cause a member of consequential component, module, or channel failures; e.g., the overheating of an amplifier module would be a "single failure" even though several transistor failures might result. Mechanical damage to a mode switch would be a "single failure" although several channels might become involved.
Software Design Description	A technical description of how the software will meet the requirements set forth in the Software Requirements Specification (e.g. system or component algorithms, control logic, data structures, data set-use information, input/output formats, and interface descriptions).
Software Requirements Specification	Identifies the requirements for a system or system component (e.g., functions, performance, design constraints, interface(s) and development standards).
Software Verification and Validation Plan	Identifies the tasks, methods, and criteria for accomplishing verification and validation of the software and all test documentation required.
Software Verification and Validation Report	Documents the results of the execution of the Software Verification and Validation Plan; identifies any major deficiencies found and provides the results of reviews, audits, and tests and whether the software is ready for operational use.

5.0 DEFINITIONS: (Cont'd)

Source Inspection	The inspection of a product by FPL or its designated agent at the supplier's plant, prior to shipment.
Source Material	Uranium or thorium, or any combination thereof, in any physical or chemical form; or, ores which contain by weight one-twentieth of one percent (0.05%) or more of uranium, thorium, or any combination thereof. Source material does not include special nuclear material.
(1) Source Surveillance	A review, observation, or inspection for the purpose of verifying that an action has been accomplished as specified at the location of material procurement or manufacture.
Special Nuclear Material	Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, determines to be special nuclear material, but does not include source material; or any material artificially enriched by any of the foregoing but does not include source material.
Special Processes	Those processes which must be qualified and controlled where quality is highly dependent on close control of process variables or operator skills; and objective verifications of end quality (inspection, examination or testing) is difficult. As a further clarification, special processes identified by applicable codes and standards shall be controlled, qualified and implemented in accordance with those codes and standards. Examples of special processes include (but are not limited to) welding, heat treating and nondestructive examination~~, and special nuclear cleaning~~. Flushing, protective coating, ~~and~~ plating applications, **and nuclear cleaning** should be reviewed to determine if they are special processes.
Special Quality Assurance Document (SQAD)	Standardized quality requirements which are frequently used for nuclear related purchases. Each SQAD defines a particular characteristic or set of characteristics which are commonly applied to nuclear procurement documents. They are intended as a convenience to the users for ease of inclusion in RPAs and POs. Copies of SQADs are available from Nuclear Materials Management.

5.0 **DEFINITIONS:** (Cont'd)

(1) Specification	A concise statement of a set of requirements to be satisfied by a product, a material, or process; indicating, whenever appropriate, the procedure by means of which it may be determined whether the requirements given are satisfied.
Start-Up Tests	Tests that are performed after initial fuel loading and proceed through several power level plateaus to 100% power.
Stop Work Order	Management order to stop all work or plant operations as defined in the order.
Stop Work Request	Request to management to issue a Stop Work Order.
(2) Storage	That period following the release of an item for shipment until turnover for start-up or preoperational testing. This includes in-place storage.
Storage Facilities	Warehouse or yard area designated and prepared for the holding of items.
Subassembly	A replaceable combination of parts which is an element of an assembly.
Substantial Safety Hazard	A loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed under applicable Parts of Title 10, Code of Federal Regulations.
(1) Subsystem	A group of assemblies or components or both, combined to perform a single function.
Subtier Procurement	Procurement by a supplier from a subsupplier of items or services.
(3) Supervision	Direction of activities of personnel or monitoring of a function or functions through a supervisor who is responsible and accountable for the activities he directs or monitors.
Supplier	Any individual or organization under contract for furnishing items or services. "Supplier" encompasses the terms Vendor, Seller, Contractor, Subcontractor, Fabricator, Consultant, and lower tier levels.
Supplier Deviation Notice (SDN)	Notification by a supplier of a deviation or discrepancy with regard to the contracted quality and/or technical requirements of a purchase order /contract.

5.0 DEFINITIONS: (Cont'd)

Supplier Facility Evaluation (Audit)	An evaluation by a ~~Principal~~ **Lead** Auditor of the effectiveness of a supplier's Quality Assurance Program and the firm's ability to supply a product of acceptable quality.
Supplier Reviewer	A ~~Principal~~ **Lead** Auditor, a Quality Engineer or other individual who is designated by the Quality Manager Juno Beach to review and determine the acceptability of a supplier, based upon the results of an evaluation.
Surveillance	The physical presence to monitor by observation the designated activities (including requirements for data, records, and logging), to assure that they are performed in a specified manner.
~~(3)~~ Surveillance Testing	Periodic testing to verify that ~~safety-related structures, systems, and components~~ **items affecting quality** continue to function or remain in the state of readiness necessary to perform their safety function.
(2) System (3)	An integral part of a nuclear power plant comprised of electrical, electrical or mechanical components (or combinations thereof) that may be operated as a separate entity to perform a specific function.
(1) System Performance Test	A test performed on a completed system including electric, instrumentation, controls, fluid and mechanical subsystems under normal or simulated normal process conditions such as temperature, flow, level, and pressure.
Technical Evaluation	An evaluation performed to assure that the correct requirements are specified for procured items. The Technical Evaluation, Commercial Grade Dedication (when required) and Item Equivalency Evaluation (when required) are controlled as one document and constitute a procurement specification.
Technical Review	A determination as to whether a deficiency or nonconformance that is detected during a design, construction, procurement, installation, test, operating, or modification activity will be accepted "as is", reworked, repaired to an acceptable condition, or rejected.
Technical Specifications (Safety)	Those specifications contained in a facility operating license which define specific technical operating limits and conditions imposed upon the facility operation; the basis for these limits and conditions, and the surveillance requirements which relate to the tests, calibrations, and inspections necessary to assure that the quality of systems and components is maintained.

5.0 DEFINITIONS: (Cont'd)

Temporary Procedures	Temporary Procedures are written instructions which may be issued to: 1. Direct operations during testing, refueling, maintenance, and modifications. 2. Provide guidance in unusual situations not within the scope of the normal procedures. 3. Ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures or has been modified or extended in such a manner that portions of existing procedures do not apply.
Temporary Storage Facility	A Quality Assurance Record Storage Facility that meets all of the requirements of a permanent storage facility except, the records are stored for a limited period of a time up to 18 months before being transmitted to a permanent storage facility.
(2) Testing (3)	Performance of those steps necessary to determine that systems or components function in accordance with pre-determined specifications.
Test Plan	An outline, narrative description, or flow diagram indicating the tests to be performed, the methods to be used and the points in the process where they are to be executed. May be a test procedure.
Tolerance	The range of acceptable values for a characteristic which is bounded by the specified upper and lower limits.
Topical Quality Requirement (TQR)	**A document that delineates Quality Assurance Program requirements and responsibilities and summarizes the FPL approach to activities related to items and services included in the Quality Assurance Program. TQRs are issued and controlled by the Nuclear Assurance Department.**
Traceability	Maintaining identification for the purpose of preventing the use of incorrect or defective materials, components or modules.

5.0 DEFINITIONS: (Cont'd)

(1) Transit	A state of being conveyed or transported from one place to another.
Transportation Mode	A method identified by the conveyance used for transportation of items and may include motor vehicles, ships, railroad cars, or aircraft. Each cargo-carrying body (trailer, van, boxcar, etc.) is a separate vehicle.
(1) Trip-Point	A predetermined critical level at which a bistable device changes state to indicate that the quantity under surveillance has reached the selected value.
Trouble Shooting	An activity performed by a qualified technician to determine why an item is not performing its intended function and what caused it to malfunction.
Unreviewed Environmental Question	A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns: 1) a matter which may result in significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES), supplements to the FES environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board (ASLB), 2) a significant change in effluents or power levels, 3) a matter not previously reviewed and evaluated in the documents listed in one (1) above, which may have a significant adverse environmental impact.
Unreviewed Safety Question	An Unreviewed Safety Question is defined in 10 CFR 50.59. A proposed change, test, or experiment shall be deemed to involve an Unreviewed Safety Question if: 1. The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; or 2. If a possibility for an accident or malfunction of a different type than evaluated previously in the Safety Evaluation Report may be created, or 3. If the margin of safety as defined in the basis for any Technical Specification is reduced.
Update	Revise and/or enter into the nuclear plant drawing system.

5.0 **DEFINITIONS:** (Cont'd)

(1) Use-as-is — A disposition which may be imposed for a nonconformance when it can be established that no adverse conditions will exist and that the subject will satisfy all engineering functional requirements including those of performance, maintainability, fit, and safety.

User Documentation — Specifies and describes the required input data, input sequences, options, program limitations, and other activities/ items necessary for the execution of the software. User documentation shall include as a minimum:

1. User instructions that contain an introduction, a description of the user's interaction with the system, and a description of any required training for using the system.
2. A system narrative.
3. Input/output specifications.
4. Samples of all outputs, forms, reports, or displays.
5. Data entry instructions for data preparation, data keying, data verification, and error correction.
6. References to all documents or manuals intended for users.
7. A description of system limitations.
8. A description of possible error situations and how the user should respond.

Validation — The process of evaluating software at the end of the software development process to ensure compliance with software requirements.

Vendor Manual — A manual supplied by equipment manufacturers that addresses installation, operation, and maintenance of the equipment.
NOTE: "Vendor Manual" also refers to all vendor supplied technical information such as Bulletins, Parts Bulletins, Notices, Letters, etc. that affects vendor manual contents.

(1) Verification (Hardware) — An act of confirming, substantiating and assuring that an activity or condition has been implemented in conformance with the specified requirements.

Verification (Software) — The process of determining whether or not the products of a given phase of the software development cycle fulfill the requirements established during the previous phase.

Vital Area — An area located within a protected area containing vital equipment or facilities.

5.0 **DEFINITIONS:** (Cont'd)

Vital Equipment	Any equipment system, device, or material; the failure, destruction or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.
Waiver	An exception to established controls, or the adoption of special procedures in lieu of controls.
Witness	To watch over, observe, or examine a specific test or work operation which includes sign-off responsibility.
Work Instructions	Instructions to personnel performing work on specific areas such as controls and identification of materials and equipment during fabrication or installation.
Workmanship	That quality of an item that expresses its skillful and artful manufacture, without apparent blemishes.
Wrap	A flexible material, formed around the item or package to exclude dirt and to facilitate handling, marking or labeling.

Enclosure III

Enclosure II

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The Topical Quality Assurance Report (FPLTQAR 1-76A) contains the description of the Florida Power & Light Company (FPL) Quality Assurance Program relative to its nuclear power plants. This report consists of three parts: The Introduction, which delineates the purpose and summarizes the scope and applicability of the Topical Quality Assurance Report. The second part, Topical Quality Requirements (TQRs), which delineate Quality Assurance Program requirements and summarizes the FPL approach to activities related to materials, parts, components, systems and services included in the Quality Assurance Program. The third part, Appendices, which provide supporting statements, tabulations, and technical analyses or deviations which are not, in themselves, the subject of the report.

~~The Topical Quality Assurance Report shall be an integral part of the Quality Assurance Manual (FPL-NQA-100A), and shall delineate the generic requirements and responsibilities by which FPL implements the corporate Quality Assurance Program. Revisions and changes to this Report will be made in accordance with a Quality Procedure as outlined in TQR 2.0. The remainder of the Quality Assurance Manual is comprised of Quality Procedures (QPs) which serve as the documents which describe how the interfacing of tasks between departments or organizations is achieved. The Quality Procedures also cover those technical elements which require a common corporate position for interfaces or resolution of problem areas.~~

The corporate Quality Assurance Manual (FPL-NQA-100A) consists of the Topical Quality Assurance Report and a Glossary of commonly used terms. The Topical Quality Assurance Report delineates the generic requirements and responsibilities by which FPL implements the corporate Quality Assurance Program. Revisions and changes to this report are made in accordance with a Quality Instruction outlined in TQR 2.0.

In addition to the Quality Assurance Manual, Quality Instructions (QIs) are developed as required by each of the implementing plants and departments. Quality Instructions describe the measures to be used to implement the quality requirements of the Quality Assurance Manual. The Quality Instructions describe actions and responsibilities to be performed within a department or organization and address the requirements of the appropriate Topical Quality Requirements.

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The FPL Quality Assurance Program meets the requirements provided by the NRC Regulatory Guidance and Industry Standards as listed in Appendix C of this Topical Quality Assurance Report.

The requirements of this Topical Quality Assurance Report apply to safety-related materials, parts, components, systems and structures; services employed for design, procurement construction, operation, maintenance, refueling, repair, and modification; and packaging and shipping of radioactive material (but not design and fabrication of packages for which a license, certificate of compliance, or other approval must be issued by the NRC) in accordance with 10 CFR part 71. The safety-related systems for each plant are specified in the respective plant Safety Analysis Report.

The FPL Quality Assurance Program fully addresses the requirements of Appendix B to 10 CFR Part 50. The Topical Quality Assurance Report shall be applicable to all existing nuclear plants, those under construction, and supporting FPL departments, and will be referenced in the Safety Analysis Report (SAR). For future plants, the description of activities, requirements, and organizations structures that are unique to a particular plant shall be addressed in the respective SAR document.

Vice President Nuclear Assurance

1.1 GENERAL REQUIREMENTS

The Florida Power & Light (FPL) organizational structure shall be defined such that the responsibilities for establishment and implementation of the Quality Assurance Program are clearly identified. The authority and duties of individuals and organizations performing quality assurance and quality control functions shall be described, and shall illustrate the organizational independence and authority necessary to identify problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. In addition, the description shall illustrate that persons or groups responsible for verifying the correct performance of an activity are independent of the person or groups responsible for performing the activity.

1.2 IMPLEMENTATION

The FPL Chairman of the Board and Chief Executive Officer is ultimately responsible for the execution of the Quality Assurance Program for FPL nuclear power plants. The authority for developing and verifying execution of the program is delegated to the President Nuclear Division and the Vice President Nuclear Assurance. The reporting relationship of each department involved with the Quality Assurance Program is shown in Appendix A.

To provide for a review and evaluation of Quality Assurance Program policies and activities, the President Nuclear Division has established the Company Nuclear Review Board (CNRB). This organization's responsibilities are defined in Section 1.~~23~~.1~~.5.a~~.

In addition, a Quality Assurance Program Review Committee (QAPRC) has been established to review changes to the Quality Assurance Program and to provide an interface for quality matters in each department affecting quality. The QAPRC is an interdepartmental organization with the responsibility to review and resolve recommended changes to the Quality Assurance Program. This committee is administered by the Quality Assurance Services group. Quality Assurance Program changes reviewed by the QAPRC

are reviewed and signed by the affected department heads ~~or individuals listed on each Quality Procedure.~~

A Quality Assurance Program Review Committee (QAPRC) Member shall be designated by the head of each department or organization. The QAPRC Member is the prime interface for coordination of quality matters within the member's department, with the Quality Assurance Department, and with other departments.

The head of each department or organization performing activities affecting quality is responsible for: a) identifying those activities within the organization which affect quality as defined by the Quality Assurance Program; b) establishing and clearly defining the duties and responsibilities of personnel within his organization who execute those activities affecting quality; and c) planning, selecting, and training personnel to meet the requirements of the Quality Assurance Program. The responsibility, authority, and organizational relationship for performing actvities affecting quality within each organization shall be established and delineated in organizational charts and written job or functional descriptions.

Activities affecting quality may be performed by FPL or be contracted. Should any of these functions be contracted, the contractor may perform the activities under his own Quality Assurance Program, which must have prior approval by FPL Quality Assurance, or the contractor may directly adopt the requirements of the FPL Quality Assurance Manual. If the contractor implements the Quality Control function directly to the FPL Quality Assurance Manual requirements, the contractor's Quality Control Supervisor shall have the authority and freedom to administer the Quality Control program.

1.3 RESPONSIBILITIES

The organization charts in Appendix A illustrate the lines of authority and areas of responsibility for each of the organizations that are involved in activities affecting quality. Below are listed the departments and organizations that have Qquality Aassurance responsibilities. ~~Specific~~ oOrganizational responsibilities for implementation of the Quality Assurance Program are described in ~~the corresponding sections~~ **the Topical Quality Requirements (TQRs).**

1.~~2~~3.1	Nuclear Division	1.~~2~~3.2	Support Departments
1.~~2~~3.1.1	Plant Vice Presidents	1.~~2~~3.2.1	Administrative Services - Corporate Records - Documentary Files
1.~~2~~3.1.2	Nuclear Services		
~~1.2.1.3~~	~~Nuclear Construction Services~~	1.~~2~~3.2.2	Environmental Affairs
1.~~2~~3.1.~~4~~3	Nuclear Engineering and Licensing	1.~~2~~3.2.3	Protection &Control Systems
		1.~~2~~3.2.4	Information Management
1.~~2~~3.1.~~5~~4	Nuclear Assurance		
1.~~2~~3.1.~~6~~5	Nuclear ~~Analysis and Controls~~ **Business Services**		

1.~~2~~3.1 Nuclear Division

Throughout plant life, the Nuclear Division maintains control of and responsibility for nuclear power plant design, preoperational and start-up testing, operation, maintenance, refueling, and modification of the plant in accordance with written and approved procedures.

The President Nuclear Division has overall responsibility for the Nuclear Division's activities including corporate responsibility for overall plant nuclear safety. Reporting to the President Nuclear Division are: the Vice President - Turkey Point Plant, Vice President - St. Lucie Plant, Vice President Nuclear Assurance, Vice President Nuclear Engineering and Licensing, Director Nuclear Services, ~~Director Nuclear Construction Services~~, and the Manager Nuclear ~~Analysis and Controls~~ **Business Services.**

The Company Nuclear Review Board (CNRB), reporting to the President Nuclear Division, is comprised of executive level members of management with responsibilities for the execution of the Quality Assurance Program. The CNRB reviews, or directs the performance of reviews of, activities concerning the technical aspects of the operating nuclear power plant insofar as they impact plant safety, the health and safety of the public, and laws, regulations and licensing commitments. In addition, audits of these areas are performed under the cognizance of the CNRB.

The CNRB composition is described in Section 6.0 of each facility's Technical Specifications. Subjects within the purview of the CNRB are listed in the appropriate plant Technical Specifications. The CNRB has the authority to carry out its responsibilities by way of written action letters, verbal directions, meeting minutes or appointed subcommittees. Where necessary, the CNRB may use consulting services to perform required reviews.

The CNRB is responsible for reviewing and evaluating Quality Assurance Program policies and activities. Quality Assurance Program status reports shall be periodically given by the Quality Assurance Department.

CNRB meetings shall be held by the Chairman to keep members apprised of conditions including significant problems that require management attention. Periodic audits of the Quality Assurance Department shall be performed by a team independent of the Quality Assurance Department. The results of this audit are presented to the Vice President Nuclear Assurance and the CNRB.

1.~~2~~3.1.1 Plant Vice Presidents

The Vice President-St. Lucie Plant and Vice President-Turkey Point Plant are accountable for the operation, maintenance, and modification of their respective nuclear plant, as well as the selection, development and direction of the assigned staff. They will act as liaison between the plants and corporate headquarters, and are accountable for ensuring that company policies and procedures are properly implemented and continued at the nuclear site, **including procurement and control of material. The Plant Vice President has overall responsibility for implementation of the Environmental Protection Plans at their respective sites.**

Reporting to the Plant Vice President - Turkey Point Plant are the Plant General Manager, the Services Manager, the Human Resources Manager, the Business Systems Manager, **the Materials Management Manager,** and the Licensing Manager. Also, the Plant Vice President has functional responsibility over the Site Engineering Manager providing work direction to this group.

Reporting to the Vice President - St. Lucie Plant are the Plant General Manager, the Services Manager, the Licensing Manager, **the Materials Management Manager,** and the Human Resources Manager. Also, the Plant Vice President has functional responsibility over the Site Engineering Manager~~, Manager Nuclear Material Management and the Site Construction Manager~~ providing work direction to ~~those~~ **this** group~~s~~.

The Plant General Manager - PSL and Plant General Manager - PTN, through the respective Plant Vice President, are responsible for the operation of the nuclear plant.

The Plant Nuclear Safety Committee (PNSC) at Turkey Point Plant and the Facility Review Group (FRG) at the St. Lucie Plant are comprised of key plant management and staff personnel as described in the plant Technical Specifications. The PNSC/FRG serves the plant manager in a technical advisory capacity for the review of all safety-related procedures and activities that impact plant safety and the facility operating license.

1.~~2~~3.1.2 Nuclear Services

The Director Nuclear Services is accountable for technical staff support to the Nuclear Plants and certain centralized special functions. Reporting to the Director Nuclear Services are the Manager Nuclear Training, Manager Nuclear Security, Manager Nuclear Health Physics/Chemistry and the Manager Nuclear Emergency Preparedness.

a. The Manager Nuclear Training prepares policy documents regarding nuclear training and provides support to secure the necessary resources to ensure that Nuclear Division personnel are adequately trained. They must have adequate technical and job-related skills to provide safe and efficient operation while complying with NRC requirements.

b. The Manager Nuclear Security is responsible for coordinating the overall development and implementation of the FPL nuclear security program

c. The Manager Nuclear Health Physics/Chemistry provides technical support and assistance to the plants in the areas of health physics, chemistry, radioactive waste and hazardous material control.

d. The Manager Nuclear Emergency Preparedness provides technical support and assistance to plant and corporate management for activities associated with radiological emergency plans and procedures.

~~1.2.1.3 Nuclear Construction Services~~

~~The Director Nuclear Construction Services is responsible for directing and administering effective management of the department to ensure compliance to the corporate policies, practices and procedures; and providing qualified construction support personnel to the Site Construction Managers.~~

~~Reporting to the Director Nuclear Construction Services are the Manager Construction Control and the Site Construction Managers.~~

~~a. The Manager Construction Control is responsible for:~~

- ~~monitoring budget performance against planned engineering activities as budgeted by the Construction Services organization;~~
- ~~monitoring the efficient utilization of resources expended against Construction Services budgeted activities; and~~
- ~~ensuring economic utilization of capital construction equipment at all Construction Services locations.~~

~~b. The Site Construction Manager is responsible for:~~

- ~~completing the assigned project in compliance with technical and other project specifications, and for the application of the provisions of the Quality Assurance Manual during the project;~~
- ~~obtaining corrective action (along with Nuclear Materials Management) from contractor's management and, when necessary, exercising the authority to stop work on project activities adverse to quality.~~

~~Reporting to the Site Construction Manager are the Lead Construction Supervisors. The Lead Construction Supervisor is responsible for conformance of project construction activities to the requirements of specifications, codes, regulations and site procedures. The Lead Construction Supervisor supervises the construction personnel assigned to the project, and coordinates construction activities, including the assignment of construction personnel.~~

~~The overall responsibility for Plant Changes and Modifications to operating plants is defined in each plant's Technical Specifications. The work of installation and administration of Plant Changes and Modifications can be assigned to Nuclear Construction Services. The Site Construction Manager will report to the Director Nuclear Construction Services; however, the Vice President PSL or Services Manager PTN has functional responsibility over the Site Construction Manager by providing work direction.~~

~~Project Team Members are appointed by their home department heads as the departmental representative on the respective project, when requested by the Site Construction Manager. Team Members, other than Quality Assurance, report functionally to the Site Construction Manager, but continue to receive administrative support and technical direction from their home department. Team members are responsible to the Site Construction Manager for home department support to the project.~~

~~Activities affecting quality may be performed by FPL or contracted. Should any of these functions be contracted, the contractor may perform the activities under his own Quality Assurance Program, which must have prior approval by FPL Quality Assurance, or the contractor may directly adopt the requirements of the FPL Quality Assurance Manual. If the contractor implements the Quality Control function directly to the FPL Quality Assurance Manual requirements, the contractor's Quality Control Supervisor shall have the authority and freedom to administer the Quality Control program.~~

1.~~23~~.1.~~43~~ Nuclear Engineering and Licensing

The Vice President Nuclear Engineering and Licensing is responsible for nuclear plant design, materials management at Juno Beach, contract activities and maintaining the operating licenses.

Reporting to the Vice President Nuclear Engineering and Licensing are the ~~Director - Nuclear Engineering~~, Manager - Turkey Point Engineering, Manager - St. Lucie Engineering, ~~Director - Nuclear~~ Manager - Licensing and Special Programs, ~~Director~~ Manager ~~- Nuclear~~ Materials Management, ~~Manager~~ Director - ~~Nuclear Information Services~~Technical Support, Manager~~- Project Controls, and the Nuclear Records Official~~ Component Support and Inspections, and the Manager - St. Lucie Steam Generator Repair Project..

a. Nuclear Engineering ~~Department~~

~~The~~ Nuclear Engineering ~~Department~~ includes personnel located at both nuclear sites and at the corporate office. Nuclear Engineering performs design-related activities and delegates design-related activities to qualified contractors. For activities performed by Nuclear Engineering, the work is governed by FPL's Quality Assurance Program, and Nuclear Engineering is responsible for approval of the design output. Delegated activities are performed in accordance with an FPL approved Quality Assurance Program and the contractor is responsible for approval of design output. Nuclear Engineering is responsible for defining the scope of delegated activities and the responsibilities of the contractor. Prior to the release of design outputs by contractor organizations, Nuclear Engineering ensures that the contractor is technically qualified to perform the design-related activity.

~~The Director - Nuclear Engineering~~ The Manager - Turkey Point Engineering and the Manager - St. Lucie Engineering **provide on-site engineering support and** direct the engineering aspects of all FPL nuclear power plant projects during construction and operation to assure efficient, economical and reliable power plant design, conformance with engineering schedules and budgets and compliance with regulatory requirements. ~~The Manager - Turkey Point Engineering and Manager - St. Lucie Engineering are responsible for on-site engineering support to the nuclear units. The Director - Nuclear Engineering is responsible for engineering projects and support at the Corporate Nuclear Engineering Office. Project Managers are assigned to provide overall management and control of designated projects as required by the Vice President - Nuclear Engineering and Licensing~~.

~~The~~ Nuclear Engineering ~~Department~~ is responsible for:

- power plant design related aspects of the FPL Quality Assurance Program throughout all phases of plant life. This responsibility extends from initial engineering evaluations of plant design-related site characteristics, through preliminary and detailed design, construction, operation and decommissioning;
- development and maintenance of the design control program governing design-related activities performed by Nuclear Engineering and for providing technical support to the Quality Assurance Department for assessing the adequacy, implementation and effectiveness of contractor design control programs;
- the preparation, revision, approval and distribution of plant design records that are identified to be maintained as "as constructed" drawings during plant operation;
- the development, control, and performance of certain aspects of items and services procurement, including establishment of procurement standards, the technical evaluation, equivalency evaluation, and commercial grade dedication of replacement parts/components for nuclear plants.
- review of the technical and quality requirements in procurement requisitioning documents and changes thereto for safety related and quality related items and services, as well as configuration control activities for controlled design documentation associated with procurement. The review shall be performed by individuals other than the document originator;

Aspects of the above activities are performed by the Juno Beach Engineering organization as determined by the Vice President Engineering and Licensing.

- ~~forecasting FPL's nuclear fuel requirements and the availability of nuclear fuel;~~
- ~~determining sources of supply, evaluating alternatives, and negotiating and establishing arrangements with suppliers for acquisition, processing and delivery of nuclear fuel and related services for the nuclear fuel cycle;~~
- ~~assuring that technical and quality requirements (including inputs from~~

~~other FPL departments) are incorporated in fuel contracts and letters of authorization, and that these documents have the necessary approvals;~~

- ~~administering and managing contracts for nuclear fuel and related services to assure that technical and quality obligations are met, and serving as FPL liaison in all matters of nuclear fuel and fuel related contracts;~~
- ~~administering and managing spent fuel disposal contracts with Department of Energy and serving as FPL liaison in matters of nuclear fuel and high level waste disposal;~~
- ~~performing the project management function with respect to fuel management, design, licensing, delivery and other technical aspects of nuclear fuel;~~
- ~~all fuel related design, analyses, reviews, and technical assistance necessary to ensure the safe, reliable, and economic operation of the nuclear plants;~~
- ~~the optimization of nuclear fuel cycle economics within nuclear safety and operating constraints, as well as providing fuel related information, such as forecasts of nuclear fuel requirements to support licensing and regulatory requirements;~~
- ~~the development and/or review of fuel and nuclear physics design;~~
- ~~implementing and maintaining the FPL corporate nuclear material accountability program as outlined in the FPL Special Nuclear Material Control Manual;~~
- ~~providing support to the Quality Assurance Department for their auditing of nuclear fuel design and fuel assembly manufacturing;~~
- ~~performing audits and coordinating accountability reporting on all nuclear fuel;~~
- ~~developing and providing, to appropriate FPL groups, information necessary to determine FPL's fuel related costs and to finance fuel related expenditures;~~
- ~~providing technical support of activities associated with component reliability, materials evaluations, inspections, corrosion protection, non-destructive examination, and ASME Section XI implementation/problem resolution for nuclear plant components;~~

- ~~providing specific component expertise, metallurgical support, and non-destructive examination and inspections;~~
- ~~establishing the FPL Welding Program to meet the requirements of the Quality Assurance Program and applicable codes and standards;~~
- ~~developing, maintaining, and controlling the FPL Welding Control Manual to implement the FPL Welding Program;~~
- ~~originating and qualifying welding procedure specifications; and~~
- ~~providing technical direction to personnel within the FPL Welding Program.~~

b. ~~Nuclear~~ Licensing and Special Programs ~~Department~~

~~The Nuclear~~ Licensing and Special Programs ~~Department~~ is responsible for engineering activities at the Juno Beach office and licensing activities as follows:

- Engineering assurance;
- Probalistic risk management;
- Electrical engineering support;
- Civil engineering support;
- Mechanical engineering support;
- Configuration management and document control;
- Nuclear Division corporate interface with the NRC;
- Nuclear Division corporate administrative point of contact with INPO;
- Managing NRC safety and regulatory issues and developing effective strategies to resolve them;
- Advising senior Nuclear Division management on a regular basis of important developments in licensing areas which could significantly affect the Nuclear Division;
- Providing Nuclear Division licensing hearing and legal services;
- Providing corporate licensing support and guidance to onsite licensing organizations;
- Administering the Nuclear Problem Reporting System;
- Administering the Commitment Tracking System;
- Administering the Operating Experience and Feedback System.

c. ~~Nuclear~~ Materials Management ~~Department~~

~~The Nuclear~~ Materials Management ~~Department~~ is responsible for:

- ~~o negotiation, procurement and management of contracts (except nuclear fuel);~~
- ~~o purchase and control of materials;~~
- ~~o and the administrative duties to support these activities; Reporting to the Director Nuclear Materials Management are the Supervisors of Contracts (Juno Beach), and the Site Managers of Nuclear Materials Management (Turkey Point and St. Lucie).~~

~~1) Nuclear Contracts~~

~~Nuclear Contracts is responsible for~~

- o negotiation, generation, ~~and~~ issuance, and management of contracts (except nuclear fuel) and purchase orders for required contracted services supporting the operation, licensing, maintenance, modification, and inspection of FPL nuclear plants, and for materials and equipment to support Nuclear Division staff; ~~The Site Managers of Nuclear Materials Management (Turkey Point and St. Lucie) are responsible for Nuclear Contracts activities performed at the respective sites. The Supervisors of Contracts (Juno Beach) are responsible for Nuclear~~

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~~Nuclear Contracts is also responsible for~~

- o reviewing procurement documents to assure that technical and quality requirements developed by others are incorporated into the procurement documents which it authorizes;
- o ~~and~~ ensuring that ~~the~~ requisitioning documents have the required approvals; ~~Services for nuclear safety related applications are secured only from approved suppliers, or as commercial grade, as applicable. Nuclear Contracts is responsible for~~
- o maintaining traceability of procurement document records for which

they are responsible until transmitted to an approved storage facility.

~~2) Purchasing and Warehousing~~

~~The Site Managers of Materials Management (Turkey Point and St. Lucie) are responsible for the procurement and control of FPL Nuclear Plant materials and equipment.~~

- ~~Purchasing is responsible for the procurement of materials and equipment by FPL for its nuclear power plants with the exception of nuclear fuel procurement. Materials and equipment for nuclear safety related application are secured only from approved suppliers, or as commercial grade, as applicable. Purchasing is responsible for reviewing procurement documents to assure that technical and quality requirements developed by others are incorporated into the procurement document which it authorizes, and that the requisitioning documents have the required approvals. Purchasing is responsible for maintaining traceability of procurement document records until transmitted to an approved storage facility.~~
- ~~Warehousing is responsible for the receipt, handling, storage, issue and shipping of materials and equipment received at the nuclear plant for control by Warehousing. This responsibility encompasses material, parts and components for plant equipment while in their care and custody. During operations, Warehousing also performs additional quality related activities such as receipt inspection of other than safety related materials and equipment and handling and segregation for nonconforming items received for material control.~~

~~d. Project Controls Department~~

~~The Project Controls Department is responsible for:~~

- ~~Coordinating the establishment of scope baseline for the Nuclear Engineering, Nuclear Materials Management, and Nuclear Licensing~~

~~Departments.~~

- ~~Developing estimates for the scope, and annually establishing budgets for the work to be performed.~~
- ~~Monitoring cost and schedule performance.~~
- ~~Reforecasting costs and schedule based on performance history and emergent trends.~~
- ~~Providing management with corrective action recommendations, and implement same into revised scope, cost, and schedule baselines.~~

~~e~~d. Nuclear ~~Information Services Department~~ **Technical Support**

~~The~~ Nuclear ~~Information Services Department~~ **Technical Support** is responsible for the identification, design, development, implementation, on-going maintenance, and control of all Nuclear Division data processing information systems excluding process applications.

This encompasses the following accountabilities:

- directing the development, implementation, and on-going maintenance of information management systems;
- coordinate~~ing~~ and directing the computer hardware and telecommunication planning and control within the Nuclear Division;
- ensu~~ring~~ that the Nuclear Division's information management program is in full compliance with software quality assurance regulations and guidelines;
- administering and controlling system access;
- execute~~ing~~ software production release and change control activities;
- administering physical databases and provide~~ing~~ on-going technical support

Nuclear Technical Support is also responsible for nuclear fuel engineering and procurement activities including the following:

- **determining sources of supply, evaluating alternatives, and negotiating and establishing arrangements with suppliers for acquisition, processing and delivery of nuclear fuel and**

related services for the nuclear fuel cycle;

- o assuring that technical and quality requirements (including inputs from other FPL departments) are incorporated in fuel contracts and letters of authorization, and that these documents have the necessary approvals;
- o administering and managing contracts for nuclear fuel and related services to assure that technical and quality obligations are met, and serving as FPL liaison in all matters of nuclear fuel and fuel-related contracts;
- o administering and managing spent fuel disposal contracts with Department of Energy and serving as FPL liaison in matters of nuclear fuel and high level waste disposal;
- o performing the project management function with respect to fuel management, design, licensing, delivery and other technical aspects of nuclear fuel;
- o all fuel related design, analyses, reviews, and technical assistance necessary to ensure the safe, reliable, and economic operation of the nuclear plants;
- o the optimization of nuclear fuel cycle economics within nuclear safety and operating constraints, as well as providing fuel related information, such as forecasts of nuclear fuel requirements to support licensing and regulatory requirements;
- o the development and/or review of fuel and nuclear physics design;
- o implementing and maintaining the FPL corporate nuclear material accountability program as outlined in the FPL Special Nuclear Material Control Manual;
- o providing support to the Quality Assurance Department for their auditing of nuclear fuel design and fuel assembly manufacturing;
- o performing audits and coordinating accountability reporting on all nuclear fuel;

~~f. Nuclear Records Official~~

The Nuclear Records Official, reporting to the Director Technical Support, is responsible for:

- o ensuring the Quality Assurance records program activities are managed in accordance with applicable laws and regulations;
- o developing, approving, and maintaining record retention schedules;
- o establishing parameters for records indexing;
- o locating acceptable record storage areas when requested;
- o storage, retrieval and control of records/documents as requested by other departments;
- o leading the evaluation of specially designated QARSET approved storage facilities, maintaining ~~the~~ records of this evaluation, and establishing schedules to assure that re-evaluations are performed every two (2) years.

e. Component Support and Inspections

Component Support and Inspections is responsible for providing support to the plants as follows:

- o providing technical support of activities associated with component reliability, materials evaluations, inspections, corrosion protection, non-destructive examination, and ASME Section XI implementation/problem resolution for nuclear plant components;
- o providing specific component expertise, metallurgical support, and non-destructive examination and inspections;
- o establishing the FPL Welding Program to meet the requirements of the Quality Assurance Program and applicable codes and standards;
- o developing, maintaining, and controlling the procedures and instructions to implement the FPL Welding Program;
- o originating and qualifying welding procedure specifications; and
- o providing technical direction to personnel within the FPL Welding Program.

The Vice President Nuclear Assurance is responsible for the selection, technical direction, administrative control (e.g. performance appraisal, salary review, hire/fire, position assignment) staffing, training and development of personnel required for supervisory and operating continuity of the Quality Assurance Department and the Nuclear Safety Assessment Group. The Vice President Nuclear Assurance also initiates QA Program policy changes when necessary. In addition, the Vice President Nuclear Assurance is responsible for selecting a team independent of the Quality Assurance Department to perform periodic audits of the Quality Assurance Department. The results of these audits are presented to the Vice President, Nuclear Assurance and the Company Nuclear Review Board (CNRB).

Reporting to the Vice President Nuclear Assurance are the Director Nuclear Safety Assessment, the Site Quality Manager - Turkey Point, the Site Quality Manager - St. Lucie and the Quality Manager - Juno Beach, ~~and the PSL Steam Generator Project (SGP) Quality Assurance Manager for quality direction.~~

~~b~~a. Nuclear Safety Assessment ~~Group~~

The Director Nuclear Safety Assessment has responsibility for the management and implementation of Nuclear Safety Speakout, PSL and PTN Independent Safety Engineering Groups (ISEG), and the CNRB subcommittee, ~~Additionally, he~~ and serves as the CNRB Chairman. ~~Reporting to the Director Nuclear Safety Assessment are the Chairmen of ISEG at PTN and PSL, the Supervisors Nuclear Safety Speakout at PTN and PSL, the Nuclear Safety Speakout investigators at Juno Beach, and the CNRB Subcommittee Chairman.~~

The Nuclear Safety Speakout Program provides a forum for employees and contractors to communicate their concerns to FPL. Concerns are documented, investigated and corrective actions are taken when necessary. The program offers confidentiality.

~~c~~b. Quality Assurance Department

The Quality Assurance Department shall be responsible for administering the FPL Quality Assurance Program. This includes developing and verifying implementation of corporate policies, plans, requirements, and procedures affecting quality. This is accomplished through the Quality Assurance Department. The Quality Assurance Department retains responsibility for delegated portions of the Quality Assurance Program by performing initial evaluation and subsequent periodic audits of the contractors' Quality Assurance Programs. The Quality Assurance Program responsibility further extends to the performance of audits within the Company to assure management that the established requirements and procedures are being implemented, and that the Program complies with the baseline document requirements.

The organizational freedom of the Quality Assurance function is accomplished through the corporate structure, illustrated in Appendix A, which provides independence from those departments responsible for design, procurement, engineering, construction and operation. With quality assurance as its sole function the Quality Assurance Department, both on-site and off-site, is completely free from the cost and scheduling pressures of design, procurement, construction and operation. The Quality Assurance Department has the freedom and authority to: a) identify quality problems; b) initiate, recommend or provide corrective action; c) verify implementation of the corrective action; and d) recommend the stoppage of work or operations adverse to quality, when necessary. The Quality Manager - Juno Beach, the Site Quality Manager - St. Lucie and the Site Quality Manager - Turkey Point report administratively and functionally to the Vice President Nuclear Assurance. These reporting relationships assure that the Quality Assurance Department has direct access to the levels of management necessary to assure effective implementation of the Quality Assurance Program.

The duties, responsibilities, and authorities of each Quality Assurance group are described in the sections which follow.

1) Quality Assurance Services ~~Group~~

The Quality Manager - Juno Beach directs and administers the Corporate Quality Assurance Program assuring compliance with the baseline documents listed in Appendix C of this Topical Quality Assurance Report. Quality Assurance Services ~~Group~~ activities include the following:

- o develop and maintain the Quality Assurance Department Quality Instructions and the corporate Quality Assurance Manual, including the administration of the Quality Assurance Program Review Committee (QAPRC);
- o assist other departments in the development of Quality Instructions by review and comment and through interpretation of corporate Quality Assurance requirements;
- o develop and implement a Quality Assurance indoctrination program for FPL personnel, and a training program for the Quality Assurance Department;
- o prepare reports on Quality Assurance Program activities for review by the CNRB;
- o review Regulatory Guides, Codes, SAR Document Commitments and Standards for impact on the Quality Assurance Program and recommend appropriate program changes;
- o review documents submitted to the CNRB as requested by the Nuclear Assurance Department CNRB member;
- o plan, coordinate and implement a comprehensive system of periodic internal audits with support from the other Quality Assurance groups, when necessary;
- o review FPL originated design specifications for inclusion of appropriate quality requirements.
- o perform periodic activity audits of FPL procurement and associated documents and changes to these documents to assure that the necessary quality requirements are imposed.
- o assist in the development and implementation of policies, plans, requirements and procedures for the requisition and purchase of materials, equipment and services related to nuclear power plants and to the acceptance and storage of equipment and material;

- o perform appropriate surveillance of hardware during manufacture;
- o develop and implement a program for auditing of supplier Quality Assurance/Quality Control programs including Architect Engineer/Nuclear Steam Supply System Suppliers;
- o assure design-related activities performed by the Architect Engineer meet the quality aspects of the contract;
- o assist other FPL departments in the identification of quality problems associated with procurement and storage; initiate, recommend, or provide solution; and verify implementation of solutions;
- o review, approve and periodically audit the execution of FPL contractor quality assurance programs;
- o assure~~s~~ that the contractors' organizations performing Quality Assurance functions have sufficient authority and organizational freedom to implement effective Quality Assurance programs;
- o evaluate the Quality Assurance capability of suppliers requested by ~~the Nuclear~~ Materials Management ~~Department~~ and maintain the Quality Assurance Department list of ~~A~~approved ~~S~~suppliers ~~List;~~
- o provide NDE Level III services including technical direction and monitoring of NDE activities performed by Quality Control at the plant sites (PTN and PSL); preparation, revision and implementation of NDE procedures; training, testing and qualification of NDE personnel, and providing the programs and direction for NDE activities meeting the ASME, AWS and other NDE code requirements;
- o maintain a file system for documentation of quality assurance activities performed.

For purchased items and services, the responsibility of this group extends through receipt of shipment or performance of contract.

2) Site Quality Assurance ~~Groups~~ - Turkey Point Nuclear (PTN) and St. Lucie (PSL)

Quality Assurance activities at the plant sites (PTN and PSL) are accomplished by the respective site Quality Assurance ~~G~~groups, reporting

to the Site Quality Manager. The Site Quality Manager has responsibility for on-site development and implementation of the Quality Assurance Program, including the following:

- coordinate the development and implementation of policies, plans, requirements, and procedures for portions of the quality assurance program related to the operation and modification of nuclear power plants at the plant site;
- perform audits, assessments and other observations as specified in procedures and instructions to verify compliance with Quality Assurance Program commitments, identify quality problems and ensure timely corrective actions are taken in the areas of plant operation, system turnover, modification and maintenance; including such areas as refueling, inservice inspection and testing, material storage, health physics, chemistry, plant security and fire protection;
- perform periodic activity audits of site generated FPL procurement and associated documents and changes to these documents to assure that the necessary quality requirements are imposed;
- identify requirements, ensure inclusion of commitments in documents and verify implementation of the Quality Assurance Program during construction activities at the plant site through audits of FPL and contractor organizations;
- recommend stoppage of work or operations adverse to quality at the plant site in accordance with the appropriate ~~Quality~~ **instructions** ~~Procedures;~~
- review and comment on Quality Instructions or equivalent quality administrative procedures prior to issue, with respect to the requirements of the FPL Quality Assurance Program, the applicable Final Safety Analysis Report, and the applicable Technical Specifications;
- assure that the status is tracked for all open items identified by the Site Quality Assurance group, and inform appropriate management when there is an indication that a commitment will not be met on time;
- ~~review backfit procedures with respect to the FPL Quality Assurance~~

~~Program (for procedure review requirements see TQR 5.0);~~

- o perform audits of the architect engineer and Nuclear Steam Supply System suppliers both on-site and off-site, in conjunction with the Quality Assurance Services group
- o maintain a file system for documentation of quality assurance activities performed by the Site Quality Assurance group.

The interface with the Quality Assurance Services group ends with the receipt of a shipment of nuclear safety-related equipment at the plant site. The Quality Assurance program for the shipment is then within the purview of the Site Quality Assurance group.

The Quality Manager - Turkey Point and Quality Manager - St. Lucie are additionally responsible for the establishment and implementation of quality control aspects of the Quality Assurance Program at the plant site. Reporting directly to the Site Quality Manager are the Quality Control Supervisors who have the authority and freedom to administer the Quality Control program and, when necessary, to stop activities adverse to quality. The Quality Control Supervisors and personnel performing Quality Control inspection functions are required to be independent of groups or persons performing activities that they may be required to verify or inspect.

Quality Control ~~efforts~~ **responsibilities** include:

- o preparation and review of plant procedures, ~~PCMs~~ **design control documents**, and instructions for activities affecting quality; ~~Quality Control personnel are also responsible for~~
- o inspection, monitoring, surveillance, and review of plant activities to verify compliance with the provision of the facility operating license and the Quality Assurance Manual;
- o inspections ~~are also performed~~ to assure that ~~backfit~~ activities meet the requirements of engineering drawings, specifications, codes and standards;
- o ~~This responsibility extends from~~ receipt inspections of material;

- ~~on-site to~~ acceptance of the installed items ~~prior to turnover to the Plant; It also includes~~
- verification of conformance of ~~an~~ items or activit~~y~~ies ~~accomplished during this period~~ to quality requirements (e.g., records review, NDE, inspections); ~~The Quality Control Supervisors shall take~~
- corrective action for deficiencies identified, where applicable;
- ~~and shall~~ follow up on corrective action taken by other organizations until close out.

Off-site interfaces for the resolution of quality problems and NRC items are with Nuclear Corporate Staff, FPL support departments as indicated in this Topical Quality Assurance Report, the architect engineer and the Nuclear Steam Supply System (NSSS) Quality Assurance Department. The Site Quality Assurance group interfaces with the Plant Vice President and his staff on-site by assisting in the resolution of quality problems.

1.~~23~~.1.~~65~~ Nuclear ~~Analysis and Controls~~ Business Services

The Manager Nuclear ~~Analysis and Controls~~ Business Services ~~, reporting to the President Nuclear Division,~~ is responsible for coordinating the budget, rate, and cost control support to the plants and staff organizations; and coordinating Division business planning, target setting and monitoring of key performance indicators, and operations analysis activities.

1.~~23~~.2 <u>Support Departments</u>

Providing support activities for the Nuclear Division are Administrative Services, Environmental Affairs, Protection & Control Systems, and Information Management. The reporting relationship of each department is described in the following sections and is shown in Appendix A.

1.~~23~~.2.1 Administrative Services

~~Reporting to the Manager Administrative Services are the Supervisor Corporate Records~~

~~Services and the Supervisor Documentary Files.~~

~~a. Corporate Records Services~~

The ~~Supervisor Corporate Records~~ **Manager Administrative Services** is responsible for:

- storage, retrieval and control of Quality Assurance records received from other departments;
- assisting with the development and implementation of records and micrographics programs;
- maintaining a QARSET approved storage facility;

~~b. Documentary Files~~

~~The Supervisor Documentary Files is responsible for~~

- receiving, maintaining, retrieving and storing the Quality Assurance records **transmitted from other departments** in connection with licenses and contracts ~~received from other departments.~~

1.~~2~~3.2.2 Environmental Affairs

Environmental Affairs is responsible for obtaining the federal and state environmental permits required for FPL facilities and operations. Environmental Affairs is responsible for overall coordination of non-radiological environmental monitoring (federal and state) programs at the nuclear power plant sites.

~~The Manager Hazardous Substances Regulation, the Manager New Construction Licensing and Planning, the Manager Air and Water Permitting and Programs, the Chief Ecologist, and the Environmental Toxicologist report to the Director Environmental Affairs.~~ The Plant Vice President has overall responsibility for implementation of the Environmental Protection Plans at nuclear power plant sites.

The **Director** Environmental Affairs ~~Department~~ through ~~its~~ management of the Company Environmental Review Group (CERG) is responsible for:

- overall coordination of non-radiological environmental monitoring programs and

oversight of other requirements related to the Environmental Protection Plans;

- ~~The CERG~~ provide~~s~~ing review of proposed changes to the Environmental Protection Plans;
- review of any violations of monitoring and/or limitation requirements of federal and state permits and Environmental Protection Plans; ~~and~~
- review of plant activities as described in ~~these~~ Environmental Affairs Department Environmental Procedures subject to QA requirements.

The CERG provides information to the Director Environmental Affairs and the CNRB Chairman on environmental matters for which requirements are included in Environmental Protection Plans.

1.~~2~~3.2.3 Protection & Control Systems

The Director of Protection & Control Systems reports to the Vice President of Power Delivery.

Protection & Control Systems is responsible for:

- test, calibration and maintenance of certain high voltage electrical protective relays for safety-related systems of the nuclear plant;
- ~~Activities of Protection & Control Systems include~~ final wiring connection checks;
- preoperational check-out and test of system protection devices; ~~and~~
- providing inspection of equipment under their cognizance; ~~Additional responsibilities include~~
- providing certain setpoint and checkpoint values for protective devices.

1.~~2~~3.2.4 Information Management

Information Management consists of Computer Operations Services, Client Services, and Quality Management reporting to the Vice President of Information Management.

The Computer Operations Services Department is responsible for the installation and

maintenance of the operating system software and the operation of the computer hardware for FPL's corporate computer systems. The application programs used by the nuclear departments executes on these corporate computers.

~~The Manager Computer Center, the Manager Operations Support Services, and the Manager Technical Systems report to the Director Computer Operations Services.~~

Client Services is responsible for software libraries on FPL's in-house time-sharing Computer System (CMS) that are under its control.

Quality Management provides support to the Nuclear Division in their development and maintenance of computer applications in the area of software library controls.

2.1 GENERAL REQUIREMENTS

Florida Power & Light Company has established a Quality Assurance Program which complies with the criteria of 10 CFR 50 Appendix B, and meets the requirements of Regulatory Guides and Industry Standards referenced in Appendix C of this report. The Topical Quality Requirements and attached Policy Statement, together with ~~the Quality Procedures and~~ Quality Instructions document the Program and the FPL policy with regard to Quality Assurance. This Program shall be instituted for each plant site in a schedule consistent with accomplishing the required activity and shall be carried out throughout the life of FPL nuclear plants.

The requirements of the FPL Quality Assurance Program shall only apply to nuclear safety related structures, systems, and components as identified in the Safety Analysis Report for each nuclear unit. Additionally, the requirements of the FPL Quality Assurance Program shall apply to all FPL, contractor, or consultant organizations performing activities affecting the quality of safety related structures, systems, and components of FPL nuclear power plants. **Portions of the FPL Quality Assurance Program requirements are also applicable to Quality Related items and services. Those portions applicable to specific Quality Related items or services shall be delineated in appropriate instructions.**

Documented procedures shall require and define indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

Periodic program reviews of the status and adequacy of the FPL Quality Assurance Program shall be accomplished by the independent audit team described in Section 2.2.6.d and by Quality Assurance Department audits.

Management of organizations outside Florida Power & Light Company participating in the Program shall be required to regularly review the status and adequacy of that part of the FPL Quality Assurance Program which they are executing. The FPL Quality Assurance Department shall review and concur in the Quality Assurance Program of contractors.

2.2 IMPLEMENTATION

2.2.1 Goals and Objectives

As stated in the Policy Statement of the President of the Nuclear Division, the goal of the FPL Quality Assurance Program is to maintain quality levels in an effective and efficient manner, and to assure the high degree of functional integrity and reliability of nuclear safety related structures, systems, and components. To meet this goal, the following objectives of the FPL Quality Assurance Program have been defined:

a. Define through documented procedures and instructions the quality activities that apply to the design, fabrication, procurement, modification, testing, operation, refueling, maintenance, and repair of nuclear power plants;
b. Establish, assign, and document the responsibilities for those activities affecting quality of safety related structures, systems, and components;
c. Establish confidence that the design, fabrication, modification, and operation of nuclear power generation facilities are performed in a manner consistent with FPL policies by assuring activities affecting quality are performed by responsible personnel;
d. Apprise management of unresolved problems and trends which could have a significant effect on nuclear power plant safety; and
e. Prevent schedule delays and high cost due to poor quality.

2.2.2 Program Documentation

The Topical Quality Assurance Report, which defines the policy, goals, ~~and~~ objectives, **responsibilities and interfaces** regarding the Quality Assurance Program, shall be contained in the FPL Quality Assurance Manual, and used as guidance for the development of ~~corporate level Quality Procedures~~ **Quality Instructions.** ~~which are also contained in the Quality Assurance Manual,~~ Revisions to the Topical Quality Assurance Report will be made, as needed, to reflect current FPL program requirements

and descriptions of activities. These revisions shall be made in accordance with ~~a Quality Procedure~~ a **Quality Instruction.** If a program reflects a reduction of the commitments from the baseline documents contained in Appendix C, the revision shall be submitted to and approved by the NRC prior to implementation.

In all other cases, amendments to the Topical Quality Assurance Report will be submitted to the NRC to reflect implemented program revisions on an annual or more frequent basis.

~~Quality Procedures shall be written by the department with major responsibilities for an activity, or by the Quality Assurance Department when requested. These procedures shall be reviewed by all the departments with responsibility for some portion of that procedure, and shall be approved by the major implementing departments with co-approval by the Vice President Nuclear Assurance. A listing of corporate level Quality Procedures is contained in Appendix E.~~

~~Each Quality Procedure shall be written to further address criteria contained in the Topical Quality Requirements and to further define the FPL Quality Assurance policies, plans, and program where action is required by more than one department.~~

Each department head shall have the responsibility for implementation of the Quality Assurance Program, which includes compliance with procedure requirements applicable to the department. In addition, each department head shall be responsible for the preparation, approval, and distribution of Quality Instructions, operating procedures, testing procedures, or other instructions where further guidance is necessary for implementation of the Quality Assurance Program requirements within the department. Quality Instructions shall be reviewed by the Quality Assurance Department at each revision.

2.2.3 Structures, Systems, and Components

The requirements of the FPL Quality Assurance Program shall apply to nuclear safety related structures, systems, and components, as defined in the SAR. Safety related structures, systems, and components are listed as those necessary to assure the integrity of the reactor coolant boundary, the capability to shutdown the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in off-site exposures comparable to the guideline exposures of 10 CFR 100.

Control over activities affecting the quality of safety related structures, systems, and components shall be to the extent consistent with their importance to safety. Such control shall include use of appropriate equipment, establishment of suitable environmental conditions, and assurance that all prerequisites for a given activity have been satisfied. The Program shall provide for controls over special processes and skills necessary to attain the required quality, and the need for verification of quality by inspection and test.

~~Advance planning is required, for the control of management and technical interfaces between FPL and contractors, during the phase out of design and construction and during preoperational testing and plant turnover. This is achieved through periodic meetings of concerned organizations and the development of procedures which define responsibilities and interfaces, and control the testing and turnover of plant systems to FPL.~~

2.2.4 Participating Organizations

The FPL organizations with responsibilities for activities affecting quality of nuclear safety related structures, systems, and components are identified in TQR 1.0, which also briefly describes their assigned responsibilities.

Florida Power & Light Company may delegate activities to contractor organizations and equipment vendors. Delegated activities are subject to the external organization's FPL approved Quality Assurance Program or the FPL Quality Assurance Program, or some FPL approved combination thereof.

However, FPL shall retain overall responsibilities for the Quality Assurance Program. Procurement documents shall define the scope of delegated activities, as well as Quality Assurance Program requirements that shall govern these activities.

The Quality Assurance Department shall review and approve the Quality Assurance Program governing contracted activities prior to award of contract except for activities for which the output is of a conceptual and/or prototype nature. In all cases, final approval shall occur at a point in the process to ensure that the output complies with the requirements of the FPL approved Quality Assurance Program. The object of this review shall be to verify that the program is in compliance with the applicable requirements of Appendix B, 10CFR50, and ANSI N45.2. Audits shall be conducted periodically to verify the acceptable implementation of the contractor's FPL approved Quality Assurance Program governing delegated activities. The Quality Assurance Department is responsible for conducting these audits. The initial review and periodic audits shall be performed by qualified Quality Assurance Department personnel, and as appropriate, by technical specialists from other FPL departments and contractor organizations.

2.2.5 Indoctrination and Training

A program shall be established and maintained for quality assurance indoctrination, and for training which assures that the required level of personnel competence and skill is achieved and maintained in the performance of activities affecting quality. ~~Quality Procedures~~ **Instructions** shall delineate the requirements for an indoctrination program to assure that personnel responsible for performing activities affecting quality are instructed in the purpose, scope, and implementation of the manuals, instructions, and procedures and that compliance to these documents is a mandatory requirement.

~~Quality Procedures~~ **Instructions** shall also require the head of each department ~~(including the Quality Assurance Department)~~ to be responsible for a training plan which assures that personnel performing activities affecting quality are trained in the principles and techniques of the activity being performed. This training shall maintain the proficiency of personnel in the skills necessary through retraining, requalification or reexamination, as appropriate. **This training shall be conducted to reflect significant procedure changes, or plant modifications which significantly affect the operation of the department.** When personnel are assigned to perform their functions under the direction of personnel from other than their home department, the department head of the organization providing direction is responsible for the indoctrinaton and training of personnel who perform activities under their direction. ~~Quality Procedures~~ **Instructions** shall specify the requirements for documenting indoctrination and training sessions, including a course description, attendance, location, and date. **Records shall contain sufficient information to identify persons in attendance with the corresponding lesson plans.**

2.2.6 Management Participation

In addition to the involvement of department heads in implementing the Quality Assurance Program within their departments and the involvement of the Vice President Nuclear Assurance and the Quality Manager - Juno Beach in the development, coordination, and review of the Program, the Company Nuclear Review Board (CNRB) shall be apprised of the status and adequacy of the Quality Assurance Program on a periodic basis. The following actions shall be instituted to assure that the CNRB remains informed and meets its Program responsibilities:

a. The CNRB shall review a summary of the results of management level Quality Assurance audits of FPL Departments.

b. The Quality Assurance Department shall circulate monthly reports of activities to members of the CNRB and affected department heads. The monthly reports may include such items as the status of audits, a summary of audit findings, the status of development projects, and descriptions of policy matters or problems requiring management attention.

c. The CNRB shall review the status of the Quality Assurance Program on a semiannual basis. The review will include assessment of the Program goals, objectives, and accomplishments.

d. Periodic audits of the Quality Assurance Department and Program shall be conducted by an independent audit group under the direction of the Vice President Nuclear Assurance. This audit group shall employ FPL audit procedures and shall distribute the audit report to the Vice President Nuclear Assurance, and to the CNRB for review of findings and corrective action. Auditor certifications of independent audit teams will be retained by the Quality Assurance Department.

The programs of contractor organizations that perform activities affecting quality shall be reviewed by Quality Assurance to assure that their management regularly reviews the status and adequacy of that part of the FPL Quality Assurance Program which they are executing.

2.3 RESPONSIBILITIES

2.3.1 Each direct report of the President, Nuclear Division and Department Heads of organizations supporting the Nuclear Division shall be responsible for:

1. Reviewing changes to the FPL QA Manual and determining the need for departmental instructions, revising existing instructions, and approving instructions;
2. Controlling distribution and coordinating the use of the instructions with affected organizations and functions;
3. Submitting Quality Assurance Indoctrination (QAI) lesson plans to the Vice President Nuclear Assurance for approval to conduct their own QAI.

2.3.2 The Vice President Nuclear Assurance has overall responsibility for:

1. Development, coordination, and periodic reviews of the status and adequacy of the FPL Quality Assurance Program;
2. Establishing, conducting, reviewing and authorizing the implementation of FPL's requirements for QAI;
3. Coordinating revisions to the Topical Quality Assurance Report.

3.1 GENERAL REQUIREMENTS

A Quality Assurance Program shall be established for design-related activities. . ~~This~~ The design control program shall ensure that the design is defined, controlled and verified; that applicable design inputs are specified and correctly translated into design output documents; that design interfaces are identified and controlled; that design adequacy is verified by persons other than those who designed the item; and that design changes, including field changes, are governed by control measures commensurate with those applied to the original design.

Design records shall be developed to provide evidence that the design process and design verification were performed in accordance with the requirements of FPL's Quality Assurance Program. ~~The design organization (Nuclear Engineering or designated contractor organization) shall be responsible for the content of these records.~~

Design records shall include design output documents and the important steps in the design effort. The intent of this documentation is to allow a technically qualified person to understand how the design was developed, and to allow that person to verify the design based on the design documentation and engineering data sources referenced therein.

Documents and databases designating safety related and quality related items and any revisions thereto shall be controlled in accordance with the FPL QA Program requirements.

3.2 IMPLEMENTATION

The controlling document for the identification of safety related items shall be the FSAR. Where the FSAR is not definitive for a specified plant, Nuclear Engineering shall develop and maintain documents/databases identifying those items which are safety related (e.g., plant equipment database, Instrument List, Valve List, Line List, drawings, etc). These documents/databases shall clearly identify the boundaries of safety related

systems and may take the form of identifying boundaries on engineering drawings. For quality related items, Nuclear Engineering shall specify explicitly those aspects of design, manufacture, procurement, installation, and testing that shall be subject to the FPL QA Program requirements, as appropriate, in the design output documents (e.g., Plant Change/Modification package).

The design organization's Quality Assurance Program for design control shall be approved by the FPL Quality Assurance Department prior to the release of approved design output by the design organization. The design organization is the organization responsible for approval of design output. ~~Quality Procedures and~~ Quality Instructions shall be developed to delineate design control requirements governing design-related activities performed by Nuclear Engineering and for delegating activities to contractor organizations.

Design data approved by the design organization shall be transmitted in design output documents such as specifications, drawings, and other documents defining technical requirements or in correspondence which may reference these documents. Transmittals shall identify the status of design information or documents provided, and where necessary, identify incomplete items which require further evaluation, review, or approval. A standard PC/M and numbering system shall be established and used at each plant to ensure that all PC/Ms are handled in a uniform manner and properly documented. Nuclear Engineering shall forward the approved PC/M to the applicable Plant Vice President. Internal plant coordination and review of design control documents shall be controlled by approved instructions.

3.2.1 Design Process

The design organization shall specify and document its design activities to the level of detail necessary to permit the design to be developed in a correct manner and to permit verification that design output documents satisfy design input requirements.

Design methods, materials, parts, equipment and processes, including those associated with commercial grade items that are essential to the function of the ~~structure, system or component~~ item shall be selected, reviewed and approved for suitability of application by the design organization.

Design inputs shall be identified, documented, reviewed and approved by the design organization. They shall be specified to the level of detail necessary to permit the design activity to be carried out in a correct manner, and to provide a consistent basis for making design-related decisions, performing design verification and evaluating design changes. Changes to approved design inputs, including the reason for the changes, shall be approved, documented and controlled by the design organization.

The design organization shall identify aspects of manufacture, construction, inspection and testing critical to achieving the function of the ~~structure, system or component~~ item. Quality standards and quality requirements shall be specified on design output documents. Changes from approved quality-~~related~~ requirements specified in design output, including the reason for the changes, shall be approved, documented and controlled by the design organization.

Design analyses shall be controlled and documented. Approved design output documents and approved changes thereto shall be relatable to the design input by documentation in sufficient detail to permit verification. The design organization shall establish procedures to review industry design experience. As appropriate, this experience shall be made available to cognizant design personnel.

3.2.2 Design Change Control

Changes to approved design output documents, including field changes, shall be justified, subjected to control measures commensurate with those applied to the original design, and shall be reviewed and approved by the same design organization that approved the original design unless other organizations are specifically designated.

Where a significant design change is necessary because of an incorrect design, Nuclear Engineering shall determine the cause of the incorrect design. As necessary, design and verification procedures shall be reviewed and modified to correct the cause of the incorrect design.

~~During the operations phase, d~~Design changes shall ~~also~~ be reviewed~~ by operating plant management and Quality Control. The intent of this review is~~ to ensure that implementation of the design change is coordinated with any necessary changes to operating procedures and practices, and required **Nuclear Assurance**~~ Quality Control Surveillance~~ **activities, such as inspections and surveillances.**

In accordance with plant technical specification requirements, nuclear safety-related design changes are reviewed by the Plant Nuclear Safety Committee (PNSC) or Facility Review Group (FRG) and the Company Nuclear Review Board (CNRB).

3.2.3 Design Interface Control

~~The design organization shall be responsible for identification, control, resolution and documentation of design interface requirements. Procedures~~ **Quality Instructions** shall establish interface controls between participating organizations and between the various technical disciplines within the design organization. These **Quality Instructions** ~~procedures~~ shall include the assignment of responsibility, and be in sufficient detail to cover the preparation, review, approval, release, distribution and revision of design output documents.

For interdisciplinary design, approval documentation of each involved discipline of the design organization shall appear on the design output document or on a separate document directly traceable to the design output. The design organization shall designate a discipline(s) responsible for resolution of the comments of participating organizations. The designated discipline(s) approval of a design output shall also document resolution of the comments of participating organizations.

3.2.4 Design Verification

Design control measures shall be established to independently verify the design inputs, design process, and that design inputs are correctly incorporated into design output. The design organization shall develop ~~procedures~~ **instructions** that govern design verification. These ~~procedures~~ **instructions** shall require that the design organization identify and document the verification method utilized and that the documentation clearly identify those individuals performing the design verification.

Design verification shall be performed by technically qualified individual(s) or group(s) other than those who performed the design. The original designers and verifiers may both be from the design organization. Design verification by the designer's immediate supervisor shall be limited to those instances where the supervisor is the only qualified individual available within the design organization. These instances are further restricted to designs where the supervisor did not specify a singular design approach, or did not restrict design methods or alternatives, or did not specify design inputs (unless the specified design inputs have already been independently verified). Justification for verification by the designer's immediate supervisor should be documented along with the extent of the supervisor's involvement in the design.

The design organization shall be responsible for determining the extent of design verification and methods to be employed. The methods may include one or more of the following: the performance of design reviews, the use of alternate calculations, or the performance of qualification tests. This shall apply to original design and to changes to approved design output.

Where reverification is not required for a design change, the bases shall be documented by the design organization. Cursory supervisory reviews and mathematical checks for calculation accuracy do not satisfy the independent design verification requirement. Design verification shall normally be completed prior to release of design output for procurement, manufacture or release by the design organization for use in design activities by a participating organization. Verification shall be conducted based on the status of

design at the time of release of design documents. Where this timing cannot be met, verification may be deferred provided that the unverified portion of the design output, and all design output documents, structures, systems and components based on the unverified portion of design are identified and controlled. In all cases verification shall be completed prior to relying on any affected items to perform their design functions.

3.2.5 Computer Programs/Software

Organizations utilizing computer programs/software as a method for design shall maintain instructions or procedures to effect the following:

1. That such programs/software are verified for their particular use using benchmark problems, alternate calculations, comparison with other code or experimental results, design review or similar methods,
2. That such programs/software have been qualified for their specific application sufficient to ensure valid results,
3. That such programs/software are provided with user instructions sufficient for a technically competent individual to follow,
4. That configuration controls are provided to assure that such programs/software changes or modifications are documented and controlled.

3.3 RESPONSIBILITIES

3.3.1 The Vice President Nuclear Engineering and Licensing is responsible for:

1) determining and documenting which items are nuclear safety related or quality related;
2) the review and coordination of design interfaces;
3) assuring that design documents are reviewed for possible design interfaces, that interface problems are resolved and that design criteria and design interface changes are reviewed by participating organizations prior to approval of design documents;

4) preparing design documents, including performing the safety evaluation or screening to determine if the proposed design change involves an Unreviewed Safety Question or a change to the Technical Specifications;
5) performing design verification, including evaluation of the effects of proposed design changes on overall design adequacy (design integration);
6) providing Nuclear Engineering approval of design documents;
7) updating design documents and drawings according to applicable procedures;
8) coordinating the NRC interface for 10 CFR 50.59 reports.

3.3.2 The Site Vice President is responsible for:

1) reviewing, tracking the status of, and maintaining a file on proposed PC/Ms;
2) reviewing proposed PC/Ms for inclusion of appropriate quality criteria, standards, and hold points, including human factors considerations for design changes involving the Control Room or Remote Shutdown Panel;
3) reviewing completed PC/Ms, after implementation for compliance with governing procedures, including a review of all endorsements, sign-offs, completion of required acceptance testing/inspection, and any necessary changes to operating practices and procedures;
4) maintaining design documents as Quality Assurance records.
5) assuring that all plant design changes and drawing changes are coordinated through Nuclear Engineering;
6) determining whether or not a proposed design change affects nuclear safety;
7) approving or disapproving implementation of the proposed design change after receipt of a recommendation from the Plant Nuclear Safety Committee (PNSC) or Facility Review Group (FRG);

9) ensuring the Environmental Affairs Department is included in the proposed PC/M review if the design change may have an adverse impact on the environment;

10) reviewing design changes to ensure that the implementation of the design change is coordinated with any necessary changes to operating practices and procedures;

3.3.3 The Plant Nuclear Safety Committee (PNSC) or Facility Review Group (FRG) is responsible for:

1) reviewing all proposed PC/Ms for plant systems or equipment related to nuclear safety;

2) rendering a determination in writing (PNSC/FRG meeting minutes) as to whether or not the proposed design change constitutes an Unreviewed Safety Question.

3.3.4 The Vice President Nuclear Assurance is responsible for:

1) reviewing PC/Ms for inclusion of appropriate quality criteria, standards, hold points, and Nuclear Assurance activities.

3.3.5 The Company Nuclear Review Board (CNRB) is responsible for:

1) reviewing Safety Evaluations for design changes to verify that the design changes did not constitute an Unreviewed Safety Question. CNRB review of evaluations involving screening rather than Safety Evaluation is not mandatory;

2) reviewing proposed design changes which involve an Unreviewed Safety Question or a change in Technical Specifications or License.

4.1 GENERAL REQUIREMENTS

Procurement of items and services shall be performed in accordance with procedures **and instructions** which assure that applicable regulatory requirements, design bases, code requirements, and other requirements necessary to assure quality shall be included or invoked by reference in the procurement document. These procedures **and instructions** shall delineate the sequence of actions to be accomplished in the preparation, review, approval, and control of procurement documents. Changes to procurement documents shall be subjected to the same degree of control as utilized in the preparation of the original documents.

4.2 IMPLEMENTATION

4.2.1 Procurement Document Provisions

~~Quality Procedures and~~ Quality Instructions shall identify the responsibilities and actions required of the organizations originating, reviewing, approving, and controlling procurement documents. These ~~procedures~~ **instructions** shall require the procurement documents to specify:

a. The scope of work to be performed.

b. Technical requirements (by specifying or referencing) which shall include the applicable components and materials identification requirements, drawings, specifications, procedures, instructions, codes, and regulations and provide for identification of applicable test, inspection and acceptance requirements, or special process instructions.

c. Quality Assurance Program requirements to be imposed on contractors which shall include the applicable portions of 10 CFR 50, Appendix B.

d. Right of access which provides, as appropriate, for access to contractor facilities and records for inspection or audit by FPL or its designated representative, and to access for events such as witness and hold points.

e. The documentation required to be prepared, maintained, and/or submitted to FPL or its representative for review, approval, or historical record. The time of submittal of this documentation and the retention and disposition of Quality Assurance Records which will not be delivered to FPL shall be prescribed.

Consideration shall be given to the need for special requirements in the preparation and review of procurement documents. Procedures and instructions shall be prepared and implemented for special on-site handling or storage requirements. The receiving department shall ~~be responsible for~~ ensure on-site implementation of the special handling, shipping, and storage requirements for items received and controlled by their organization.

Special handling, preservation, storage, cleaning, packaging, and shipping requirements shall be specified, as appropriate, in the design documents or purchase orders. The requirements established in the design documents or purchase orders shall be consistent with industry accepted standards, the importance of equipment or material to nuclear safety, and the material or equipment's sensitivity to damage. The preparation of these design documents or purchase orders may be delegated by FPL to other organizations.

4.2.2 Procurement Document Review

Procurement documents shall be reviewed for correctness, and inspectability and controllability of quality requirements in accordance with ~~Quality Procedures and~~ Quality Instructions to assure that the appropriate provisions of Section 4.2.1 are included. This review shall be documented and performed by designated personnel who have been trained and qualified in quality assurance practices and concepts. These reviewers shall have access to pertinent information and have an adequate understanding of the quality and technical requirements and intent of the procurement documents.

Spare or replacement parts for safety related structures, systems, and components are subject to technical or quality requirements equivalent to, or better than, those used for the original equipment.

Changes to procurement documents, whether initiated by FPL or their representative, are subjected to the same degree of control as that utilized in the preparation of the original document.

4.2.3 Selection of Procurement Sources

The ~~Nuclear Materials Management Department shall verify~~ **It shall be verifed** that the procurement document has been reviewed and approved, and that the supplier has been approved prior to issuing the purchase order for safety related materials or services. **Verbal purshase orders shall be made in accordance with TQAR Appendix C exceptions to ANSI N45.2.13.** Supplier approval is not necessary if the important characteristics of the item can be verified by inspection or test.

The overall procurement requirements, including those related to planning, bid evaluation, and review and concurrence of suppliers Quality Assurance programs, are described in ~~Quality Procedures and~~ Quality Instructions.

4.3 RESPONSIBILITIES

4.3.1 Direct reports of the President , Nuclear Division, and Department Heads of organizations supporting the Nuclear Division originating a procurement requisition shall be responsible for:

1) **clearly describing the technical and quality considerations for the procurement of items or services;**
2) **specifying any special requirements;**
3) **specifying documentation required from the supplier;**
4) **specifying special handling, preservation, storage, cleaning, packaging, and shipping requirements, as appropriate.**

4.3.2 The Vice President Nuclear Engineering and Licensing is responsible for :

1) performing technical evaluations to verify and/or establish technical and quality requirements for permanent and temporary power plant items and services;
2) reviewing procurement documents and changes thereto to assure that ordering requirements are technically correct and complete for items and services as specified in 4.2.1, including quality requirements;
3) evaluating the interchangeability of items that are not identical to what is currently installed.

4.3.3 The Vice President Nuclear Assurance is responsible for:

1) assisting in the resolution of quality requirements;
2) approving suppliers for safety related procurement and commercial grade item procurement (when applicable);
3) identifying surveillance witness and/or hold points at the supplier's facility for safety related procurement when supplier QA program is relied upon and programmatic deficiencies dictate;
4) performing supplier surveillance.

4.3.4 The Plant Vice President and Vice President Nuclear Engineering and Licensing, cognizant for the issuance of a procurement document is responsible for:

1) incorporating requisition technical and quality requirements into the procurement documents;
2) notifying Nuclear Assurance of discrepancies and/or changes in supplier activities which may conflict with the work scope of Nuclear Assurance approved suppliers;
3) reviewing each procurement document to ensure that it is correct, in accordance with Nuclear Assurance approved supplier work scope and restrictions (when applicable) and the originating procurement requisition;

4) referencing and attaching appropriate Quality Assurance Program requirements, as referenced on respective procurement requisitions, requests for bid proposals, purchase orders and contracts;
5) verifying that the procurement document has been reviewed and approved and issuing procurement documents to suppliers, as approved by FPL Nuclear Assurance when supplier QA programs are required;
6) maintaining traceability of procurement document records until transmitted to an approved storage facility.

5.1 GENERAL REQUIREMENTS

Activities affecting quality of nuclear safety-related structures, systems, and components shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. These documents shall include appropriate quantitative criteria such as dimensions, tolerances, and operating limits, and qualitative criteria such as comparative workmanship samples, to assure that the quality assurance activity has been satisfactorily accomplished.

5.2 IMPLEMENTATION

5.2.1 Quality Assurance Program Documents

The FPL Quality Assurance Manual described in TQR 2.0 contains ~~corporate Quality Procedures~~ **the Topical Quality Assurance Report** which compl~~y~~ies with the criteria of 10 CFR 50, Appendix B. ~~Quality Procedures and department level~~ Quality Instructions provide direction for activities affecting quality. The Quality Assurance Department reviews and comments on Quality Instructions written by other departments. Comments concerning compliance with corporate Quality Assurance commitments and regulatory requirements are resolved prior to issuance. The Quality Assurance Department receives controlled copies of Quality Instructions issued by other departments.

5.2.2 Procedures and Instructions

Instructions and procedures for activities affecting quality shall be prepared, reviewed, and approved in accordance with written ~~Quality Procedures or~~ Quality Instructions.

For plant operations, on-site plant procedures shall be prepared, reviewed, and approved in accordance with written instructions which includes a review for concurrence by Quality Assurance or Quality Control personnel **and provisions for temporary changes and temporary procedures.** These plant procedures include operating procedures, off-normal and emergency procedures, test procedures, and calibration

procedures. Also included are maintenance and repair procedures for subcontracted maintenance and repair activities which are outside the normal scope of plant craft capability. **Temporary procedures may be issued during testing, refueling, maintenance, modifications, unusual situations not within the scope of normal procedures, and for short periods when the plant, system or component is performing in a manner not covered by existing detailed procedures or has been modified in such a manner that portions of existing procedures do not apply.**

~~For backfit activities, c~~Contractors shall be required to have Quality Assurance Programs which contain written instructions for preparation, review, and approval of procedures, instructions, and drawings affecting quality. In addition, Contractor's site procedures and Quality Control inspection procedures shall be approved by ~~an FPL Site Construction Services Manager~~ **the Plant General Manager**, or designee, following reviews by Quality Assurance or Quality Control personnel to assure compliance with Corporate commitment and regulatory requirements.

During the design, modification, and procurement phases, the Architect/Engineer or other contractors may be delegated responsibility for maintaining, issuing and verifying the implementation of appropriate program documents. In this case, Quality Assurance **or Quality Control** ~~Department~~ audit ~~and/or Quality Control~~ surveillance activities shall assure that such measures are established and implemented. Contractor programs shall clearly delineate the actions to be accomplished in the preparation, review and control of instructions, procedures and drawings, and the methods for complying with the appropriate criteria of 10 CFR 50, Appendix B. ~~A plant change or modification of a magnitude requiring the assignment of a Site Construction Services Manager shall be subject to the Quality Assurance Program as discussed above.~~

5.2.3 Drawings

The design organization is responsible for review and approval of drawings. For delegated design activities, the Nuclear Engineering **and Licensing** Department may approve changes to drawings. The technical control of drawings, i.e., review and approval of the drawing and all changes thereto shall be governed by procedures. A means shall be developed and updated as required to identify approved drawings and revisions thereto. A Master Drawing List is the normal means used for this.

5.2.4 Acceptance Criteria

~~Quality Procedures and~~ Quality Instructions shall require that ~~quality-related~~ instructions, procedures, and drawings **affecting quality** include adequate quantitative and qualitative acceptance criteria, as appropriate, for determining satisfactory work performance and quality compliance. These acceptance criteria requirements apply to important activities such as design, operations, test control, inspection, and plant modifications.

5.3 Responsibilities

5.3.1 Each direct report to the President Nuclear Division and Department Heads of organizations supporting the Nuclear Division is responsible for:

a. Establishment of a documented system for the preparation, review, approval and revision of procedures. This system shall comply with regulatory requirements, the applicable Plant Technical Specifications and Topical Quality Requirements.

5.3.2 The Vice President Nuclear Assurance is responsible for:

a. Review and concurrence of procedures affecting quality in accordance with paragraph 5.2.

6.1 GENERAL REQUIREMENTS

The distribution of documents such as instructions, procedures, drawings, and software which provide guidance, specifications, or requirements affecting the quality of nuclear safety-related structures, systems, and components shall be controlled. These documents shall be prepared, reviewed for adequacy, and approved for release by authorized personnel in the affected organization. These documents shall be distributed to locations where the activity is performed.

Changes to controlled documents shall be so identified and shall be reviewed and approved by the same organization that performed the original review and approval unless otherwise specified in the implementing procedures. In addition, procedures shall preclude the possibility of use of outdated documents.

6.2 IMPLEMENTATION

6.2.1 ~~Responsibility~~

Quality ~~Procedures~~ **Instructions** shall delineate the control measures ~~for controlled documents including direction for the review for adequacy, approval by authorized personnel, distribution of controlled documents and verification that changes are received.~~ **that provide for:**

1. **Identification of individuals or organizations responsible for preparing, reviewing, approving, and issuing documents and revisions thereto.**
2. **Identifying the proper documents to be used in performing the activity.**
3. **Coordination and control of interface documents.**
4. **Ascertaining that proper documents are being used.**
5. **Establishing current and updated distribution lists.**

These control measures shall apply to documents affecting the quality of nuclear safety-related structures, systems, and components such as:

a. design specifications;
b. design, manufacturing, construction, and installation drawings;
c. quality program manuals, procedures, and instructions;
d. inspection, manufacturing, and test procedures and instructions;
e. plant operating and maintenance procedures;
f. plant Safety Analysis Reports and related design criteria documents.

The requirements for control of procurement documents are contained in TQR 4.0.

~~During all phases of the plant life, it shall be the responsibility of each organization issuing and using controlled documents to use document control procedures. Procedures shall document the responsibility for review, approval, maintenance and distribution of documents including assuring revisions are initiated to interfacing documents within their organization.~~

~~During the design and construction phase and for operating plant changes under their cognizance, the Architect/Engineer, Nuclear Steam Supply System vendor, and other contractors shall be responsible for assuring that all revisions required as a result of FPL comments, nonconformances, or engineering work are incorporated into revised documents.~~ *MOVED TO SECTION 6.3.*

~~6.2.2 Distribution of Controlled Documents~~

~~Quality Procedures shall specify that controlled documents and revisions be distributed to locations where the activity is performed.~~

~~6.2.3~~ Drawing Control

6.2.2

FPL assumes control of the drawings and Master Drawing List after initial operation of the facility or delegates this activity to a qualified contractor. Nuclear Engineering shall require that participating design organizations update the drawings and Master Drawing List to reflect the as-built conditions of the facility prior to FPL's acceptance of these documents.

Maintenance, distribution and control of the drawings and the Master Drawing List by FPL during the operation phase shall be assigned to a drawing custodian. Revision to drawings shall be approved prior to release by the drawing custodian. Approval shall be by Nuclear Engineering, or a designated design organization.

~~6.2.3~~

6.2.2

During the operation phase a system shall be established to provide ready access and availability of drawings to engineering and operations personnel; to identify drawings affected by approved plant design changes; and to update drawings and the Master Drawing List to reflect implemented design changes.

~~6.2.4~~ Design Documents Other Than Drawings

6.2.3

Ascertaining that proper design documents are accessible and are being used ~~may~~ shall be accomplished by periodic issuance of master document lists showing the latest applicable revision, or by a document receipting system.

~~6.2.5 Instruction & Procedure Control~~

~~Participating organizations shall be responsible for development, maintenance and control of those documents identified in paragraph 6.2.1 issued by them as controlled documents. Each organization shall be responsible for the adequacy of their procedures.~~

MOVED TO SECTION 6.3.

~~6.2.6 Obsolete Documents~~

- ~~Controls established by Quality Procedures and Quality Instructions shall assure that outdated copies of controlled documents are not inadvertently used.~~ *Moved to Section 6.2.1.*

6.3 **RESPONSIBILITIES:**

6.3.1 Direct reports to the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsible for:

a. the development, maintenance and control of those documents identified in Section 6.2 issued by them as controlled documents.

b. the adequacy of their instructions, including the instructions for control of the documents and changes thereto to preclude the possibility of use of outdated or inappropriate documents.

6.3.2 Each recipient of a controlled document is responsible for ensuring that the appropriate latest revision is being used.

6.3.3 ~~The Director - Nuclear Engineering~~ . The Vice President, Nuclear Engineering & Licensing, is responsible for assuring that the Architect-Engineer, Nuclear Steam Supply System vendor, and other contractors, as a minimum,

a. provide for the development, control and distribution of drawings, specifications and procedures; and the development and periodic distribution of a master drawing list for each project.

b. provide for all revisions required as a result of FPL comments, nonconformances, or engineering work are incorporated into revised documents.

6.3.4 ~~The Director Nuclear Construction Services~~ The Site Vice President is responsible for establishing a document distribution and control system to assure that the latest appropriate revisions of documents are used for construction and installation at each project site.

7.1 GENERAL REQUIREMENTS

Measures shall be established to assure that ~~safety-related~~ items or services purchased by or for FPL conform to the requirements of the procurement document. These measures shall include documented evidence of source selection, verification activities and examination of items or services to assure compliance with the procurement document. The effectiveness of the control of quality by contractors and subcontractors shall be assessed at intervals consistent with the importance, complexity, and quantity of the product or service.

7.2 IMPLEMENTATION

7.2.1 ~~Initial~~ Evaluation of Suppliers

Procurement source evaluation and selection measures shall be specified in ~~Quality Procedures and~~ Quality Instructions which shall identify the responsibility of qualified individuals for determining supplier capability. The evaluation may require integrated action involving Quality Assurance and one or more organizations ~~(e.g., Nuclear Engineering, Nuclear Construction Services, or Nuclear Materials Management)~~ based upon the item or service being procured. This evaluation is to ensure that the FPL contractors comply with the applicable portions of 10 CFR 50, Appendix B. Documented evidence of the evaluation, and the acceptance of the contractor's quality program and procedures shall be retained in the Quality Assurance Department files. The determination of supplier approval shall be based on such factors as prior performance, historical quality performance data, source surveys or audits, and evaluation of the supplier's Quality Assurance Program. The basis shall be consistent with the importance, complexity, and quality required for the items or services involved.

7.2.2 Verification Activities

Quality ~~Procedures~~ **Instructions** shall define the requirements for verification activities such as surveillance, inspection, or audit to assure conformance of procured items and services to identified requirements. These verification activities shall be performed in accordance with written procedures, procurement documents and their references, which specify the documentation required and the characteristic or process to be witnessed, inspected, verified, or accepted. FPL verification activities shall be accomplished by qualified personnel to verify that the supplier complies with quality requirements, and depending on the importance/complexity, shall be performed on those items where verification of procurement requirements cannot be determined upon receipt.

7.2.3 Receiving Inspection

~~Quality Procedures and~~ Quality Instructions shall delineate requirements and responsibilities for the performance of receiving inspection. This inspection shall verify that suppliers have fulfilled their contractual obligation and that the procured items meet the appropriate quality requirements. **Receipt inspections shall be planned. The receipt inspection plans shall identify the characteristics to be verified and the documentation to be reviewed at receipt inspection.** Receiving inspection shall include, as appropriate:

a. Measures for verifying that the shipment is complete, properly identified, undamaged, and corresponds with the purchase order documentation;
b. Measures for inspection of the item and review of supporting documentation (e.g., mill test reports, NDE reports) as required by the purchase documents;
c. Measures for disposition of items to inspection instructions;
d. Measures for identifying and controlling items including identification of inspection status prior to release from the receiving inspection area;
e. Measures to ascertain that inspection records or Certificates of Conformance are available prior to release;.
f. Measures verifying completion of Commercial Grade Item dedication requirements.

7.2.4 Supplier Furnished Records

Records required to be furnished by the supplier shall be specified in the procurement document. Certifications or documentation verifying conformance provided by the supplier shall identify the specific procurement requirements met (either by reference to the purchase order or by referenced requirements therein). Such certification shall identify any procurement requirements which have not been met and provide a description of those nonconformances dispositioned "accept as is" or "repair".

7.3 RESPONSIBILITIES

7.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division are responsible for:

1) determining the methods of acceptance for services requested by them;

2) the performance of the acceptance methods selected, when assigned to them.

7.3.2 The Vice President Nuclear Engineering and Licensing is responsible for:

1) requesting that Nuclear Assurance perform a supplier evaluation;

2) determining the methods of acceptance for items and services.

7.3.3 The Vice President Nuclear Assurance is responsible for:

1) assuring that evaluations of suppliers are performed and the results documented in accordance with approved Quality Instructions;

2) determining the methods of source verification;

3) performing receipt inspections in accordance with approved Quality Instructions;

7.3.4 The Site Vice President is responsible for:

1) requesting that Nuclear Assurance perform a supplier evaluation;

2) examining items for shipping damage upon receipt;

3) performing receipt inspection in accordance with approved Quality Instructions;

8.1 GENERAL REQUIREMENTS

Materials, parts, and components, including partially fabricated assemblies, shall be identified and controlled as required throughout fabrication, receipt, handling, storage, installation, and use of the item. The identification of the item shall be maintained by heat number, part number, serial number, FPL M&S number, or other suitable means, and shall be physically marked on the item or on records traceable to the item. The object of these controls shall be to prevent the use of **non-inspected,** incorrect or defective materials, parts, and components. (The FPL Material and Supplies -- M&S number is a number given to each unique type of item in inventory to distinguish it from each other type of item in inventory).

8.2 IMPLEMENTATION

~~Quality Procedures and~~ Quality Instructions shall establish the responsibilities and requirements for the identification, and control of materials, parts and components. The procedures and instructions used by all organizations shall assure that identification and control is maintained throughout fabrication, receipt, handling, storage, installation and use of items. **This shall include welding material traceability to the point of consumption. Provisions include:**

a. **Physical identification shall be used to the maximum extent possible. When physical identification is impractical or insufficient, items shall be physically segregated and identified by batch, lots, etc.**
b. **When items are subdivided, their identification shall be maintained by transferring the identification to each of the subdivided parts or their container.**
c. **Post-installation identification of items that cannot feasibly be physically marked shall be traceable by record verification.**
d. **Items requiring identification, but whose identification was lost during storage, shall be segregated and documented as nonconforming and dispositioned in accordance with established procedures.** ~~Provisions include:~~

~~ae~~. Requirements for traceability to appropriate documentation, such as: procurement documents, manufacturing documents, drawings, specifications, inspection and test records, nonconformance or deficiency reports or other Quality Assurance Records, in sufficient detail to preclude any possibility of doubt or confusion concerning the traceability of an item to the documentation, or the documentation of the item.

~~bf~~. Controls to assure that the correct identification of an item is verified and documented prior to fabrication, receipt, handling, storage, installation and use.

~~cg~~. Requirements which assure that the method or location of markings are not detrimental to, and do not affect the function or quality of an item; are clear, unambiguous and indelible; are in plain unobstructed view; do not provide conflicts with other requirements; are not obliterated by any surface treatment unless other means of identification are substituted; withstand normal shipping, handling and environmental effects and are able to be retained.

~~dh~~. Establishment of identification requirements by specifications, drawings, procurement documents, instructions or procedures during initial planning.

i. Requirements to ensure that dedicated Commercial Grade Items are identifiable to the specific component or equipment for which they are dedicated.

FPL may delegate any portion of the implementation of the identification and control program to the Architect/Engineer, Constructor, Nuclear Steam Supply System vendor or other contractors. If delegated, contracts shall require that the contractor establish an identification and control program which meets the requirements of this TQR.

8.3 RESPONSIBILITIES

8.3.1 The Site Vice President has overall responsibility for:

a) Assuring that an identification and control system is developed and implemented for items to be utilized within the plant;

b) Receiving, controlling and ensuring the security of items;

c) Segregating items until the required receipt inspection is performed;

d) Assuring the placement of any necessary markings on the items as required by applicable procedures or as requested in accordance with applicable purchase orders, specifications or commercial grade dedication packages; and

e) Incorporating applicable pre-installation and/or post-installation inspections, tests, and QC hold points (including Commercial Grade Item Dedication requirements) into applicable work control documents.

8.3.2 The Vice President Engineering and Licensing has overall responsibility for:

a) Determining and specifying end use applications for items.

9.1 GENERAL REQUIREMENTS

Measures shall be established to assure that special processes such as welding, heat treating, and nondestructive examination items , are controlled and accomplished by qualified personnel using qualified procedures and equipment in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

9.2 IMPLEMENTATION

~~Nuclear Engineering or the delegated contractor organization, as appropriate, shall include s~~Special process requirements **shall be included** in ~~their~~ design outputs and changes thereto. Special processes~~s used during plant operations shall be the responsibility of the plant manager, who shall ensure that~~ procedures~~ are~~ **shall** be developed, reviewed, approved and controlled, and ~~that~~ **special process** personnel and equipment ~~are~~ **shall** be qualified.

9.2.1 Identification of Special Processes

Special processes are those processes which must be qualified and controlled where quality is highly dependent on close control of process variables or operator skills, and objective verification (inspection, examination or testing) of end quality is difficult.

~~As a further clarification, s~~Special processes identified ~~as such~~ by applicable codes and standards shall be controlled, qualified, and implemented in accordance with those codes and standards. Examples of special processes include (but are not limited to) welding, heat treating, and nondestructive examination. Others, (~~i.e.,~~ e.g., flushing, protective coating, plating applications and nuclear cleaning) should be reviewed to determine if they are special processes.

9.2.2 Procedure Qualification and Control

Process control procedures written by FPL organizations or their contractors shall be used and qualified as required by applicable specifications, codes, or standards.

Where FPL assigns work to outside contractors, the contractors shall make their procedures and personnel qualifications available for review to FPL prior to the start of work. The Architect/Engineer, Nuclear Steam Supply System vendor, or other organization designated by FPL shall be responsible for the evaluation and acceptance of on-site contractor special process procedures, and shall interface with the appropriate FPL department, as necessary, to resolve review comments with the contractor. The contractor shall also be responsible for the control and approval of sub-contractor procedures.

Special process procedures shall be:

a. sufficiently detailed for a qualified person to perform the technique and achieve the desired results;

b. reviewed and approved prior to use to ensure the procedure complies with applicable codes, standards, and specifications, and that specified materials, equipment, and techniques are suitable for the intended application;

c. qualified prior to or during initial use.

Special process procedures and revisions thereto which specify acceptance criteria (other than those identified in the ASME code) shall have the concurrence of the acceptance criteria by Nuclear Engineering prior to issuance and use.

9.2.3 Personnel Qualification and Certification

Procedures or instructions shall specify personnel qualification and certification requirements. Personnel responsible for the performance and verification of special processes shall be trained, tested, and certified as required by applicable specifications, codes and standards. Requirements for the period of certification, retesting, and

recertification of personnel shall also be specified. Contractors shall qualify personnel and maintain records of qualified personnel in accordance with applicable codes, standards, specifications, and contract or procurement document requirements.

9.2.4 Control of Equipment

Equipment that must be of a specific type, range, or accuracy to provide conformance to specified requirements shall be controlled to ensure that it is qualified, maintained, and calibrated in accordance with those requirements.

~~9.2.4~~9.2.5 Special Process Records

~~The Services Manager is responsible for retention of records. The Plant General Manager is responsible for the review of records.~~ Records shall provide objective evidence that special processes were performed in compliance with approved procedures by qualified personnel and equipment. Records shall also be maintained for verification activities when required by procedure, code or specification. Results of nondestructive examinations shall be recorded in accordance with applicable specifications, codes and standards. **For contracted work, ~~T~~these** records shall be retained by the vendor or supplied to FPL as required by contract or purchase order ~~s~~. If records are to be retained by the vendor, the contract or purchase order shall specify the retention period and instructions for final disposition of such records.

~~For backfit activities, the Quality Control organization is responsible for the review of nondestructive examination documents for acceptance. The Site Construction Services Manager is responsible for assuring that documents for special processes utilized for modifications are properly collected, reviewed, accepted and transmitted for retention of records.~~

Nondestructive examination documents shall be reviewed for acceptance by an individual who is certified in the applicable method.

9.3 RESPONSIBILITIES

9.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division involved in special process activities are responsible for:

1) ensuring that special process procedures used by their department are reviewed, approved, controlled, and are qualified prior to or during initial use.
2) ensuring that special process personnel in their department are qualified and certified.
3) ensuring that records associated with special processes under their control are reviewed and maintained.
4) performing special process inspections, examinations, and activities, when assigned to their department, as required by applicable codes, standards, criteria, or other special requirements identified.
5) ensuring that work documents under their control contain adequate requirements for the identification and control of special processes.
6) ensuring special process procedures and revisions which specify acceptance criteria (other than identified in the ASME code) have Nuclear Engineering concurrence of acceptance criteria prior to use.
7) ensuring nondestructive examination documents are reviewed by an individual certified in the applicable method.

9.3.2 The Vice President Nuclear Engineering and Licensing is responsible for:

1) determining (as requested) if a specific activity constitutes a special process;

2) identifying applicable codes, standards, specifications, criteria, and other requirements related to special processes;
3) preparation, qualification, issuance, and control of Visual Test (VT) and Nondestructive Examination (NDE) procedures, instructions, and technique sheets for all ASME Section XI examination activities;
4) direction, including technical direction to all personnel, of the welding program to meet the requirements of applicable codes and standards. This shall include the development, maintenance, and control of a welding program;
5) review and approval of contractor welding programs.

9.3.3 The Site Vice President is responsible for:

1) welding activities performed at the site including issuance and control of weld documentation packages, welding material and equipment.
2) maintaining a current report of qualified welders and weld operators and assigning welder symbols.
3) ensuring that the Authorized Nuclear Inspector/Authorized Nuclear Inservice Inspector (ANI/ANII) is permitted access to all parts of the plant site or supplier facilities while work on an item or system is being performed that concerns the welding fabrication, modification, repair, or replacement of the item or system; including inspections, examinations, and tests.

10.1 GENERAL REQUIREMENTS

A program for inspection shall be established and executed by or for FPL to verify conformance with the documented instructions, procedures and drawings for accomplishing an activity. ~~Such~~ Inspections shall be performed by individuals or groups other than those who performed the activity being inspected. Examinations, measurements and tests of materials or products processed shall be performed for each work operation, where necessary, to assure conformance to established requirements. If direct inspection of processed materials or products is impossible or disadvantageous, indirect control by surveillance or monitoring shall be provided. Mandatory inspection, witness, or hold points beyond which work shall not proceed without the consent of FPL or a designated representative shall be indicated in the appropriate documents.

10.2 IMPLEMENTATION

10.2.1 Inspection Program ~~Responsibilities~~

For plant operations, maintenance, or modification activities, a program for on-site inspection of activities affecting quality shall be established. ~~by the Nuclear Assurance Department. Quality Control shall perform~~ **This program shall ensure the performance of** inspections, surveillance and monitoring of plant activities including operations, maintenance or modifications as required by established plans, schedules and/or procedurally required inspection, witness or hold points. In all cases, the personnel performing the inspection shall be independent of the group performing the work.

~~For these plant activities, the Nuclear Assurance Department may delegate the establishment and execution of this program to a contractor or other designated FPL representative, but shall retain ultimate responsibility for the program.~~

~~10.2.1 (Continued)~~

For preoperational start-up and testing of plant modifications, Nuclear Division personnel may report functionally to the ~~Site Construction Services Manager~~ **manager responsible for the start-up and testing** and establish plans, schedules and procedurally required inspection, witness or hold points. In all cases, the personnel performing the inspection shall be independent of the group performing the work.

Protection & Control Systems **personnel** may perform inspections of equipment within their purview during operations. Inspections shall be performed in accordance with approved, written procedures by qualified personnel.

~~Quality Procedures and~~ Quality Instructions shall be written which delineate the requirements and responsibilities for the performance of inspections.

10.2.2 Inspection Plans and Schedules

Documented inspection plans may be either a separate document or an integral part of work instruction documents. The plans shall be based on design specifications, procurement documents, drawings, other specifications or previous experience, as appropriate. **The frequency and timing of inspections** ~~Inspections~~ shall be scheduled ~~to~~ **according to the activities being conducted and to** assure that sufficient time and resources are available, and ~~to assure~~ inspections are not inadvertently omitted or bypassed.

Inspection planning should include a review for the acceptability of sampling. If sampling is permitted, the sampling procedure shall be based on nationally recognized standard practices.

10.2.3 Inspection Personnel

~~a.~~ Inspections shall be performed by individuals other than those who performed or directly supervised the activity being inspected. Inspection personnel shall ~~be~~ **have current qualifications and certifications** ~~qualified and certified~~ in accordance

with appropriate codes, standards and/or company training programs. ~~Qualifications and certifications shall be kept current.~~ **These qualifications and certifications shall be documented.**

~~b.~~ Prior to performing inspections , inspection personnel shall have access to the drawings, procedures, specifications or other documented criteria necessary for performance of the inspection.

10.2.4 Inspection Procedures

~~a.~~Required inspection, surveillance or monitoring activities shall be performed and documented according to written, approved instructions or procedures.

a. Inspection procedures, instructions or checklists shall contain the following:
   - o Identification of characteristics to be inspected;
   - o Identification of the individual or groups responsible for performing the inspection;
   - o Acceptance criteria or reference to the acceptance criteria;
   - o A description of the method of inspection;
   - o Verification of completion and certification of inspection.

b. Inspection records shall identify:
   - o Inspector or data recorder;
   - o Method or type of observations;
   - o Test or inspection results;
   - o Statement of acceptability;
   - o Date of observation;
   - o Deficiencies and nonconformances, and the action taken in connection with these deficient conditions, either by inclusion or by reference to other documents.

c. Inspection procedures shall be reviewed by ~~QC~~ **Nuclear Assurance** personnel to determine the need for an independent inspection and the degree and method if such an inspection is required, and to assure the identification of inspection personnel and the method of documentation of inspection results.

d. Written approved instructions shall specify surveillance or monitoring of processing methods, or testing and operation of equipment when inspection is impossible, inaccessible or not applicable.

e. Modification, repair, replacement or rework items shall be inspected in accordance with original inspection requirements or acceptable alternatives.

10.2.5 Inspection, Witness, and Hold Point Identification

Appropriate inspection, witness or hold points shall appear in process documents (e.g., construction, testing, operating and maintenance procedures). These process procedures are subject to the review of the Quality Control organization for adequacy of inspection, witness, and hold points.

Mandatory hold points shall be identified in process documents when witnessing and inspecting must be performed and signed-off by the responsible personnel before work can proceed.

FPL procurement documents shall indicate FPL witness or hold points applicable prior to during, or after the manufacture of an item or the performance of a service. A distinction shall be made between witness points and mandatory hold points.

10.3 RESPONSIBILITIES

10.3.1 Direct Reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division that perform inspection activities are responsible for:

1. implementation of a program for inspection activities;

2. ensuring that this program verifies compliance with applicable portions of Technical Specifications, SAR requirements, procurement documents, other operating license requirements and the QA Manual;
3. ensuring coordination with QC for incorporation of QC inspection and hold points into procedures and work documents;
4. ensuring that inspections are not inadvertently omitted or bypassed;
5. ensuring that personnel assigned to perform inspections are appropriately qualified and certified;
6. ensuring inspection procedures are reviewed by Nuclear Assurance personnel to determine the need for an independent inspection and the degree and method if such an inspection is required, and to ensure the identification of inspection personnel and the method of documentation of inspection results.

10.3.2 The Vice President Nuclear Assurance is responsible for:

1. implementation of a program for inspection and surveillance activities;
2. ensuring that required QC inspections are incorporated into inspection/test/maintenance procedures, design change documents, and work process control documents;
3. ensuring that inspections and surveillances are correctly performed and documented;
4. reviewing inspection procedures to determine the need for an independent inspection and the degree and method if such an inspection is required, and to ensure the identification of inspection personnel and the method of documentation of inspection results.

11.1 GENERAL REQUIREMENTS

A test program shall be established to assure that testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified, accomplished, and documented in accordance with written procedures. The test program shall include, as appropriate, proof tests~~,~~ prior to installation, preoperational tests, start-up tests, ~~and~~ operational tests, and retest following repairs, replacements or modifications.

11.2 IMPLEMENTATION

11.2.1 Test Program

Testing requirements shall be identified in the engineering/design documents, SAR documents, procedures, or procurement documents, as appropriate. Retest following repairs, replacements, or modifications shall be performed in accordance with the original design and test requirements or acceptable alternatives. Retest shall be performed when the original test results are invalidated. **A schedule shall be provided and maintained to provide assurance that all tests are performed and properly evaluated on a timely basis.**

~~Quality Procedures and~~ Quality Instructions shall be written which delineate the methods and responsibilities for **scheduling,** controlling, accomplishing, and documenting testing.

FPL may delegate the implementation of all or any part of the test program to other organizations but shall retain ultimate responsibility for the program. The contractor shall be required to control, perform and evaluate tests in accordance with written procedures and shall be required to prepare a written test program detailing the testing required.

11.2.2 Test Procedure Preparation and Test Performance

Testing shall be accomplished in accordance with written approved test procedures which incorporate or reference the requirements and acceptance limits in the applicable design and procurement documents. **Test procedures shall be revised as necessary to assure that tests are performed in accordance with the latest approved information.** The test procedure or test program documents shall include or reference the following as a minimum:

a. Instructions for the testing method used **(including precautions, limitations, and restoration of normal conditions upon test completion)**;

b. Required test equipment and instrumentation;

c. Test requirements and acceptance criteria;

d. Hold, witness, inspection and data collection points;

e. Test prerequisites such as: calibrated instrumentation; trained, qualified, and licensed or certified personnel; preparation, condition and completeness of item to be tested; suitable and controlled environmental conditions; **defined system interfaces; initial plant conditions.**

f. Methods for documenting or recording test data and results;

g. Test records shall identify:

1) ~~Inspector or data recorder~~ **Identification of personnel performing the testing activities;**

2) Method or type of observations;

3) Test or inspection results **(to include pertinent test data)**;

4) **Specific measuring and test equipment utilized for testing;**

5) **As found and as left condition (as applicable);**

~~4)~~6) Statement of acceptability;

~~5)~~7) Date of observation; and

~~6)~~8) Deficiencies and nonconformances, and the action taken in connection with these deficient conditions, either by inclusion or by reference to other documents.

11.2.3 Evaluation of Test Results

The documented test results shall be evaluated against the predetermined acceptance criteria by a group or individual having appropriate qualifications. The acceptance status of the test shall be documented. Deficiencies noted during the evaluation shall be documented and dispositioned in accordance with TQR 15.0 and approved ~~Quality Procedures or~~ Quality Instructions.

The evaluation of the test results may be delegated to other organizations; however, FPL shall retain the responsibility for the evaluation. The evaluating organization shall be required to use qualified personnel, evaluate the data against predetermined criteria, and document the results of the evaluation and acceptance status of the test.

11.3 RESPONSIBILITIES

11.3.1 The Site Vice President is responsible for:

1. **Assuring that plant tests are identified, scheduled, controlled, performed and documented;**

2. **Assuring that plant test procedures are reviewed and approved.**

11.3.2 The Vice President Nuclear Assurance is responsible for:

1. Assuring that test procedures specify necessary quality requirements such as witness and hold points, and adequate data sheets.

11.3.3 The Director Protection & Control Systems is responsible for:

1. Assuring the identification, scheduling, control, performance, and documentation of tests performed by Protection & Control Systems;

2. Submitting test procedures to the Plant General Manager for review;

3. Coordinating test schedules with the Plant General Manager.

11.3.4 The Vice President Nuclear Engineering and Licensing is responsible for:

1. Specifying the need for pre-installation and post-installation testing of items within his purview;

2. Writing test procedures as requested;

3. Evaluating test results as requested.

12.1 GENERAL REQUIREMENTS

Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits. It is the responsibility of each department maintaining calibrated instruments to provide for the calibration and control of such instruments.

12.2 IMPLEMENTATION

12.2.1 Calibration and Control of Measuring and Test Equipment

Procedures shall be written to delineate the methods and responsibilities for the control, maintenance, and calibration of measuring and test equipment (M&TE) **and installed plant instrumentation and control equipment.** M&TE control procedures or calibration program documents shall contain the following:

a A **complete** listing of M&TE **and installed plant instrumentation and control equipment** to be controlled;

b. **The** frequency of calibration of listed M&TE **and installed plant instrumentation and control equipment.** The frequency may be based on calendar time or relate to usag~~e, and be based on such factors as experience, inherent stability, instrument purpose, or accuracy required;~~ **and shall be based on such factors as licensing commitments, regulatory requirements, experience, inherent stability, manufacturer's recommendations, purpose of use, frequency of service, or company standards. A schedule for calibration shall be established and shall indicate as a minimum the instrument, calibration frequency, and procedure to be used or the identification of the approved supplier qualified to provide calibration services.**

c. A method for controlling issue and recall of portable M&TE;

d. A method to **uniquely** identify controlled M&TE (e.g., labeling), required calibration frequency and calibration test data applicable to the M&TE **and installed plant instrumentation and control equipment;**

e. A ~~M~~method to document and maintain the status of M&TE **and installed plant instrumentation and control equipment.**

M&TE shall be calibrated in environments which will not adversely affect their accuracy. When inaccuracy due to environmental effects cannot be avoided, compensating corrections shall be determined and applied in accordance with the manufacturer technical instructions.

M&TE and reference standards shall be suitably marked so that the calibration status can be determined.

FPL may delegate the control and/or calibration of M&TE to other organizations. FPL, however, retains ultimate responsibility for control and calibration, and the contractor shall meet the requirements of this TQR or an acceptable alternative program as required by the procurement document for the contracted services.

12.2.2 Calibration Procedure

M&TE, reference standards, and listed installed plant instrumentation and control equipment shall be calibrated in accordance with written approved procedures. ~~The~~ Calibration procedures shall contain, **or reference** as a minimum:

a. Identity of M&TE **or equipment** to which the procedure applies;

b. Calibration equipment and reference standards to be used;

c. Acceptance criteria;

d. Sequence of operations;~~ and special instructions~~

e. Special instructions (such as, prerequisites, power level requirements, precautions, limitations) as applicable.

~~e.~~**f.** Documentation and data collection requirements;

~~f.~~g. A requirement that equipment to be calibrated ~~M&TE,~~ be checked and results recorded before adjustments or repairs are made;

~~g.~~h. Calibration frequency required.

12.2.3 Calibration Standards

M&TE shall be calibrated using reference standards whose calibration has a known, documented, valid relationship to nationally recognized standards or accepted values of natural physical constants. If no national standard exists, the basis for calibration shall be documented. Standards and reference standards shall have an accuracy level, range and stability which are adequate to verify that the equipment being calibrated is within tolerance and adequate for the programmatic requirements of the equipment being calibrated.

M&TE shall be calibrated against working standards having an accuracy of at least four times the required accuracy of the equipment being calibrated. When this is not practical, working standards shall have an accuracy that assures that the M&TE being calibrated will be within required accuracy tolerances and that the basis of acceptance is documented and authorized by designated responsible management.

The meaning of this paragraph may be diagrammed as follows:

— NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
"greater than" tolerance

— PRIMARY STANDARD (if applicable)
"greater than" tolerance

— SECONDARY STANDARD (if applicable)
"greater than" tolerance

— WORKING STANDARD
"1:4 ratio" tolerance (except as noted above)

— M&TE (installed instruments and measuring and test equipment used for inspection, maintenance, etc.)

The accuracies of M&TE and reference standards shall be chosen such that the equipment being calibrated can be calibrated and maintained within the required tolerances.

12.2.4 "Out of Tolerance" Control and Corrective Action

The reporting, follow-up, and correction of conditions adverse to quality found during calibration or calibration checks shall be documented. M&TE and reference standards, when found out of tolerance, shall be so identified and removed from service, **tagged to indicate its status and segregated from M&TE in service, pending disposition of corrective action.. A~~n~~ documented** investigation shall be conducted to determine the validity of previous inspection or test results gained through use of the instrument, and of the acceptability of items previously inspected or tested.

12.3 RESPONSIBILITIES

12.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsibile for:

a) assuring that the affected plant departments establish and maintain a calibration control program;
b) assuring that written procedures governing calibration activities are reviewed and approved prior to use;
c) assuring that documentation of calibration activities are reviewed and approved.

12.3.2 The Director Protection & Control Systems is responsible for assuring that calibration control procedures for installed plant instrumentation and control equipment under his control are submitted to the Plant General Manager for review, and for coordination of calibration activity schedules with plant supervisors.

13.1 GENERAL REQUIREMENTS

Written instructions or procedures shall be established and implemented for the cleaning, shipping, storage, preservation, packaging, and handling of specified items. These instructions and procedures shall delineate measures which prevent degrading an item through damage or deterioration. When necessary for particular products, special protective environments such as inert gas atmosphere, specific moisture content levels, and temperature levels shall be specified and provided.

Housekeeping procedures and instructions shall require cleanness to be maintained at a level consistent with the work performed to prevent the entry of foreign material into safety related systems. Control of personnel, tools, equipment and supplies shall be established with approved procedures or instructions when the safety function of a system, component or item may be jeopardized and also while the reactor system is opened for inspection, maintenance or repair. Documented cleanness inspections shall be performed prior to system closure.

13.2 IMPLEMENTATION

13.2.1 General

Instructions or procedures shall be written to define the requirements and responsibilities for the **housekeeping,** cleaning, packaging, preservation, handling, storage, and shipping of equipment and material, and shall require implementation of the established design and specification requirements by personnel having appropriate qualifications. FPL may delegate any portion of the responsibility for **cleaning, housekeeping,** handling, storage and shipping of material and equipment, but shall retain ultimate responsibility. Where any of the functions in the sections which follow is delegated to a contractor, the contractor shall be required to adhere to the FPL requirements stated herein.

13.2.2 Handling, Storage, and Shipping Procedures

Materials and equipment which are to be incorporated into a safety-related system of a nuclear power plant shall be handled, stored, and shipped in accordance with written procedures, where necessary, to implement the design document and purchase order requirements. These procedures shall assure that cleaning, handling, storing, packaging, shipping, and preserving materials, components and systems will preclude damage, loss, or deterioration by environmental conditions, such as temperature or humidity.

Site specific procedures or specific work instructions shall be developed which provide guidelines in handling heavy loads that are lifted over, or in proximity to, irradiated fuel or safe shutdown equipment/systems.

The preparation and/or implementation of these procedures may be delegated to other organizations, but FPL shall retain the ultimate responsibility for proper material handling, storage, and shipping.

~~13.2.4 Verification of Proper Handling, Storage, and Shipping.~~

~~The Quality Assurance Department shall be responsible for verification of proper handling, storage and shipping at vendor facilities.~~

13.2.3 Cleanness Procedures

Procedures or work instructions for cleaning; cleanness control practices and inspections; examinations or tests to verify cleanness of items; shall be prepared and implemented.

13.2.4 Housekeeping Procedures

Methods and techniques for controlling and maintaining housekeeping and documenting housekeeping surveillances and inspections shall be delineated in procedures or instructions.

13.3 Responsibilities

13.3.1 The Site Vice President has overall responsibility for ensuring that handling, storage, shipping, cleanness and housekeeping requirements are identified, and implemented.

13.3.2 The Vice President Engineering and Licensing is responsible for:

a. Identifying special handling and storage requirements for site fabricated items in applicable design output documents/work instructions.

b. Identifying cleaning and cleanness verification methods in appropriate specifications, drawings or procedures.

13.3.3 The Vice President Nuclear Assurance is responsible for:

a. Verifying proper handling, storage, and shipping activities at supplier facilities.

b. Verification of housekeeping, handling, storage, shipping and cleanness of items through inspections, surveillances, examinations or tests at the plant site.

14.1 GENERAL REQUIREMENTS

Measures shall be established to indicate by the use of markings such as stamps, tags, labels, routing cards or other suitable means, the status of inspections and tests performed on material, equipment, or systems. These measures shall provide for the identification of items which have satisfactorily passed required inspections and tests. Measures shall also be established for indicating the operating status of structures, systems and components to prevent inadvertent operations.

14.2 IMPLEMENTATION

14.2.1 General

~~For operations activities, the Nuclear Division is responsible for establishment and maintenance of a~~ A suitable system for identifying the inspection, test, and operating status of materials, equipment, systems, and components shall be established. ~~For plant modifications assigned to Nuclear Construction Services Department or when requested by the Plant General Manager, the Site Construction Services Manager is responsible for establishing a suitable system for identifying, inspecting and testing for material, equipment, systems and components which is approved by the Plant General Manager.~~ Each system ~~shall be~~ established shall be implemented and maintained in accordance with written ~~Quality Procedures and~~ Quality Instructions. The Architect/Engineer or Contractors shall develop and implement procedures to comply with contractual responsibilities, and applicable codes, standards, specifications, and criteria governing the status identification of procurement items being tested, installed, or fabricated. The Architect/Engineer (where applicable), suppliers and contractors shall be required to maintain a system for identifying the inspection, test and processing status of materials, parts, and components. Elements of this system require that suppliers and contractors have a controlled manufacturing and test operation in order to preclude the inadvertent bypassing of processing, inspections or test, and to provide a positive identification of component status throughout all phases of manufacturing, testing, and

inspecting, by means of tagging, routing cards, stamping, manufacturing or test reports, labeling or other appropriate methods. ~~The Vice President - Turkey Point Plant or St. Lucie Plant and the Quality Assurance Department shall~~ Methods to verify adequacy of the controls shall be established and implemented, as appropriate. ~~for their site.~~

14.2.2 Status Identification and Control

~~Quality Procedures and~~ Quality Instructions shall describe control of the application and removal of markings such as stamps, tags, labels, routing cards, and other suitable means to indicate the status of non-operational, nonconforming, or malfunctioning nuclear safety related structures, systems and components to prevent inadvertent operation, and to prevent omission of inspections, tests, or other critical operations. These procedures and instructions shall delineate the requirements, methods and responsibilities for indicating the status of the affected items. These procedures will clearly delineate the individuals or groups responsible for application and removal of status indicators. These procedures shall require independent verifications, where appropriate, to ensure that necessary measures have been implemented.

14.3 RESPONSIBILITES

14.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division shall be responsible for coordinating activities affecting the inspection, test and operating status of material, equipment, systems and components with the appropriate plant organization.

14.3.2 The Site Vice President is responsible for the establishment, maintenance, and implementation of a suitable system for identifying, inspecting, testing, and providing operating status of material, equipment, systems and components in accordance with written and approved procedures and instructions and the approval of other programs utilized on site which provide for inspection, test and operating status.

14.3.3 The Vice President Nuclear Assurance is responsible for assuring that requirements are implemented per written instructions and procedures.

15.1 GENERAL REQUIREMENTS

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

15.2 IMPLEMENTATION

15.2.1 Program

~~Quality Procedures and~~ Quality Instructions shall define the responsibilities and methods for identifying, documenting, segregating and dispositioning nonconforming items. ~~For procedure review requirements, see TQR 2.0 and TQR 5.0. Each department shall be responsible for the identification, control and disposition of nonconformances within the scope of their departmental responsibilities.~~ Throughout plant life, FPL may delegate any portion of the identification and control of nonconforming items and services to an Architect/Engineer (A/E), constructor, NSSS vendor or other contractor~~s~~. In any case, FPL retains the responsibility for assuring that requirements are met, and shall assure that the contractor's actions conform to requirements set by FPL.

15.2.2 Documenting and Controlling Nonconformances

All nonconformance~~s in safety related items~~ shall be documented and reported for corrective action. Measures shall be delineated in ~~Quality Procedures and~~ Quality Instructions which control further processing, installation, or operation of nonconforming items. These measures shall include:

a. Physical identification of the item as nonconforming.
b. Segregation of nonconforming items until properly dispositioned.

Where physical segregation is not practical, suitable tags, marking or documentation shall be used to assure control.

The control of, and the documentation generated by the identification, disposition, correction, and verification of nonconformances may be transferred between processing methods. Adequate controls shall be established to assure traceability between processing methods and the identified nonconforming item and to prevent inadvertent cancellation of the corrective action implementing document.

15.2.3 Documentation

Documentation of the nonconforming item shall: identify the item; describe the nonconformance; show disposition of the nonconformance and inspection requirements; and include the signature of the person approving the disposition.

15.2.4 Evaluation and Disposition

Nuclear Engineering, or ~~the~~ other delegated ~~contractor~~ organizations, as specified by procedure, shall evaluate nonconformances and disposition them based on the results of the evaluations. **Nonconforming conditions which cannot be made acceptable utilizing existing design documents shall be evaluated by Nuclear Engineering for disposition.** These evaluations and dispositions shall be reviewed, approved and documented in accordance with procedures.

An evaluation to determine the disposition of nonconforming items shall be performed. The evaluation shall determine whether an item is to be accepted as-is, repaired, reworked or rejected. A technical evaluation shall be performed when an item is accepted as-is or is repaired to an acceptable condition. Records of the disposition of these items shall be made part of the nonconformance report. This evaluation shall assure that the final condition does not adversely effect safety, operability or maintainability of the item, or of the component or system in which it is installed.

The A/E, or other contractors on-site, shall be required to inform FPL as specified in procurement documents prior to use or installation of a nonconforming item. The nature and extent of a nonconformance and the reason for proposing its use or installation shall be justified. Nonconforming items dispositioned "accept as-is", or repaired to an acceptable condition, shall be so identified. Nonconformance reports for those items shall be made part of the item records and forwarded with the material to FPL.

The determination of the need and the advisability of releasing nonconforming materials or items, ~~is made by the~~ **shall be initiated by the Site Vice President, and approved by** Nuclear Engineering ~~Department.~~ The following factors may be appropriate considerations in making this determination:

a. Effect on the orderly progress of work if material or items are released;
b. Safety of personnel;
c. Suitability of material or items in "as-is" condition, i.e., probability of eventual satisfactory resolution of the nonconformance without repair, rework, or replacement;
d. Accessibility of material or items after release;
e. Cost of removal and repair of replacement should material or items eventually have to be removed, repaired, or replaced;
f. Impact on plant safety.

Items shall be reworked or repaired in accordance with documented procedures and shall be verified by reinspecting the item as originally inspected or by a documented method which is at least equal to the original inspection method.

~~Nuclear Assurance personnel shall periodically review n~~Nonconformance reports **shall be periodically reviewed** to identify quality trends. The results of these analyses shall be reviewed with appropriate members of upper level management.

15.3 RESPONSIBILITIES

15.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division are responsible for:

a) the generation of instructions/procedures to implement requirements for the identification, control, disposition, and verification of nonconformances within their purview;

b) identifying and documenting nonconforming items within the scope of their departmental responsibilities;

c) submitting nonconformances requiring design evaluations to the appropriate engineering organizations;

d) tracking and control of open nonconforming items within the scope of their departmental responsibilities;

e) dispositioning and verifying the resolution of nonconforming items within the scope of their departmental responsibilities;

f) periodically assessing quality trends related to nonconformances.

15.3.2 The Site Vice President is responsible for:

a) supplier notification and follow-up of nonconformances requiring supplier corrective actions.

15.3.3 The Vice President Nuclear Assurance is responsible for:

a) periodically assessing quality trends related to nonconformances and reviewing the results of these assessments with appropriate members of upper level management.

15.3.4 The Vice President Nuclear Engineering and Licensing is responsible for:

a) the review, evaluation, and disposition of nonconformances submitted by other departments;

b) approval of release of nonconforming items

c) supplier notification and follow-up of nonconformances requiring supplier corrective actions.

16.1 GENERAL REQUIREMENTS

Documented measures shall be used to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected as soon as practicable. In the case of significant conditions adverse to quality, the cause of the condition shall be determined and action taken to preclude repetition. The identification of significant conditions adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

16.2 IMPLEMENTATION

16.2.1 Corrective Action and Follow-Up

~~Quality Procedures and~~ Quality Instructions shall define responsibilities and methods for identifying and correcting conditions adverse to quality. When an adverse condition is detected, a determination shall be made by plant supervision or Nuclear Assurance personnel as to whether immediate or routine corrective action is required.

a. "Immediate Corrective Action" applies to conditions which pose a threat to plant safety or to the health and safety of the public, which could result in major equipment and material damage, or could, if not corrected, produce defects of significantly greater consequences than those immediately resulting from the condition. "Immediate Corrective Action" is accomplished through stopwork requests/orders to appropriate levels of management, requiring that work be stopped, the plant be shut down or other appropriate actions be taken.

Specific personnel having stop work authority include the Plant General Manager, Site Quality Manager and Plant Vice President.

b. "Routine Corrective Action" applies to conditions which do not require immediate corrective action. Routine corrective action is assured through the distribution and disposition associated with inspection reports, surveillance reports, nonconformance reports, and audit reports; and the investigation analysis and action associated with reportable ~~conditions~~ events.

Interdepartmental corrective action shall be requested by use of written correspondence. Audit reports, nonconformance reports, interoffice letters, and other documents may be used for this purpose.

Follow-up to verify implementation of corrective action and close-out of corrective action documentation is accomplished by the ~~QA or QC~~ organization responsible for verifying the corrective action. The ~~Quality~~ Nuclear Assurance Department shall track, follow-up, and closeout open items identified by ~~QA~~ Nuclear Assurance Department ~~audits and vendor surveillances~~. The respective department or plant shall track those items charged to its operating license by the NRC. Each department shall be responsible for follow-up and close-out of corrective action resulting from their departmental inspections, tests, or operations.

If corrective action is inadequate or not timely, the follow-up organization shall request corrective action from management, as delineated in procedures. The President Nuclear Division is the final authority in the event that agreement is not reached at lower levels regarding stop work requests or other corrective action.

Where corrective action is required of contractor personnel, FPL shall define in procedures and contracts the corrective action interface between FPL and the contractor. FPL shall require the A/E, NSSS vendor, constructor and other suppliers of safety related materials and services to have a documented corrective action system.

16.2.2 Recurrence Control

It is the responsibility of the organization which identifies the significant condition adverse to quality to verify that corrective action description not only corrects the immediate condition, but also precludes the condition from recurring. The organization(s) that provide(s) the corrective action disposition and implementation is responsible to assure that the corrective action taken not only corrects the immediate condition, but also precludes recurrence.

16.2.3 Incidents and Reportable Events Reporting

Operating reportable events and reports of incidents shall be investigated, documented as to cause and corrective action, and reported to the NRC in accordance with the applicable plant Technical Specifications and Federal Regulations. Reportable events and reports of incidents that are safety related or that result in damage shall be forwarded to the Company Nuclear Review Board (CNRB) for review. Conditions adverse to quality are reported to operating plant management through: distribution of QA audit reports, QC inspection reports, corrective action requests, and the investigation and reporting of reportable events in accordance with plant Technical Specifications.

16.3 Responsibilities

16.3.1 The President Nuclear Division is the final authority in the event agreement relating to stop work requests or other proposed corrective action is not reached at lower management levels.

16.3.2 Direct reports of the President Nuclear Division and Department Heads of organizations supporting the Nuclear Division are responsible for:

a. Assuring that timely corrective action within their respective organization.

b. Follow-up and assuring completion of corrective action resulting from their respective department's audits, inspections, surveillances, tests, or operations.

c. Reviewing and investigating audit findings to determine and schedule appropriate corrective action and responding as requested in the audit report.

16.3.3 The Vice President Nuclear Assurance has the responsibility and authority to recommend that work be stopped or appropriate corrective action taken as a result of QA findings during department audits and reviews or QC activities.

16.3.4 All personnel detecting conditions adverse to quality or significant conditions adverse to quality are responsible for reporting such conditions to the appropriate authority.

17.1 GENERAL REQUIREMENTS

Sufficient records shall be maintained to furnish documented evidence of the quality of safety related structures, systems, and components, and of activities affecting their quality. The records shall include, as appropriate, data such as qualifications of personnel, procedures, and equipment; and other documentation such as inspection or test acceptance criteria, and the action taken in connection with deficiencies noted during inspection.

The records required to furnish documentary evidence of quality, herein called quality assurance records, shall be identifiable and retrievable. These records shall be maintained in facilities that provide a suitable environment to minimize deterioration or damage and to prevent loss.

The requirements and responsibilities for quality assurance record control, transmittal, retention, and maintenance shall be established and documented. These record requirements shall be consistent with applicable design, manufacturing, and installation codes and standards, and with procurement document requirements.

17.2 IMPLEMENTATION

17.2.1 Records Identification

Quality ~~Procedures~~ Instructions shall define the quality assurance records necessary to furnish documentary evidence of the quality of safety related structures, systems, and components; and activities affecting quality. These records shall include plant operating logs; results of design reviews, inspections, tests, audits, and material analyses; qualification of personnel, procedures, and equipment; design records such as drawings and specifications; procurement documents; calibration records; and nonconformance or corrective action reports.

Quality assurance records shall be classified as lifetime or non-permanent as required by the NRC facility operating license, the NRC construction permit, applicable parts of 10CFR, the FSAR, or other NRC commitments.

~~17.2.2 Responsibilities~~

~~Responsibilities shall be established and documented for the control, transfer, maintenance, and retention of quality assurance records. Quality Procedures shall provide guidance for determining the retention requirements of quality assurance records. Each organization responsible for the conduct of a quality activity shall be responsible for the maintenance of the subsequent quality assurance records unless retention responsibilities have been transferred by a prearranged agreement. In any case, the organization initiating the quality assurance records shall be responsible for their validity and approval.~~

17.2.2

~~17.2.3~~ Retrieval

~~Quality Procedures shall require that q~~Quality assurance records submitted for retention **shall** be legible, completely filled out, and adequately identifiable and retrievable for each item. The records shall be filed in a ~~the~~ storage area or facility using a documented system to provide retrievability. Quality ~~Procedures~~ **Instructions shall** ~~additionally~~ require control of corrections and supplements issued for quality assurance records that are previously approved and filed, and that documented methods for control and accountability of records removed from the storage area be instituted.

17.2.~~4~~3 Storage

~~Specified in the Quality Procedures are the c~~Construction features and location requirements for record storage facilities **shall be established to** ~~which~~ assure that quality assurance records are protected from possible destruction by causes such as fire, flooding, theft, tornadoes, insects, rodents, and from possible deterioration by a

combination of extreme variations in temperature and humidity. Specific instructions regarding the storage area ~~are~~ shall be given for special processed records and for temporary storage facilities.

A QA Record Storage Evaluation Team (QARSET) shall be established to determine if the methods utilized to store and protect QA records are adequate. The QARSET shall consist of the following: the Quality Manager - Juno Beach, the Loss Prevention Engineer, and the Nuclear Records Official. The QARSET shall maintain records of evaluations and establish schedules to assure that reevaluations are performed every two (2) years. The QARSET shall evaluate the status of existing facilities and the adequacy of additional records facilities prior to the construction of a new facility or the conversion of existing structures. The requirements of the Topical Quality Assurance Report, Appendix C shall be utilized in the evaluation of potential permanent and temporary record storage facilities.

17.3 RESPONSIBILITIES

17.3.1 Direct reports of the President, Nuclear Division, and Department Heads of organizations supporting the Nuclear Division that generate quality assurance records are responsible for:

a) the technical content and accuracy of the records they generate;

b) transmitting records to the appropriate storage facility or requesting approved storage locations from QARSET;

c) establishing a list of quality assurance records generated by the organization and their retention times and assuring that these quality assurance records are identified in the appropriate quality assurance record index;

d) the storage and retrieval of quality assurance records prior to transmittal to permanent record storage facilities;

e) performing periodic surveys to ensure that their record control system is adequate.

17.3.2 The Nuclear Records Official is responsible for:

a) ensuring the quality assurance records program activities are managed in accordance with applicable laws and regulations;

b) developing, approving, and maintaining record retention schedules;

c) establishing parameters for records indexing;

d) locating acceptable record storage areas when requested;

e) storage, retrieval, and control of records/documents as requested by other departments;

f) leading the evaluation of specially designated QARSET approved storage facilities, maintaining records of this evaluation, and establishing schedules to assure that re-evaluations are performed every two (2) years.

17.3.3 The Site Vice President is responsible for:

a) the storage and retrieval of quality assurance records at the site.

17.3.4 The Manager Administrative Services is responsible for:

a) storage, retrieval, and control of records and documents as requested by other departments.

17.3.5 The Quality Assurance Record Storage Evaluation Team (QARSET) is responsible for:

a) evaluating the acceptability of storage locations for quality assurance records;

b) ensuring that evaluations of storage locations are performed every two years.

18.1 GENERAL REQUIREMENTS

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Follow-up action, including reaudit of deficient areas, shall be taken, where necessary.

18.2 IMPLEMENTATION

A comprehensive program of audits is carried out by the Quality Assurance Department during the design, procurement, construction, and operations phase of nuclear power plants. These audits are performed to verify that all safety related activities associated with nuclear power plants are carried out in accordance with the requirements of the FPL QA Program, and that the implementation is effective.

18.2.1 Personnel

Quality ~~Procedures~~ **Instructions shall** provide instructions for the training of QA Department personnel who perform audit activities, to assure that they are adequately indoctrinated and trained, and that they are qualified to carry out these activities. Quality ~~Procedures~~ **Instructions** provide for personnel qualified as Lead Auditors to be formally certified by Quality Assurance Department management. Certification shall be based on education, experience, training and other specified criteria.

18.2.2 Planning and Scheduling

Quality ~~Procedures and Quality Instructions~~ **Instructions** provide requirements for written audit plans and schedules. The audits are planned and scheduled on the basis of the following:

a. Activities shall be audited as early in their life as practicable. Auditing shall be initiated early enough to assure effective quality assurance during the design, procurement and contracting activities.

b. The system of audits devised to verify compliance with ~~safety and quality related~~ aspects of the nuclear plants is described in each unit's technical specifications. Audits of selected aspects of operational phase activities are performed with a frequency commensurate with safety significance. As a minimun, unless otherwise specified by technical specifications, the Code of Federal Regulations or other licensing commitments, these audits are performed at a biennial (2-year) frequency. The audit system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities.

c. An annual evaluation of suppliers' quality performance history shall be performed to determine reaudit requirements. Reaudit requirements for suppliers shall be based on the supplier's quality performance and the complexity and criticality of the equipment or service being procured. A facility evaluation (audit) will be performed at least every three years and shall be conducted in accordance with Quality ~~Procedures and Quality Instructions~~ Instructions for supplier evaluations.

d. Audits shall be regularly scheduled for on-going activities.

e. Regularly scheduled audits shall be supplemented, as required to cover unforeseen events or changes in requirements.

The scope of audit activities shall include, as a minimum:

a. The determination of site features which affect plant safety (e.g., core sampling, site preparation, and meteorology).

b. The preparation, review, approval, and control of the SAR, designs, specifications, procurement documents, instructions, procedures, and drawings.

c. Evaluation of bids.

d. Indoctrination and training programs.

e. Receiving and plant inspections.

f. Operation, maintenance/repair and modification.

g. The implementation of operating and test procedures.

h. All criteria in Appendix B to 10 CFR Part 50.

i. Validity of Certificates of Conformance.

External audits shall be performed by the Quality Assurance Department on Architect/Engineers, NSSS vendors, constructors, and other suppliers of safety related materials and services to evaluate their QA programs, procedures and activities. Procurement documents shall require that FPL suppliers and contractors in turn perform audits on their sub-tier suppliers and contractors.

18.2.3 Conduct of Audits

Quality ~~Procedures and Quality Instructions~~ Instructions shall delineate requirements for the conduct of audits. These ~~procedures and~~ instructions shall require that:

a. Audits be conducted by trained and qualified personnel.

b. Personnel conducting audits shall not have direct responsibility in the area audited.

c. Checklists or ~~procedures~~ instructions shall be used to ensure depth and continuity of audits.

d. Objective evidence shall be examined for compliance with quality assurance program requirements. This shall include examination of ~~procedures~~ **instructions** and activities to assure that documented objective evidence is meaningful and in compliance with the overall Quality Assurance Program.

e. Audits shall include evaluation of work areas, activities, processes and items; and the review of documents and records.

18.2.4 Reporting of Audit Findings

Audit findings shall be documented in written reports. Audit reports shall be distributed to the responsible management of the audited FPL organization within thirty calendar days after completion of the audit.

18.2.5 Follow-up

Responsible management of the audited organization shall take action to correct the deficiencies identified in the audit report and provide a written response within thirty calendar days after receipt of the report. This response shall include action taken and/or planned to correct deficiencies and to prevent recurrence of the deficiencies, and commitment dates for actions not yet complete. The mechanism for evaluation and follow-up of corrective action is described in TQR 16.0. The status of correction of deficiencies shall be followed until the corrective actions have been accomplished and verified.

18.2.6 Reports to Management

The Quality Assurance ~~Program status reports are periodically prepared by the QA~~ Department **periodically reports on the status of the Quality Program** ~~and routed~~ to the members of the Company Nuclear Review Board (CNRB) ~~for their review.~~ This status report summarizes the results of QA Department audit activities for the period, keeps all CNRB members apprised of current conditions and program effectiveness, and when necessary, directs management attention to significant trends and problems.

18.3 RESPONSIBILITIES

18.3.1 Direct reports to the President, Nuclear Division, and Department Heads of organizations supporting the nuclear division shall be responsible for:

1. Taking action to correct deficiencies identified in audit reports.

2. Providing a written response within thirty (30) calendar days of receipt the audit report.

18.3.2 The Vice President Nuclear Assurance is responsible for the following:

1. Scheduling audits on a regular basis.

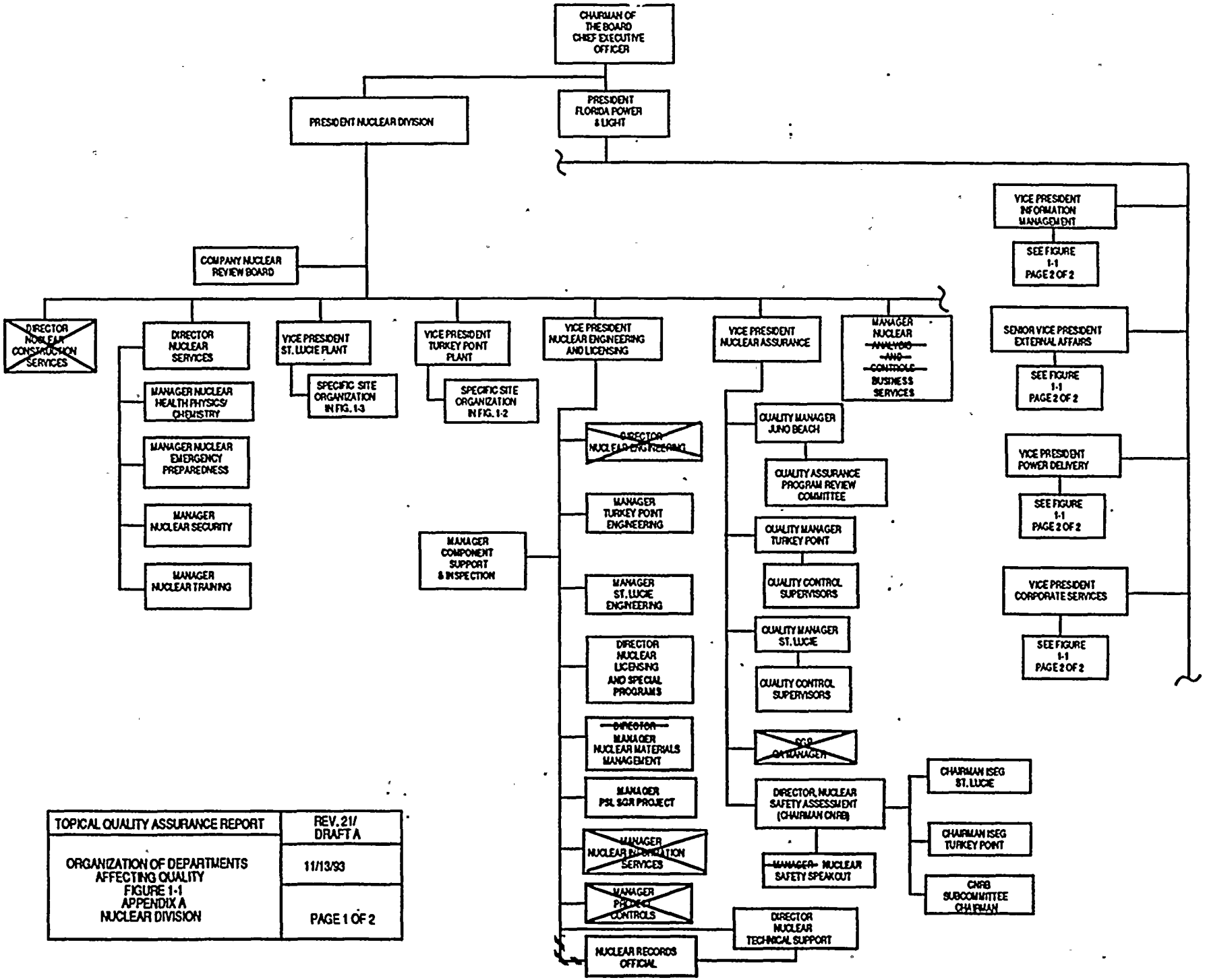
2. Selecting the audit team and the ~~Principal~~ Lead Auditor.

3. Reviewing each audit report for accuracy, completeness, proper format and distribution.

4. Designating a qualified replacement ~~principal~~ Lead Auditor (in writing) if the audit team leader transfers from the respective QA group or is otherwise unable to continue ~~his/her~~ the assigned audit.

5. The qualification of ~~Principal~~ Lead Auditors.

18.3.3 The Chairman, Company Nuclear Review Board (CNRB) is responsible for review and concurrence of Annual Audit Program Plans, review of individual audit scopes and involvement in the audit program for internal audits as defined by CNRB ~~procedures~~ instructions.



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ORGANIZATION OF DEPARTMENTS AFFECTING QUALITY FIGURE 1-1 APPENDIX A NUCLEAR DIVISION	11/13/93
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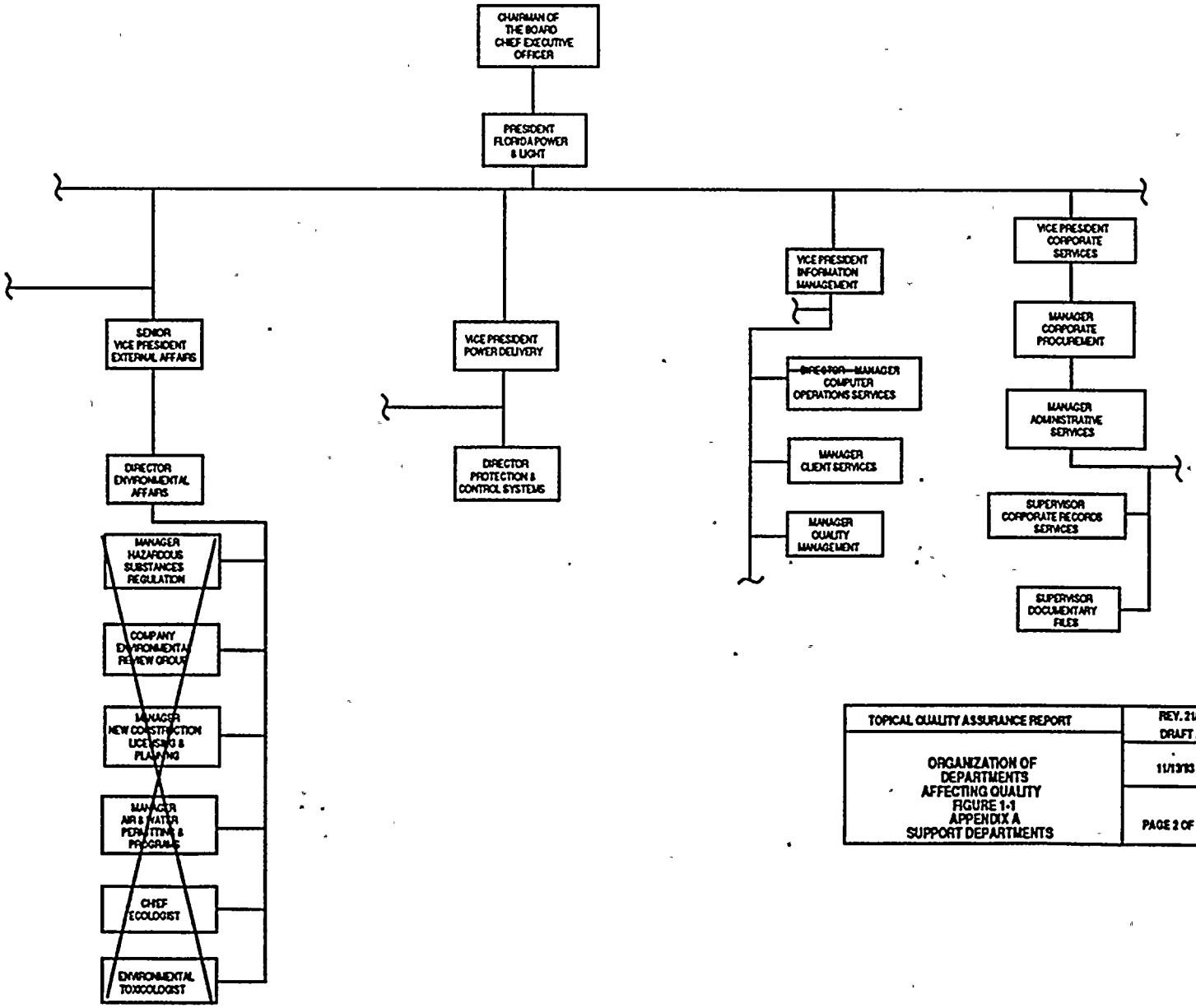

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ORGANIZATION OF DEPARTMENTS AFFECTING QUALITY FIGURE 1-1 APPENDIX A SUPPORT DEPARTMENTS	11/13/93
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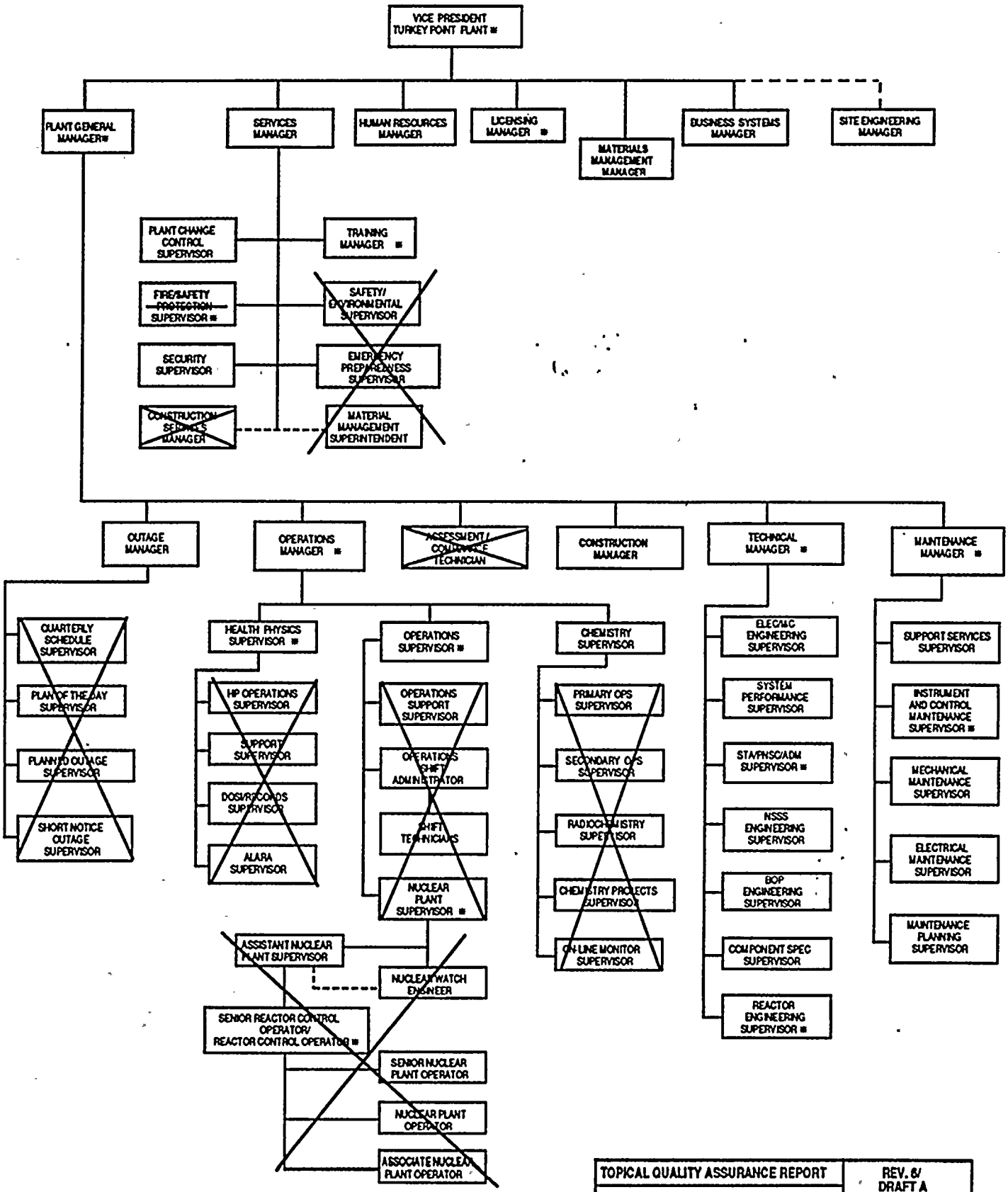

* - Indicates position with accountabilities in Technical Specifications.

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TURKEY POINT NUCLEAR SITE ORGANIZATION FIGURE 1-2 APPENDIX A	11/13/93
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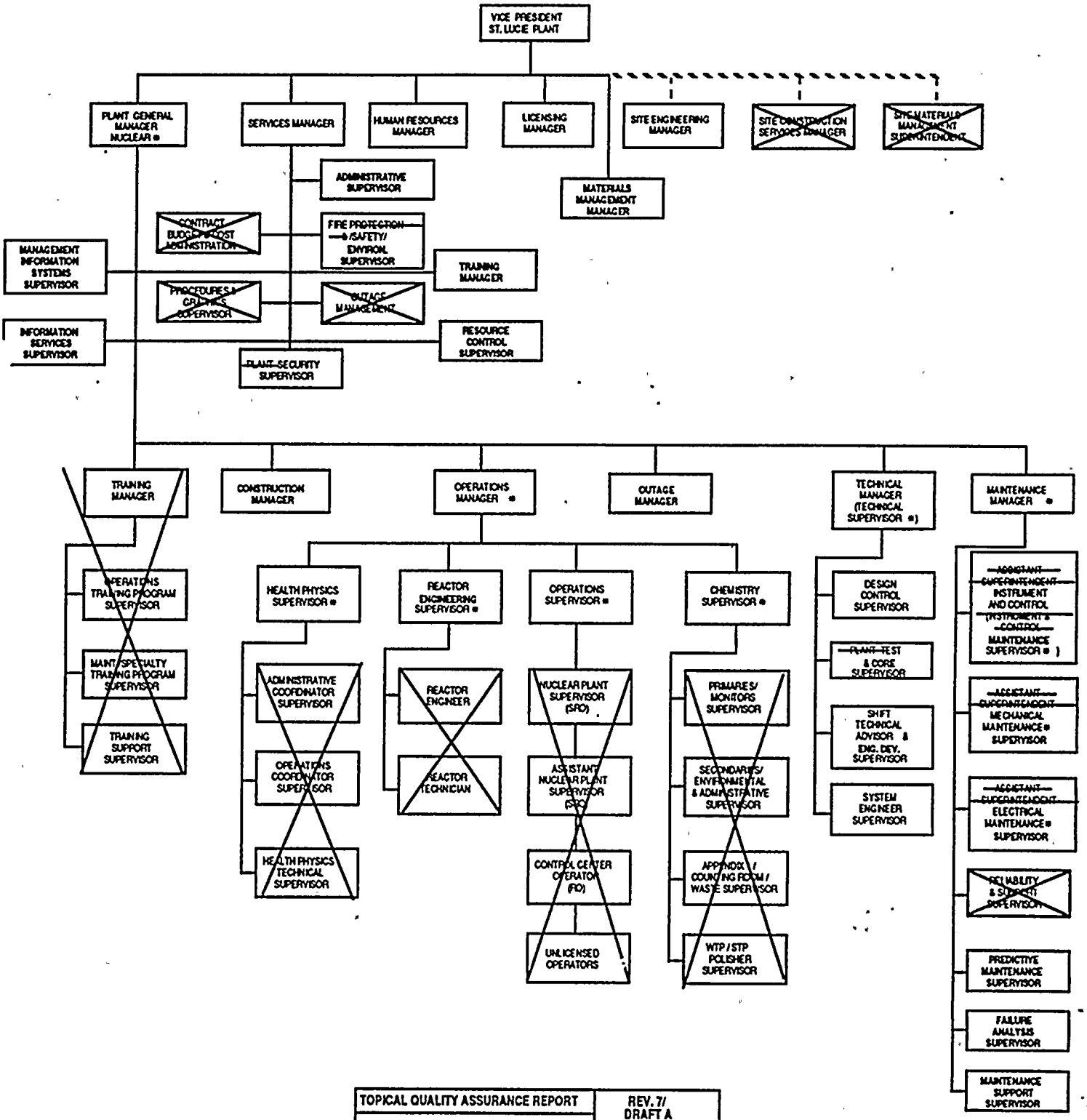

TOPICAL QUALITY ASSURANCE REPORT	REV. 7/ DRAFT A
ST. LUCIE PLANT, UNITS 1 & 2 SITE ORGANIZATION FIGURE 1-3 APPENDIX A	11/13/93
	PAGE 1 OF 1

* - Indicates position with accountabilities in Technical Specifications. Where multiple titles occur, the first position listed shall act in the capacity of the other listed titles.

This Appendix has been deleted in its entirety.

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~1.1~~ ~~CANCELLED~~	
~~2.1~~ ~~CANCELLED~~ ~~(Terms and Definitions contained in the QA Manual Glossary)~~	
~~2.2~~ ~~CANCELLED~~	
~~2.3~~ ~~QUALITY ASSURANCE PROGRAM REVIEW~~	~~Provides instructions for the revision of the Florida Power & Light Company Topical Quality Assurance Report (FPL TQAR). Describes the instructions and methods used for establishing, preparing, issuing, revising and controlling Quality Procedures employed in supporting quality requirements.~~
~~2.4~~ ~~PREPARATION AND REVISION OF QUALITY INSTRUCTIONS~~	~~Provides the responsibilities, guidelines and methods used for developing and revising Quality Instructions, based upon QP's, that involve quality activities within a department or organization and are unique to that activity.~~
~~2.5~~ ~~QUALITY ASSURANCE INDOCTRINATION AND DEPARTMENTAL TRAINING~~	~~Describes the requirements for the indoctrination and training of personnel who perform, or are responsible for activities that affect quality.~~
~~2.6~~ ~~CANCELLED~~	
~~2.7~~ ~~IDENTIFICATION OF SAFETY RELATED STRUCTURES, SYSTEMS, AND COMPONENTS~~	~~Describes the development and approval of documents identifying safety related and safety related design feature structures, systems and components.~~
~~2.8~~ ~~CLEANLINESS CONTROL METHODS~~	~~Provides criteria for securing good housekeeping. Assigns responsibilities for assuring that the cleanliness of material, systems and structures is maintained.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~2.9~~ ~~QUALIFICATION OF QA AUDIT, QC INSPECTION, CONSTRUCTION & POWER SUPPLY TEST PERSONNEL~~	~~Describes the personnel qualifications that are required to assure that competent QC inspectors, QA auditors, construction and power supply test personnel perform these respective functions.~~
~~2.10~~ ~~HOUSEKEEPING FOR OPERATING PLANTS~~	~~Describes the responsibilities and controls for housekeeping at operating nuclear power plants.~~
~~2.11~~ ~~CANCELLED~~	
~~2.12~~ ~~FPL QA PROGRAM APPLICABILITY FOR QUALITY RELATED ITEMS AND SERVICES~~	~~Identifies the applicability of the Quality Assurance Program for Quality Related Items and Services.~~
~~2.13~~ ~~PROCESSING OF NRC CORRESPONDENCE~~	~~Describes the system for providing responses to NRC initiated action requests.~~
~~2.14~~ ~~IMPLEMENTATION OF ASME XI~~	~~Describes the program and responsibilities for controlling activities defined by ASME Section XI.~~
~~2.15~~ ~~CONTROL OF COMPUTER SOFTWARE~~	~~Specifies basic requirements for control of the lifecycle of computer software on mainframe, stand-alone, and PC computers.~~
~~2.17~~ ~~ENVIRONMENTAL QUALIFICATION (EQ) OF ELECTRICAL EQUIPMENT~~	~~Delineates the responsibilities and requirements for maintaining the environmental qualifications of nuclear plant components.~~
~~3.1~~ ~~CANCELLED~~	
~~3.2~~ ~~IDENTIFICATION AND CONTROL OF DESIGN INTERFACES~~	~~Describes measures employed for identifying and controlling design interfaces, changes in design interfaces, and modifications that affect documents.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~3.4 PLANT CHANGES AND MODIFICATIONS FOR OPERATING PLANTS~~	~~Establishes measures for controlling design changes or modifications in operating nuclear power plants.~~
~~3.5 DESIGN CONTROL AT THE CONSTRUCTION SITE~~	~~Defines the responsibilities and methods employed for the initiation, review, evaluation, approval and disposition of field initiated design changes and miscellaneous design documents such as field sketches and isometrics.~~
~~3.6 CONTROL OF FPL ORIGINATED DESIGN~~	~~Covers the preparation, review, and approval of design input documents, design analysis specifications, and design verification for safety related design work originated by FPL.~~
~~3.7 EVALUATION AND CONTROL OF CONTRACTOR DESIGN FOR NUCLEAR FUEL AND RELATED SYSTEMS~~	~~Describes the evaluation and control of contractor designs for fuel related components and analysis.~~
~~4.1 CANCELLED~~	
~~4.2 CANCELLED~~	
~~4.3 CANCELLED~~	
~~4.4 CANCELLED~~	
~~4.5 CANCELLED~~	
~~4.6 PROCUREMENT CONTROL~~	~~Delineates the sequence of actions in the preparation, review, approval, and control of procurement documents.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~4.7~~ ~~SPECIAL QUALITY ASSURANCE DOCUMENTS~~	~~Describes the process for development, revision, issuance, and control of Special Quality Assurance Documents (SQADS).~~
~~5.1~~ ~~OPERATING PLANT PROCEDURES~~	~~Describes measures which ensure that instructions and procedures used in operating plants are identified, prepared, reviewed, approved, issued and revised in accordance with regulatory and FPL requirements.~~
~~5.2~~ ~~CONSTRUCTION SERVICES PROCEDURES~~	~~Describes the generation, review and control of Construction Services procedures.~~
~~6.1~~ ~~CONTROL OF CONSTRUCTION PROJECT CONTRACTOR DRAWINGS, SPECIFICATIONS AND PROCEDURES~~	~~Defines responsibilities and methods for the control and issue of contractor drawings, specifications and procedures to be used during the construction phase of nuclear power plants.~~
~~6.2~~ ~~CONTROL OF DOCUMENTS ISSUED BY FPL~~	~~Instructions are provided for controlling documents issued by FPL which prescribe activities affecting the quality of safety related items.~~
~~6.3~~ ~~CANCELLED~~	
~~6.4~~ ~~CANCELLED~~	
~~6.5~~ ~~CANCELLED~~	
~~6.6~~ ~~DRAWING CONTROL FOR OPERATING NUCLEAR POWER PLANTS~~	~~Describes the method to be used for controlling and updating nuclear safety related drawings for operating plants after turnover from the design organization.~~
~~6.7~~ ~~CONTROL OF VENDOR MANUALS AND VENDOR TECHNICAL INFORMATION~~	~~Establishes requirements for controlling technical manuals for operating, maintenance and test equipment.~~

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~7.1 RECEIPT INSPECTION OF ITEMS AT THE PLANT SITE~~	~~Provides instructions for receipt inspection of materials, parts and components which have been obtained for use in nuclear safety applications at the operating plant site.~~
~~7.2 CANCELLED~~	
~~7.3 CANCELLED~~	
~~7.4 EVALUATION OF SUPPLIERS OF SAFETY RELATED ITEMS OR SERVICES~~	~~Provides standards, measures, and guidelines for the evaluation of QA Programs of contractors or suppliers supplying items or services.~~
~~7.5 CANCELLED~~	
~~7.6 ACCEPTANCE OF ITEMS AND SERVICES~~	~~Describes the responsibilities and requirements for accepting nuclear safety related items or services that are being procured for nuclear power plants.~~
~~7.8 CANCELLED~~	
~~7.9 CONTROL OF ON SITE SERVICES~~	~~This procedure provides a system to assure that vendors who provide on-site services by contract or purchase order to FPL at nuclear power plants are controlled.~~
~~8.1 IDENTIFICATION AND CONTROL OF ITEMS AT THE PLANT SITE~~	~~Delineates measures for assuring traceability, identification and control of items from the time they are received through usage at operating plants.~~
~~8.2 CANCELLED~~	
~~9.1 CONTROL OF SPECIAL PROCESSES~~	~~Delineates the responsibilities of organizations and personnel, and the control and documentation of special processes that are applied to safety related items.~~

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~9.2~~ ~~CANCELLED~~ ~~(Combined with 9.1)~~	
~~9.4~~ ~~CONTROL OF WELDING FOR NUCLEAR POWER PLANTS~~	~~Delineates responsibilities and requirements for control FPL welding processes for nuclear power plants.~~
~~10.1~~ ~~CANCELLED~~	
~~10.2~~ ~~CANCELLED~~	
~~10.3~~ ~~INSPECTION AND SURVEILLANCE~~	~~Delineates responsibilities and requirements for the inspection and surveillance of safety related plant maintenance activities, operation of safety related systems, and fuel handling activities.~~
~~10.4~~ ~~CANCELLED~~	
~~10.5~~ ~~CANCELLED~~	
~~10.6~~ ~~CANCELLED~~	
~~11.1~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	
~~11.2~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	
~~11.3~~ ~~CANCELLED~~ ~~(Combined with 11.4)~~	

~~QP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~11.4~~ ~~TEST CONTROL~~	~~Defines the measures for control of proof tests prior to installation, construction tests, preoperational tests, startup tests, operational tests and retests following repairs, replacements or modifications for nuclear safety related systems, structures, and components.~~
~~12.1~~ ~~CALIBRATION AND CONTROL OF MEASURING AND TEST EQUIPMENT~~	~~Delineates the responsibilities for implementing the described program for maintenance, calibration and control of measuring and test equipment (M&TE).~~
~~12.2~~ ~~CALIBRATION CONTROL OF INSTALLED PLANT INSTRUMENTATION AND CONTROL EQUIPMENT~~	~~Describes the calibration program, delineates responsibilities, and establishes procedures for control over the calibration of install instrumentation and plant control equipment.~~
~~13.1~~ ~~HANDLING, STORAGE AND SHIPPING OF ITEMS~~	~~Establishes responsibilities and procedures to assure that measures are employed by FPL and contractors to: (1) control the handling, shipping and storage of material; (2) protect the quality of material by using proper handling, shipping, and storage techniques; (3) effectively control the disposition of discrepant items.~~
~~13.2~~ ~~CANCELLED~~	
~~13.3~~ ~~CANCELLED~~ ~~(Combined with 13.1)~~	
~~14.1~~ ~~CANCELLED~~ ~~(Combined with 14.3)~~	
~~14.2~~ ~~CANCELLED~~ ~~(Combined with 14.3)~~	

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~14.3~~ ~~INSPECTION, TEST AND OPERATING STATUS DURING PLANT OPERATION~~	~~Defines the measures and responsibilities for the identification of the inspection, test and operating status of structures, systems, and components.~~
~~15.1~~ ~~CANCELLED~~ ~~(Combined with 15.2)~~	
~~15.2~~ ~~CONTROL OF NONCONFORMING MATERIALS, PARTS, COMPONENTS AND SERVICES FOR ST. LUCIE PLANT~~	~~Defines the objectives and responsibilities for controlling nonconforming items or services in order to prevent their inadvertent use, installation or application to St. Lucie nuclear power plant.~~
~~15.3~~ ~~CONTROL OF NONCONFORMING MATERIALS, PARTS, COMPONENTS AND SERVICES FOR TURKEY POINT PLANT~~	~~Defines the objectives and responsibilities for controlling nonconforming items or services in order to prevent their inadvertent use, installation or application to Turkey Point nuclear power plant.~~
~~16.1~~ ~~CORRECTIVE ACTION~~	~~Establishes the respective responsibilities of FPL personnel and the procedure for assuring that conditions identified by the FPL QA Department as being adverse to quality, are corrected.~~
~~16.2~~ ~~CANCELLED~~ ~~(Combined with 16.1)~~	
~~16.3~~ ~~CANCELLED~~ ~~(Combined with 16.1)~~	
~~16.4~~ ~~EVALUATING AND REPORTING DEFECTS AND FAILURE TO COMPLY FOR SUBSTANTIAL SAFETY HAZARDS IN ACCORDANCE WITH 10 CFR PART 21~~	~~Specifies the measures and responsibilities within Florida Power & Light to assure compliance to 10 CFR Part 21.~~
~~16.6~~ ~~CANCELLED~~	

~~OP NUMBER/TITLE~~	~~SECTION DESCRIPTION~~
~~17.1 QUALITY ASSURANCE RECORDS~~	~~Identifies records and documents required to substantiate quality; and, describes measures employed for their maintenance, retention and retrieval.~~
~~18.1 PERFORMANCE OF QUALITY ASSURANCE AUDITS~~	~~Provides instructions for conducting audits of FPL Quality Assurance Program activities.~~
~~18.2 CANCELLED~~	
~~18.3 CANCELLED~~	
~~18.4 CANCELLED~~	

5.0 **DEFINITIONS:** (Cont'd)

1.0 **APPROVAL:**

Vice President Nuclear Assurance

2.0 **PURPOSE:**

This glossary provides terms that are used by FPL personnel in the performance of Quality activities ~~during the design, construction and operation of~~ for nuclear power plants.

3.0 **SCOPE:**

The terms and definitions appearing in this compilation apply to those that are used in this manual and in documentation resulting from FPL Quality Program activities.

4.0 **RESPONSIBILITY:**

It is the responsibility of the Quality Manager Juno Beach to maintain and update this glossary. It is the responsibility of the user to ascertain that these definitions are appropriate.

5.0 **DEFINITIONS:**

Abnormal Occurrence	An unscheduled incident or event which the NRC determines is significant from the standpoint of public health or safety.
Acceptance	The act of assenting to ownership of an item, structure or service as conforming to specified requirements.
Acceptance Criteria	A limit or limits placed on the variation permitted in the characteristics of an item expressed in definitive engineering terms such as dimensional tolerances, chemical composition limits, density and size of defects, temperature ranges, time limits, operating parameters, and other similar characteristics.

FOOTNOTE:
(1) - ANSI 45.2.10 Definition
(2) - QA Manual Appendix C Definition
(3) - ANSI N.18.7 Definition
(4) - ANSI NQA-1 Definition
(5) - NSAC 125 Definition/Excerpt

5.0 **DEFINITIONS:** (Cont'd)

Accepted Industry Standard	A standard established by a group representing different members of an industry who normally are those engaged in manufacturing. This standard is "accepted" by the responsible organization. Examples are: AGMA - American Gear Manufacturers Association, AISC - American Institute of Steel Construction; AISE - Association of Iron and Steel Engineers.
Accuracy	The degree of conformity of a measured value to an accepted standard value.
Activity Audits	Performed supplemental to Program Audit to verify procedure development and/or implementation of specific activities by plants/departments in accordance with Quality Instructions or other implementing procedures. Activity Audits may be planned so that a series of such audits will verify the development and implementation of a portion of the Quality Assurance Program.
Analysis	A process of mathematical or other logical reasoning that leads from stated premises to the conclusion concerning specific capabilities of equipment and its adequacy for a particular application.
(1)Approval	An act of endorsing or adding positive authorization, or both.
Approved As-Built Marked Up Drawings	Drawings marked up per plant change/modification documentation by Nuclear Engineering and field checked by Nuclear Energy. The drawings have received proper review and are approved by signature from Nuclear Energy and Nuclear Engineering.
Approved Inspector (AI)	See "Inspector" (State or Code)
(1)Appurtenance	A part that is attached to a component which has been completed.
As-Built	The plant configuration after implementation of any specific plant construction or plant change, as approved by Nuclear Engineering.
(1) As-Built Data	Documented data that describes the condition actually achieved in a product.
As Constructed	The plant configuration after implementation of any specific plant construction or plant change.

5.0 **DEFINITIONS:** (Cont'd)

(2) Assembly	A combination of subassemblies or components or both, fitted together to form a workable unit.
(2) Audit	A documented activity performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that applicable elements of the Quality Assurance Program have been developed, documented and effectively implemented in accordance with specified requirements. An audit does not include surveillance or inspection for the purpose of process control or product acceptance.
Auditable Justification	When compliance to 10 CFR 50.49 requirements is not complete, a technical evaluation is provided to demonstrate that the item can perform the required quality related function when subjected to the applicable 10 CFR 50.49 harsh environmental conditions.
Audit Finding	Deviation from specified audit criteria which is based on objective evidence.
Auditor	Any individual who participates in an audit, including lead auditors, technical specialists and others such as management representatives and auditors in training.
Audit Program Plan (APP)	Developed in accordance with department instructions to assure coverage of all activities required by license commitments to be included in the audit program and to demonstrate that this coverage has been achieved.
Augmented Quality Procurement Classification (PC-3)	1. PC-3 items and services are not subject to 10CFR 21 by the supplier. 2. This classification may be applied to any item or service that is subject to non-safety related regulatory requirements or special requirements imposed by FPL, which include those items and services defined as quality related. NOTE: Basic components cannot be procured PC-3.
Availability	The characteristic of an item expressed by the probability that it will be operational at a randomly selected future instant in time.
~~Backfit~~	~~Work performed at an operating plant under the direction of the Nuclear Construction Services organization.~~

5.0 DEFINITIONS: (Cont'd)

Backfitting	**Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the NRC rules or the imposition of a regulatory staff position interpreting the NRC rules that is either new or different from a previously applicable staff position.**
Basic Components	Those components, structures, and equipment, as well as their associated design, testing, inspection, and consulting services which are nuclear safety related. See Safety Related.
Bid Package	Proposal by prospective contractor/supplier in response to a request for bid. It includes exceptions to requirements stated in drawings, specifications, codes, standards, quality and other requirements incorporated in or referenced in the request for bid.
Blanket Purchase Order (BPO)	A Purchase Order issued to a firm to supply specified items or services to FPL for a specified period of time on an "as requested" basis. Specific Items or Services are requested to be delivered or supplied by use of a Delivery and Work Authorization (DWA) form which delineates the specific scope of work.
Blanket Purchase Order Release (BPOR)	A release or authorization to a supplier who holds a Blanket Purchase Order to provide specific items as defined in the Blanket Purchase Order. This is a PMIS generated document.
Break-In Period	That early period, beginning at some stated time, during which the failure rate of some items is decreasing rapidly; also called, "early failure" period.
Calibration	Comparison of an item of Measuring and Test Equipment (M&TE) with a reference standard or item of M&TE of equal or closer tolerances to detect and quantify inaccuracies and to report and eliminate those inaccuracies by adjustment.
Carrier	The transporting agency.

5.0 **DEFINITIONS:** (Cont'd)

(1)Certificate of Compliance	A written statement, signed by a qualified party, attesting that the items or services are in accordance with specified requirements and accompanied by additional information to substantiate the statement.
(1)Certificate of Conformance	A written statement, signed by a qualified party, certifying that items or services comply with specific requirements.
(1)Certification	The action of determining, verifying and attesting, in writing, to the qualifications of personnel or material; i.e, a written testimony of qualification.
Certified Personnel	Persons who are periodically certified by their respective employers as being qualified to perform assigned work. Certification is substantiated by documentation that verifies education or training, testing, evaluation and periodic review to assure initial and continuing proficiencies.
Certified As-Constructed	Documentation provided by and approved by Nuclear Energy or FPL Construction, to provide objective evidence as to the as-constructed configuration.
Certified Standards	Standards of measurement whose accuracy can be traced to standards at the National Institute of Standards and Technology.
(1)Certified Test Report	A written and signed document, approved by a qualified party, that contains sufficient data and information to verify the actual properties of items and the actual results of all required tests.
Channel	An arrangement of components and modules as required to generate a single protective action signal when required by a generating station condition. A channel loses its identity where single action signals are combined.
(1)Characteristic	Any property or attribute of an item, process, or service that is distinct, describable, and measurable, as conforming or nonconforming to specified quality requirements. Quality characteristics are generally identified in specifications and drawings which describe the item, process, or service.
(1)Checks	The tests, measurements, verifications or controls placed on an activity by means of investigations, comparisons, or examinations to determine satisfactory condition, accuracy, safety or performance.
Chemical Conditioning	The addition of chemicals to flush, rinse, or layup water to prevent precipitation of dissolved solids, inhibit corrosion, etc.

5.0 **DEFINITIONS:** (Cont'd)

Class IE	The safety classification of the electric equipment and systems that are essential to emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal, or otherwise essential in preventing significant release of radioactive material to the environment.
Class I Structures and Equipment	Structures and equipment that are essential to the safe shutdown and isolation of the reactor or whose failure or damage could result in a significant release of radioactive material.
Class II Structures and Equipment	Structures and equipment that are important to reactor operation but are not essential to the safe shutdown and isolation of the reactor, and whose failure cannot result in a significant release of radioactive material.
Cleaning	The removal of any contaminants that might have a deleterious effect on safe and reliable operation of the plant.
(1)Cleanness	A state of being clean in accordance with predetermined standards, and usually implies freedom from dirt, scale, heavy rust, oil or other contaminating impurities.
Code	A recognized standard to be followed when using or processing materials, or for specifying the skills involved when using or processing materials.
Code Classes	The ASME Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Power Plant Components," has four classifications: Code Classes 1,2, and 3 for fluid system components covered by the Code, and MC for reactor containment components. These classifications specify design and quality assurance requirements.
Cognizant Engineer	The engineer (or engineering organization) assigned Engineer specific task or responsibility to design, install or document an item, structure or system.
~~Commencement of Construction~~	~~Any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.~~

5.0 **DEFINITIONS:** (Cont'd)

Commercial (4) Grade Item	An item that is (1) not subject to design or specification requirements that are unique to facilities or activities licensed by the NRC, and (2) used in applications other than facilities or activities licensed by the NRC, and (3) to be ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (for example, a catalog).
Common Failure Mode	A mechanism by which a single design basis event can cause redundant equipment to be inoperable.
Company Nuclear Review Board (CNRB)	A group established to assist Company Management in assuring that nuclear generating facilities are operated and maintained in compliance with NRC license requirements.
Completely Filled Out Quality Assurance Record	A Quality Assurance Record is completely filled out when it has all necessary or normal parts, elements, or steps; it lacks nothing essential.
(1) Component	A piece of equipment such as a vessel, piping, pump, valve or core support structure, which will be combined with other components to form an assembly.
Component Identification Number	An identification number assigned to an item for use throughout its lifetime.
Computer Program	A sequence of instructions suitable for processing by a computer. Processing may include the use of an assembler, a compiler, an interpreter, or a translator to prepare the program for execution.
Computer Software	Computer programs, procedures, rules, and possibly associated documentation and data pertaining to the operation of a computer system.

5.0 **DEFINITIONS:** (Cont'd)

Conditions Adverse To Quality	Failures, malfunctions, deficiencies or deviations in material and equipment and other nonconformances which are corrected by taking action to correct the immediate condition only. Such nonconforming conditions do not require engineering evaluation or are not reportable as 10 CFR 50.55(e), 10 CFR 50.73, or 10 CFR 21 deficiencies.
Condition Report	A nonconformance reporting document used for processing nonconformances at PTN including nonconforming conditions that cannot be made acceptable utilizing existing design documents thereby requiring engineering disposition.
Configuration	The physical arrangement of components, systems and structures.
Configuration Control	Measures taken to assure that the physical arrangement of structures, systems and components are compatible with the documentation of those structures, systems and components.
Configuration Documentation	Current and applicable documentation of the physical arrangement of structures, systems and components.
Confirming Purchase Order	A written purchase order issued to a supplier as a confirmation to an oral commitment to buy item(s) or services. The orally stated order becomes a commitment to purchase when a P.O. number is given to the supplier. The written (confirming) order must bear the identified P.O. number and have a reference that shows it to be a confirming order. The same technical and quality requirements stated orally shall be specified on the confirming order.
Conforming Characteristic	A characteristic of an item whose measured value lies within specified limits.
Consensus Standard	A standard established by a group representing a cross section of a particular industry or trade or a part thereof. A cross section includes those who purchase or use products of the industry or trade as well as those who produce these products. Examples are: American National Standards Institute, American Society of Mechanical Engineers, American Society for Testing and Materials, Institute of Electrical and Electronic Engineers.

5.0 **DEFINITIONS:** (Cont'd)

Construction Phase	Includes those construction activities that occur from issuance of the Construction Permit to issuance of the Operating License for large permitted projects. Also, from start of physical implementation to system acceptance turnover for inplant projects.
Construction Tests	Those tests (including "flushes and hydros") that are made during the construction phase and are necessary to verify that the installation of each component of a system is complete and complies with the applicable specifications, standards, codes, drawings, and engineering information.
Construction Work Order (CWO)	The release and authorization to perform specific work on a specific item or system.
(1) Containment	The principal design feature of a nuclear power generating station that is provided for the specified purpose of preventing the release, even under conditions of a reactor accident, of unacceptable quantities of radioactive material beyond a controlled zone.
Contaminants	Foreign materials such as mill scale, dirt, oil, chemicals, and any matter that renders a fluid, solid or surface impure and unclean according to preset standards of acceptable cleanness.
Contract (Involving Purchase Order)	A binding agreement between two or more persons or companies.
Contract Change Order (CCO)	A serially numbered (preprinted) document, which when properly executed, authorizes required contract scope changes or gives notice to ~~the Nuclear~~ Materials Management ~~Department~~ of the need for a supplement or amendment to an existing contract.
(1) Contractor	Any organization under contract for furnishing items or services. It includes the terms A/E, NSSS, Vendor, Supplier, Subcontractor, Fabricator and Subtier levels of these where appropriate.
Controlled Area	A specified area in which exposure of personnel to radiation or radioactive material is controlled and which is under the supervision of a person who has knowledge of the appropriate radiation protection practices, including pertinent regulations, and who has responsibility for applying them.

5.0 **DEFINITIONS:** (Cont'd)

Controlled Documents — Controlled documents are defined as those documents which require accountability and provide guidance, requirements, or instruction affecting quality such that lack of up-to-date revisions may affect quality. Controlled documents include documents such as the following:

a. design specifications,
b. design, manufacturing, construction, and installation drawings,
c. quality program manuals, procedures, and instructions,
d. inspection, manufacturing, and test procedures and instructions,
e. plant operating and maintenance procedures,
f. plant Safety Analysis Reports and related design criteria documents.

Control Point — In a sequential operation, a checkpoint at which certain data are taken, inspection made or approvals required.

Corrective Action — Action taken to correct a nonconforming condition with specific emphasis on prevention of recurrence.

Critical Design Review — Evaluates the technical adequacy, completeness, and correctness of the detailed design before the start of the actual coding.

Curing — The process of maintaining a satisfactory moisture content and a favorable temperature in concrete during hydration of the cementitious materials so that desired properties of the concrete are developed.

Dead Leg — Any area that does not have flow during the cleaning operation or which cannot be drained without special provision.

Defect

1. A deviation in a basic component delivered to a purchaser for use in a facility or an activity subject to the regulation in 10 CFR Part 21 if, on the basis of an evaluation the deviation could create a Substantial Safety Hazard; or

2. The installation, use, or operation of a basic component containing a defect as defined above; or

3. A deviation in a portion of a facility subject to the construction permit or manufacturing licensing requirements of 10 CFR Part 50 provided the deviation could, on the basis of an evaluation, create a Substantial Safety Hazard and the portion of the facility containing the deviation has been offered to the purchaser for acceptance; or

5.0 **DEFINITIONS:** (Cont'd)

4. A condition or circumstance involving a basic component that could contribute to the exceeding of a safety limit, as defined in the technical specifications of a license for operation issued pursuant to 10 CFR Part 50.

(1) Defective Material	A material or component which has one or more characteristics that do not comply with specified requirements.
Deficiency	An observed condition that is, or appears to be adverse to quality or beyond a defined or approved qualitative or quantitative acceptance criterion.
Delivery & Work Authorization (DWA)	The release and authorization to a supplier who holds a Blanket Purchase Order (BPO) to perform specific work or to provide specific items as defined in the Blanket Purchase Order.
Design	Technical and management processes which commence with identification of design input and which lead to and include the issuance of design output documents.
Design Bases	That information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values, or ranges of values chosen for controlling parameters as reference bounds for design.
Design Basis Earthquake (DBE)	That earthquake which produces the maximum vibratory ground motion that the nuclear power generating station is designed to withstand, without functional impairment of those features necessary to shutdown the reactor, maintain the station in a safe condition, and prevent undue risk to the health and safety of the public.
Design Basis Event	A postulated abnormal event used in the design of nuclear power generating stations to establish the performance requirements of the structures and systems of the station.
Design Basis Event Conditions	Conditions calculated to occur as a result of the design basis event.
Design Controls	Methods for assuring that basic design requirements are formalized and translated into design documents with proper review to assure the scheduled release of a valid design.

5.0 DEFINITIONS: (Cont'd)

Design Control Document	Documents that control the proposal of a plant change or modification, the initial evaluations, the design, review, authorization, and implementation of a plant change or modification, as required by this procedure.
Design Criteria	The summation of knowledge about a thing, technique, or process which defines its nature, purpose and limits so that it may be developed, modified, manufactured, fabricated, applied, used or maintained toward the satisfaction of an established need.
Design Input	Those criteria, parameters, bases or other design requirements upon which detailed final design is based.
Design Interface	The common boundary within or between components, systems or structures in which the expertise of two or more engineering disciplines (fields of study) are shared to assure the functional adequacy of the items.
Design Interface External	Relationship between design groups from different companies. Examples are the interfaces between the plant owner and the architect engineer or the plant owner and the NSSS (Nuclear Steam Supply System) supplier, or the architect engineer and the NSSS supplier.
Design Interface Internal	Relationship between design groups or organizations within a company.
Design Life	The time during which satisfactory performance can be expected for a specific set of service conditions.
Design Output	Documents such as drawings, specifications and other documents defining technical requirements of structures, systems and components.
Design Requirements	Documents that set the functional requirements, operating conditions, safety requirements, performance objectives, design margins, and design life. Included are any special requirements for size, weight, ruggedness, materials, fabrications or construction, testing, maintenance, operating environments, safety margins, and derating factors.
Design Review	An analysis of design with respect to technical adequacy, interface control, inspectability, reliability, maintainability; and conformance to applicable codes, standards, regulations, and design criteria.

5.0 DEFINITIONS: (Cont'd)

Design Verification	Checking or verifying the adequacy of design, such as by the performance of design reviews, the use of simplified or alternate calculation methods or by the performance of a suitable test program. The design verification shall be performed and documented by a person other than the originator of the design. If necessary, the verification may be performed by the originator's supervisor, provided the supervisor did not specify a singular design approach or rule out certain design considerations, and did not establish the design inputs used in the design. The use of the originator's supervisor for design verification should be restricted to special situations where the supervisor is the only individual within the design organization competent to perform the verification.
Designated Design Organization	The engineering organization that is assigned by FPL to perform the design work for a particular item or service. This includes FPL Nuclear Engineering or any of Nuclear Engineering's contractors.
Desk Survey	An evaluation of a supplier's quality control capability made from documented procedures and records of past performance.
(1) Deviation	A nonconformance or departure of a characteristic from a specified requirements.
Document	A written or printed paper bearing the original, official, or legal form of something that can be used to provide decisive information or proof.
(1) Documentation	Any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures or results.
Drawing Manifest	A document for transmitting drawings released for construction, to. Engineering, Construction and Production.
Dynamic Load Test	A test wherein designated loads are hoisted, lowered, rotated or transported through all motions required to simulate handling of the intended items.
(3) Emergency Procedure	Written instruction that specify actions, including manipulation of plant controls, to avoid further degradation of off-normal which in themselves do not constitute an accident but could lead to an accident, reduce the consequences of an accident or hazardous condition that has already occurred, implement the emergency plan, or prepare for possible hazardous natural occurrences.

5.0 **DEFINITIONS:** (Cont'd)

Engineer	The person responsible for the technical aspects of the work.
Engineered Safety Features	Features for mitigating the consequences of postulated accidents, including for example, containment, emergency core cooling, and containment atmospheric cleanup systems.
Engineering Hold	A request by Engineering to place material or implementation on hold until Engineering releases the item in writing. An engineering hold typically occurs when design documentation needs to be reviewed or issued prior to releasing an item for use.
Engineering Limitations	Restrictions which, if disregarded, may result in damage to the item, shortening the life of the item, or preventing the item from functioning as intended.
Equipment Qualification	The generation and maintenance of evidence to assure that the equipment will operate on demand to meet the system performance requirements.
(1) Examination	An element of inspection consisting of investigation of materials, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gaging, and measurement.
(3) Experiments	Performance of those plant operations carried out under controlled conditions in order to establish characteristics or values not previously known.
(4) External Audit	An audit of those portions of another organizations's quality assurance program not under the direct control or within the organizational structure of FPL.
External Coordination	Planning, follow-up and documentation of activities among different participating companies.
Facility	A building installation, or established area that is used for material storage or protection.
Failure	The termination of the ability of an item to perform its required function. Failures may be announced and not detected until the next test (unannounced failure), or they may be announced and detected by any number of methods at the instant of occurrence (announced failure).

5.0 **DEFINITIONS:** (Cont'd)

Failure Stress	That stress at which failure is imminent due to direct loads, excessive deflections or vibrations, or permanent deformations that may lead to unsafe conditions.
Field Check	The act of verifying that the current plant configuration is accurately reflected on the drawing.
(4) Final Design	Approved design output documents and approved changes thereto.
Final Safety Analysis Report (FSAR)	Describes the facility, presents the design bases and limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole.
First Level Design Review	A review conducted by the responsible engineer within the design agency for specific design discipline.
Flame Retardant	Capable of preventing the propagation of a fire beyond the area of influence of the energy source that initiated the fire.
Flow Chart	A representation of the sequence of activities such as procurement, fabrication, processing, assembly, inspection and test, or the sequence of individual operations within one or more of those functions.
Fluid	Any gas or liquid.
Flushing	Flowing fluid through a component or system at adequate velocity to suspend and carry away contaminants.
FPL Company Technical Representative	FPL's designated representative having responsibilities and authority for administration of a purchase order or contract but not having authority to waive any obligations of FPL or the contractor provided in the purchase order or contract. The on-site coordinator, as designated by the FPL Company Technical Representative, may be assigned to assist with these responsibilities.
Fuel Element	The smallest structurally discrete part of a fuel assembly that contains nuclear materials, such as a fuel rod or fuel pin.
Generating Plant	A utility company complex, constructed and operated for the purpose of producing electric power.

5.0 **DEFINITIONS:** (Cont'd)

(2)Guidelines	Particular provisions which are considered good practice but which are not mandatory in programs intended to comply with Standards. The term "should" denotes a guideline; the term "shall" denotes a requirement; and the word "may" denotes permission, neither a requirement nor a recommendation. (See definition of Requirement)
G Force	A unit of acceleration equal to the acceleration of gravity (i.e., 32 ft/sec.^{2}) used to measure the force on an item undergoing acceleration and expressed as a multiple of the item's weight.
Handled Load	The weight of the item to be lifted plus the weight of any required rigging such as lifting beam, slings, hooks, and blocks.
(1) Handling	An act of physically moving items by hand or mechanical means, but not including transport modes.
Heavy Load	Any load carried in a given area after a plant becomes operational, that weighs more than the combined weight of a single spent fuel assembly and its associated handling tool for the specific plant in question.
Hoisting Equipment	Machinery used to physically move an item. This includes cranes, chainfalls, ratchet hoists, etc. This does not include movement via transportation modes such as fork lifts and motor vehicles.
Hold Point	An intermediate step in a step-by-step Procedure, Work Record or Checklist, where an inspection, test, or verification must be performed. Examples range from a check for cleanliness to Non-Destructive Examination of individual weld passes.
Housekeeping	Encompasses all activities related to control of cleanliness of facilities, cleanness of material and equipment, fire prevention and fire protection including disposal of combustible materials and debris, control of access, and protection of materials.
Independent Review & Audit Group (IRAG)	Personnel performing the independent review and audit function, regardless of whether they operate as part of an organizational unit or as a committee.
Initial Start-Up Testing	Testing conducted at and after fuel loading and before commercial operation that confirm the design bases and demonstrate, where practical, that the plant is capable of withstanding the anticipated transients and postulated accidents. The initial start-up tests consists of such activities as precritical tests, low power test (including critical test), and power ascension tests.

5.0 DEFINITIONS: (Cont'd)

Input Organization	The organization responsible for providing inputs to Nuclear Licensing for preparation of outgoing Nuclear Regulatory Commission correspondence.
In-Process Tests	Tests performed during the course of fabrication and construction to maintain control of items and materials. These tests may be performed by the manufacturer or supplier, but samples for these tests must be taken from items and materials that are supplied to the site for use.
Inspector	The person who performs inspections or examinations to determine compliance with specifications, procedures, drawings, and applicable standards.
(1)Inspector (State or Code)	A qualified inspector employed by a legally constituted agency of a Municipality or state of the United States, or regularly employed by an Authorized Inspection agency and having authorized jurisdiction at the site of manufacture or installation. Also is known as the "Authorized Inspector" or "(AI)".
(2) Inspector (Owner's or Installer's)	A qualified inspector employed by the Owner or Installer, whose duties include the verification of quality related activities on installations.
(2) Inspection (3)	Examination, observations, or measurement to determine the conformance of materials, supplies, components, parts, appurtenances, systems, processes, or structures to predetermined requirements.
Inspection and Test Plan	A listing of all the inspections and tests required to be performed for a specific item, component, structure or service.
Installed Life	The time interval for which an equipment or component thereof will be installed; e.g., a motor may have an installed life of 40 years with certain components of the motor being replaced periodically; thus, the installed life of the components would be less than 40 years.
Instructions	A series of logical and well defined steps which are usually, but not necessarily limited to, written descriptions that provide an efficient and uniform method for achieving an objective.
Interface Control	The steps that are taken to assure that structural, mechanical, electrical, and environmental common boundaries between adjacent regions are geometrically and functionally compatible.

5.0 **DEFINITIONS:** (Cont'd)

(4) Internal Audit	An audit of those portions of the FPL Quality Assurance Program retained under it's direct control and within the organizational structure of FPL.
Internal Coordination	Planning, follow-up and documentation of activities among participating organizations within a company.
Internal Design Interface	Relationship between design groups or organizations within a company.
Isolation Device	A device placed in a circuit to prevent malfunctions in one section to cause unacceptable influences in other sections of the circuit or other circuits.
(1) Item	Any level of unit assembly, including structure,system, subsystem, subassembly, component, part or material.
Item Control Area (ICA)	A defined area within the nuclear power plant for which the nuclear materials records are maintained in such a way that, at any time, an item count and related quantities of nuclear materials can be obtained from the records for the nuclear materials located within the area. ICA's shall have physical boundaries. ICA's generally consist of new fuel storage areas, reactors, and irradiated fuel storage areas.
Lay-up	The protection of an item after it has been cleaned, to prevent deterioration while the item is out of service or awaiting subsequent operations.
Lead Auditor	An individual whose experience and training qualifies him to organize and direct an audit, report audit findings, and evaluate corrective action.
Lifetime Records	Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10 CFR, the FSAR, or other NRC commitments to be retained for the life of the plant.
Limiting Conditions for Operations	Lowest functional capability or performance levels of equipment required for safe operation of a nuclear facility.
Limiting Safety System Settings	Settings for automatic protective devices related to those variable having significant safety functions.

5.0 **DEFINITIONS:** (Cont'd)

Lower Tier Procurement	Procurement by a Supplier from a subsupplier of items or services.
(3) Maintenance & Modification Procedures	Written instructions defining the policies and practices by which mechanical, electrical, and instrumentation and control systems of a nuclear power plant are kept in a condition of good repair or efficiency so they may satisfactorily perform their intended functions. These procedures include those activities performed by maintenance or contractor personnel to maintain repair or modify safety-related equipment. Related activities are those actions taken by operating personnel to determine that a planned activity can be performed safely under the existing plant operating conditions, to authorize the equipment to be maintained in accordance with equipment control procedures, and to assure that the equipment has been returned to normal operating status at the completion of the maintenance work including verification of functional acceptability. Procedures for these related activities by operating personnel are considered to be operating procedures, but may be included in maintenance procedures.
Malfunction	An occurrence, either catastrophic or a gradual deterioration, which causes the performance of an item to deviate from limits detailed in the item's specification. It is a condition that requires the services of maintenance personnel to return the item to a satisfactory condition.
(1) Manufacturer	One who constructs any class of component, part, or appurtenance to meet prescribed design requirements.
Master Drawing Index	A list which identifies current or archived drawing numbers, drawing revisions and the plant to which the drawing applies.
(1) Material	A substance or combination of substances forming components, parts, pieces, and equipment items. (Intended to include such as machinery, casting, liquids, formed steel shapes, aggregates, and cements.)
May	It is used to denote permission, neither a requirement nor a recommendation.
Measuring & Test Equipment (M&TE)	Devices or systems used to calibrate, measure, gauge, test, inspect, or control in order to acquire research, development, test or operational data; to determine compliance with design specifications, or other technical requirements. M&TE does not include permanently-installed operating equipment or test equipment used for preliminary checks where accuracy is not required; e.g., circuit checking multimeters.

5.0 **DEFINITIONS:** (Cont'd)

Mechanical Cleaning	A method in which contaminant removal is accomplished solely by mechanical means, including wiping, abrasive blasting, brushing, grinding, sanding, chipping, etc.
Mechanical Items	Parts, components, or systems that function primarily for pressure retaining, mass moving, or heat exchange purposes. Examples of mechanical items are rotating equipment (motors, pumps, blowers), handling equipment (cranes, hoists, conveyors), piping systems (pipe, valves, hangers), fuel handling systems, and waste effluent systems.
(1) Modifications	A planned change in plant design or operation and accomplished in accordance with the requirements and limitations of applicable codes, standards, specifications, licenses and predetermined safety restrictions.
Module	Any assembly of interconnected components which constitutes an identifiable device, instrument, or piece of equipment. A module can be disconnected, removed as a unit, and replaced with a spare. It has definable performance characteristics which permit it to be tested as a unit. A module could be a card or other subassembly of a larger device provided it meets the requirements of this definition.
National Standards	Standard practices, codes, and specifications developed and published by the National Institute of Standards and Technology (NIST), the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), the American Society of Mechanical Engineers (ASME), the American Society for Nondestructive Testing (ASNT), the Institute of Electrical and Electronics Engineers (IEEE), and other institutions of similar character.
(1) Nonconformance (4)	A deficiency in characteristic, process, service, documentation, or procedure which renders the quality of an item unacceptable or indeterminate. Examples of nonconformance include (but are not limited to) physical defects, test failures, incorrect or inadequate documentation, or deviation from prescribed processing, inspection, or test procedures.
Non-Permanent Record	Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10 CFR, the FSAR, or other NRC commitments to be retained for periods of time less than the life of the plant.

5.0 DEFINITIONS: (Cont'd)

~~Not QL-1, QL-2, or QL-3 Classification~~

~~"Not QL-1, QL-2, or QL-3" Procurement Classification: This classification may be used in lieu of the above classifications when the following condition exists:~~

~~The item or service is not for use in or in conjunction with a safety related system or quality related system, and does not meet the procurement classifications of QL-1, QL-2, or QL-3.~~

~~"Not QL-1, QL-2, or QL-3" items are not subject to 10CFR 21.~~

Nuclear Plant Drawing Index

A list of all drawings for a nuclear power plant which are required for plant operation, maintenance or design.

(3) Nuclear Power Plant

Any plant using a nuclear reactor and associated equipment necessary to produce electric power, and includes those structures, systems and components required to provide reasonable assurance the facility can be operated without undue risk to the health and safety of people.

Nuclear Reactor

An apparatus, other than an atomic weapon, designed and used to sustain nuclear fission in a self-supporting chain reaction.

Nuclear Steam Supply System (NSSS)

That portion of the nuclear generating plant which provides steam from nuclear heat. It includes the reactor, its control systems, main coolant and steam generation systems, fuel handling equipment, emergency core cooling system; and other safeguards, associated electrical equipment, instrumentation, spent fuel handling, and radioactive waste disposal system.

(1) Objective
(4) Evidence

Any statement of fact, information, or record, either quantitative or qualitative, pertaining to the quality of an item or service based on observations, measurements, or tests which can be verified.

(3) Off-Normal Condition Procedures

Written instructions, whether included in system procedures or as separate procedures, that specify operator actions for restoring an operating variable to its normal controlled value when it departs from its range or to restore normal operating conditions following a perturbation. Such actions are invoked following an operator observation or an alarm of a condition that, if not corrected, could degenerate into a condition requiring action under an emergency procedure.

5.0 DEFINITIONS: (Cont'd)

On-Site Services	Services provided by a company under contract to FPL to perform a specific nuclear plant site task.
Operating Experience	Accumulation of verifiable service data for conditions equivalent to those for the equipment to be qualified.
Operating Organization	On-site personnel concerned with day-today operation, maintenance, and certain technical services.
(3) Operating Procedures	Written instructions defining the normal method, means and limits of operation of a nuclear power plant, a plant system or systems, or processes, including actions to be taken by operating personnel for removal from and return to service of equipment on which maintenance is to be or has been performed.
Operational Tests	Tests that are performed during the operation of the plant to verify continued satisfactory performance of safety related structures, systems, and components.
Operations	Includes those operations activities which occur from the issuance of the Operating license to Decommissioning of the Plant.
Original Drawing	The drawing used by JPN as the master copy.
(1) Owner	The person, group, company or corporation who will have or has title to the facility or installation under construction.
(3) Owner Organization	The organization, including the on-site operating organization, that has overall legal, financial, and technical responsibility for the operation of one or more nuclear power plants.
(1) Package	A wrapping or container, including its contents of material or equipment.
(1) Packaged Unit	An assembly of items and parts which can be disassembled without destroying the integrity of the individual parts.
(1) Part	An item which has work performed on it and which is attached to and becomes part of a component before completion of the component.
Period of Manufacture	The period which begins with the design of the equipment or system and ends when equipment has been prepared for shipment; it will include design, procurement of materials, shop fabrications and assembly, shop testing and preparation for shipment.

5.0 **DEFINITIONS:** (Cont'd)

Physical Walk-Through	Visual check for damage, cleanness and weatherproofing, using the latest engineering document (including isometrics and P&ID's) for guidance and to verify the configuration and condition of the system and systems.
(1) Plant	The equipment, piping, structures, buildings and property that comprise an installation or facility.
Plant Change Design Package	The file containing the appropriate design control document (Plant Change/Modification PC/M Form, or Control Plant Work Order CPWO) and all pertinent documentation to support the plant changes (ie., Project Authorization Request, the Safety Evaluation, all required written reviews, design material, acceptance tests and procedures, and relevant correspondence or material applicable to the change). ~~This package is assembled as the various tasks required by this procedure are performed.~~
(5) Plant Change or Modification (PC/M)	Changes or modifications to plant systems or equipment. Changes or modifications affecting nuclear safety related systems or adversely impacting the environment are considered to be safety related. This does not include replacements of parts/components which are identical or have been demonstrated and documented as equivalent.
Plant Change/ Modification Implementation	Completion of construction/installation affecting plant drawings.
Plant Protection System	Systems provided to act, if needed, to avoid exceeding a safety limit in anticipated operational transients and to activate appropriate engineered safety features as necessary.
Precision	The degree of resolution of a measurement; for example, readability.
~~Preconstruction Phase~~	~~That period of time prior to the commencement of construction, when activities such as planning, financing, designing, procuring, and the satisfying of local, state, and Federal Governmental codes and regulations pertaining to the securing of construction permits are accomplished.~~
Preliminary Design Review	Assesses the technical adequacy of the selected design approach; checks the design compatibility with the functional and performance requirements of the Software Requirements Specification (SRS); and verifies the existence and compatibility of the interfaces between software, hardware, and user.

5.0 **DEFINITIONS:** (Cont'd)

Preliminary Safety Analysis Report (PSAR)	The detailed safety evaluation prepared for the U.S. Nuclear Regulatory Commission prior to issuance of the site construction permit. The PSAR delineates design, normal and emergency operation, potential accidents, predicted consequences of such accidents, and the means proposed to prevent these accidents and to reduce the consequences to an acceptable level.
Preoperational Testing	The tests that are conducted prior to fuel loading to demonstrate the capability of structures, systems, and components to meet safety-related performance requirements.
Principal Auditor	See "Lead Auditor".
Principal Load Carrying Members	Those components of a system whose structural integrity must be maintained to insure a safe operation.
Principal Structural Weld	Those welds which join or affect the integrity of principal load carrying members.
(1) Procedure	A document that specifies or describes how an activity is to be performed. It may include methods to be employed, the equipment or materials to be used and a sequence of operations.
Procurement Agent (PA)	See "Purchasing Agent"
Procurement Classification (PC-1)	PC-1 items and services are subject to 10CFR 21 by the supplier. This classification shall be used when one or more of the following conditions exist: a. The item or service is for use in or in conjunction with a safety related system and the item or service does not meet the definition of a commercial grade item and the work that is to be performed is safety related and any portion of the work is to be performed under the supplier's Nuclear QA Program.

5.0 DEFINITIONS: (Cont'd)

b. For training, when associated with a basic component as defined in paragraph 21.3(a)(1) of 10CFR 21 (for example, nondestructive examination training, in-service inspection (ISI) or testing (IST) training).

Procurement Classification (PC-2) - Commercial Grade

PC-2 items and services are not subject to 10CFR21 by the supplier. (FPL assumes 10CFR21 responsibility.)

This classification should be used when the item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item.

Procurement Classification (PC-3) Augmented Quality

PC-3 items and services are not subject to 10CFR 21 by the supplier.

This classification may be applied to any item or service that is subject to non-safety related regulatory requirements or special requirements imposed by FPL, which include those items and services defined as quality related.

NOTE: Basic components cannot be procured PC-3.

Procurement Classification (PC-4) Commercial

PC-4 items and services are not subject to 10CFR21 by the supplier. (For safety related services under this classification, FPL assumes 10CFR21 responsibility.)

This classification may be used when one or more of the following conditions are met:

a. The item or service is not safety related nor augmented quality.

b. The service to be provided is safety related to FPL, but commercial to the supplier and all of the work is performed under the FPL QA Program.

(2) Procurement (4) Documents

Contractually binding documents, including such documents as contracts, letters of intent, work orders, purchase orders or proposals and their acceptances which authorize the seller to perform services or supply equipment, material or facilities on behalf of the purchaser. For control purposes, procurement requisitions are considered procurement documents in the context of this definition.

5.0 **DEFINITIONS:** (Cont'd)

Procurement Requisition	Request and authorization for purchase of items and/or services. A procurement requisition consists of a Form 1 RPA, Form 2 RPA (BAR), or Contract Change Order (CCO), and any referenced attachments thereto.
Program Deficiencies	The failure to develop, document or implement effectively any applicable element of the quality assurance program.
Program Audits	Performed to verify that a program is in effect and followed to implement the FPL QA Program and to satisfy plant specific audit requirements.
(1) Project	A planned series of activities including all of the actions necessary to provide, utilize, and maintain a facility or a portion thereof.
Protection System	The electrical and mechanical devices and circuitry (from sensors to actuation device input terminals) involved in generating those signals associated with the protective function. These signals include those that actuate reactor trip and that, in the event of a serious reactor accident, actuate engineered safeguards including safety injection, recirculation, containment spray, containment isolation, and main steam isolation.
(1) Purchaser	The organization or organizations responsible for issuance and administration of a contract, subcontract, or purchase order.
Purchasing Agent	The FPL Representative designated to act in FPL's behalf on a specific procurement.
QAPRC Representative	An individual designated by the head of each department or organization who is the prime interface for coordination of quality related matter within their department, with the QA Department, or with other departments. The Quality Manager - Juno Beach or designee is the Chairman of this group.
QAPRC Meeting	Periodic meetings which are conducted by the QAPRC Chairperson to which all QAPRC members are invited.
(2) Qualification (Personnel)	The characteristics or abilities gained through training or experience or both as measured against established requirements such as standards or tests that qualify an individual to perform a required function.

5.0 DEFINITIONS: (Cont'd)

Qualification Tests	Tests performed to qualify the basic material source or manufacturer. These tests are mandatory unless current documentary test data are available to establish complete confidence in conformance to specification requirements.
Qualified Life	The period of time for which satisfactory performance can be demonstrated for a specific set of service conditions. The qualified life of particular equipment or item may be changed during its installed life where justified.
(1) Qualified Party	A person or organization competent and recognized as knowledgeable to perform certain functions.
(1) Qualified Procedure	A procedure which incorporates all applicable codes and standards, manufacturer's parameters, and engineering specifications and has been proven adequate for its intended purpose.
Qualitative Acceptance Criteria	Those acceptance criteria pertaining to quality, kind or character.
Quality	That aspect of an item, operation, process, or service which conforms to specified requirements, codes, or standards.
Quality Achievement Functions	Designing, purchasing, fabricating, handling, shipping, storing, cleaning, directing and installing.
(2) Quality (3) Assurance	All those planned and systematic actions necessary to provide adequate confidence that a structure, system or component will perform satisfactorily in service. Quality Assurance includes quality control.
QA Approved Suppliers List (QA-ASL)	The QA-ASL identifies the name, locations, scope, quality approval level and limitations of products of firms approved by QA supplying nuclear safety-related and commercial grade items or services.
Quality Assurance Indoctrination	Those instruction periods used to describe the FPL Quality Assurance Program including the administrative controls; licensing commitments to the Nuclear Regulatory Commission with 10CFR50 Appendix B; the overall company policies; FPL Topical Quality Assurance Report; a general description of the **quality instructions and procedures** ~~Quality Procedures~~ which establish the program and the organizations within FPL which have responsibilities in the program.

5.0 DEFINITIONS: (Cont'd)

Quality Assurance Program	The policies and procedures for **activities affecting** quality ~~related activities~~ established in documented form to meet specified requirements; and the implementation of those policies and procedures.
Quality Assurance Records	Those records which furnish documentary evidence of the quality of items and of activities affecting quality.
(2) Quality Control	Those quality assurance actions related to the physical characteristics or material, structure, component or system, which provide a means to control the quality of the material, structure, component or system to predetermined requirements.
Quality Control Notice (QCN)	Specific quality requirements which may be used for nuclear plant purchases. Each QCN identifies a particular certification or documentation requirement which may be applied to procurement documents. Each QCN is represented by a unique alphanumeric codes number. Copies of the QCNs are available from Nuclear Materials Management.
~~Quality Level 1 (QL 1)~~	~~QL 1 items and services are subject to 10CFR Part 21 requirements.~~

~~QL 1 Procurement Classification~~
~~This classification shall be used when one or more of the following conditions exist:~~

~~1. The item is for use in or in conjunction with a safety related system and the item or service does not meet the definition of a commercial grade item.~~

~~2. It is desired to upgrade an item from QL 2, 3, or Not QL 1, QL 2, or QL 3 for stock items that are known to have multiple safety classification applications, including QL 1, e.g., for reduced cost or increased material control considerations.~~

~~3. For training, when associated with a basic component as defined in paragraph 21.3(a)(1) of 10CFR 21 (for example, nondestructive examination training, in service inspection (ISI) or testing (IST) training).~~

5.0 DEFINITIONS: (Cont'd)

4. ~~The item is ASME Section III or Section XI.~~
~~Quality Related items and services may be procured QL-1 with 10CFR21 not required when engineering specifies that the safety class is not safety related and the purchase order specifies the vendor's 10CFR 50 Appendix B program.~~

~~Quality Level 2 (QL-2)~~

~~QL-2 items are not subject to 10CFR21 by the vendor.~~
~~Basic components that cannot be procured QL-1 due to a lack of an acceptable program and/or the vendor will not accept 10CFR21 and there is no alternate source, may be procured QL-2 using the Commercial Grade Dedication Package process even though the item does not meet the definition of commercial grade.~~

~~QL-2 Procurement Classification: This classification should be used when one of the following conditions exist:~~

1. ~~The item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item and documentation (e.g., mill test reports, certification of compliance, chemical or physical test reports, heat treat certification, reports of inspection, etc.) is required.~~

2. ~~The item is for use in or in conjunction with a safety related system and meets the definition of a commercial grade item and the functional or material characteristics of the item cannot be verified upon receipt inspection or post installation testing.~~

3. ~~The RPA Originator desires to upgrade the procurement classification from QL-3 or Not QL-1, QL-2, or QL-3 in order to gain an FPL Quality Assurance audit and approval of the vendor's program and a QC receiving inspection of an item meeting the definition of commercial grade item or to assure that only suppliers approved by QA are used for the purchase.~~

~~Quality Level 3 (QL-3)~~

~~QL-3 items are not subject to 10CFR Part 21 by the vendor.~~

~~(QL-3) Procurement Classification: This classification may be used when one or more of the following conditions are met:~~

1. ~~The item is for use in, or in conjunction with, a safety related system and meets the definition of a commercial grade item."; and the functional or material characteristics of the item can be verified after receipt by inspection or test. Therefore, if the acceptance of the item cannot be completely dedicated by inspection and/or test of the item after receipt, the item cannot be procured QL-3.~~

5.0 DEFINITIONS: (Cont'd)

~~2. Fire protection components and parts~~

~~3. It is desired to upgrade the item from Not QL-1, QL-2, or QL-3 to obtain a Quality Control receiving inspection.~~

~~NOTE: Documentation, if requested, is for commercial considerations only; it may not be used as part of the acceptance.~~

~~4. On site safety related services performed under FPL's QA Program where Quality Control inspection/ surveillance is required.~~

~~5. Basic components that cannot be procured QL-1 or QL-2 due to a lack of an acceptable program, and/or the vendor will not accept 10 CFR 21 and there is no alternate QL-1 source may be procured QL-3 using the Commercial Grade Dedication Package.~~

Quality Manager — This title refers, collectively or in part, to the Quality Manager Juno Beach, Quality Manager St. Lucie or the Quality Manager Turkey Point.

Quality Related — Quality Related is defined as those **items or related services** ~~structures, systems or components~~ which are not safety related and are in one or more of the following categories:

1. Equipment, components and structures designed to meet seismic requirements or whose failure could:
   (1) damage safety related equipment such that the equipment would be prevented from performing its safety function or
   (2) result in releases exceeding the exposure guidelines of Technical Specifications.

2. Fire protection equipment
   (1) required to protect safety related equipment,

   or

   (2) whose failure could result in water damage to safety related equipment which could prevent the equipment from performing its safety function,
   or

   (3) required to maintain the integrity of a fire barrier necessary to protect safety related equipment.

5.0 **DEFINITIONS:** (Cont'd)

3. A partial or total loss of function of a radioactive confinement system that could result in an accidental, unplanned, or uncontrolled release of radioactivity exceeding Technical Specification limits.

4. Equipment whose failure under normal operating conditions or an anticipated transient, results in:

   (1) exceeding a safety limit specified in the Technical Specifications, or

   (2) initiation of a FSAR Design Basis Accident, or

   (3) the reactor coolant system not being in a controlled or design condition while operating or shutdown.

5. Instrumentation, equipment, components, or structures required to be operable by the Technical Specifications.

6. Instrumentation that is essential to preventing or monitoring release of radioactive material to the environment which could exceed the guidelines of Technical Specifications.

Quality Verification Functions

The act of examining, reviewing, inspecting, testing, checking, auditing, or otherwise verifying and documenting that a **an activity affecting quality** ~~quality related activity~~ has been performed in accordance with specified requirements.

Reactor Coolant Pressure Boundary

Reactor coolant pressure boundary means all those pressure containing components such as pressure vessels, piping, pumps, and valves which are:

1. part of the reactor coolant system or,

2. connected to the reactor coolant system up to and including any and all of the following:

   1) the outermost containment isolation valve in system piping which penetrates primary reactor containment,

   2) the second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment,

5.0 **DEFINITIONS:** (Cont'd)

3) the reactor coolant system safety and relief valves.

(1) Receiving (4)	Taking delivery of an item at a designated location.
Redundant Equipment or System	An equipment or system that duplicates the essential function of another equipment or system to the extent that either may perform the required function regardless of the state of operation or failure of the other.
Records Center	An information center for the storage of duplicate QA records.
Record Design	Current approved design configuration of a licensed operating nuclear power plant.
Record Tracing	The master of the FPL approved record design.
Record Drawing	A copy of the record tracing.
Reference Standards	Standards of prescribed accuracy (ie., primary, secondary and working standards, where appropriate) that are used in a calibration program. These standards establish the basic accuracy limits for that program.
Regulatory Guides	A continuing series of NRC publications that are issued ~~sporadically~~ to describe ~~and make available to the public,~~ methods which are acceptable to the NRC Regulatory staff for implementing specific parts of NRC regulations.
Reliability	The characteristics of an item expressed by the probability that it will perform a required function under stated conditions for a stated period of time.
(1) Repair (4)	The process of restoring a nonconforming characteristic to a condition such that the capability of an item to function reliably and safely is unimpaired, even though that item still may not conform to the original requirement.
Reportable Event	An event of the type defined in the Code of Federal Regulations (10 CFR 50.73) requiring submittal of a Licensee Event Report (LER) to the Nuclear Regulatory Commission (NRC).
Requirement	A mandatory action, denoted by the word "shall" (See definition of Guideline). Requirements are typically based on statutes or regulations, but may be internally generated within the Company.

5.0 DEFINITIONS: (Cont'd)

Requisition and Purchasing Authorization (RPA)	A document that is prepared to identify and obtain management approval for the purchase of items/services. The term RPA includes revisions of the Form 1 & 2 RPA, the Contract Change Order (CCO), and the Buyer Action Report (BAR). Form 1 is intended for non-inventoried items and services, and is usually initiated for the requisition of an item/service for a specific work order. Form 2 is a computer generated requisition for an item maintained in Material and Supplies inventory printed to requisition quantities of the item.
Request for Bid/ Request for Quotation/ Request for Proposals	Invitation to prospective contractor or supplier to provide a proposal for requisitioned materials, goods, or services.
Responsible Organization	An organization which is in direct charge of the equipment and manpower actually engaged in an operation.
(3) Review	A deliberately critical examination; including, but not limited to, monitoring of plan operation, formal independent evaluations of certain contemplated actions, and after-the-fact investigations of abnormal conditions.
(1) Rework	The process by which a nonconforming item is made to conform to a prior specified requirement by completion, remachining, reassembling or other corrective means.
Rigging Equipment	Equipment used to connect handling equipment to an item. This includes slings, shackles, turnbuckles, special tools, etc.
(4)Right of Access	The right of a Purchaser or designated representative to enter the premises of a Supplier for the purpose of inspection, surveillance, or quality assurance audit.
Safe Load Path	A path defined for transport of a heavy load that will minimize adverse effects, if the load is dropped, in terms of releases of radioactive material and damage to safety systems. This path shall be administratively controlled by procedures or instructions and/or sketches and training. It may also be enforced by mechanical stops and/or electrical interlocks.
Safety Evaluation	A written record which provides the basis for the determination that the plant change or modification, test or experiment does or does not involve an Unreviewed Safety Question.

5.0 **DEFINITIONS:** (Cont'd)

Safety Limits	Limits (placed upon important process variables) which are necessary to reasonably protect the integrity of those physical barriers that are guarding against uncontrolled release of radioactivity.
Safety Related	Those plant features necessary to assure the integrity of the reactor coolant pressure boundary, the capability to shutdown the reactor and maintain it in a safely shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in off-site exposures comparable to the guideline exposure described in 10 CFR Part 100, "Reactor Site Criteria".
Safe Shutdown Earthquake (SSE)	That earthquake which is based upon an evaluation of the maximum earthquake potential considering the regional and local geology, seismology and specific characteristics of load subsurface material. It is that earthquake which produces the maximum vibratory ground motion for which certain structures, systems, and components are designed to remain functional (Seismic Category I). SSE has commonly been referred to as the "Design Basis Earthquake".
Services	The performance by a supplier.
Seismic Category I	Those structures, systems, and components that should be designed to remain functional if the Safe Shutdown Earthquake (SSE) occurs.
Setpoint	A predetermined control setting, at which point a bistable device changes state to indicate that the parameter being controlled has reached the selected value.
Shall	It is used to denote a requirement.
Should	It is used to denote a recommendation.
Significant Conditions Adverse To Quality	Failures, malfunctions, deficiencies or deviations in material and equipment and other nonconformances which require engineering evaluation for reportability as 10 CFR 50.55(e), 10 CR 50.73 or 10 CFR 21 deficiencies. In addition to correcting the immediate condition, corrective action for such nonconforming conditions shall identify and document the cause and include action to preclude repetition.

5.0 DEFINITIONS: (Cont'd)

Significant Deficiency	A deficiency, which, to have remained uncorrected, could have affected adversely the safety of operations of the nuclear power plant. These deficiencies are reportable to the NRC as delineated in 10 CFR 50.55(e). Significant deficiencies include, but are not limited to, a breakdown in any portion of the quality assurance program; final design(s) not conforming to established criteria; faulty construction; damage to a structure, system, or component; and deviation from performance.
Significant Incident	Any incident which is reportable to the NRC in accordance with the requirements of 10 CFR 50.55(e), Regulatory Guide 1.16, and Appendices A & B (Technical Specifications) of the Operating License. Such incidents usually involve safety implications.
Single Failure	Includes such events as the shorting or open-circuiting of interconnecting signal or power cables. It also includes single credible malfunctions or events that cause a member of consequential component, module, or channel failures; e.g., the overheating of an amplifier module would be a "single failure" even though several transistor failures might result. Mechanical damage to a mode switch would be a "single failure" although several channels might become involved.
Software Design Description	A technical description of how the software will meet the requirements set forth in the Software Requirements Specification (e.g. system or component algorithms, control logic, data structures, data set-use information, input/output formats, and interface descriptions).
Software Requirements Specification	Identifies the requirements for a system or system component (e.g., functions, performance, design constraints, interface(s) and development standards).
Software Verification and Validation Plan	Identifies the tasks, methods, and criteria for accomplishing verification and validation of the software and all test documentation required.
Software Verification and Validation Report	Documents the results of the execution of the Software Verification and Validation Plan; identifies any major deficiencies found and provides the results of reviews, audits, and tests and whether the software is ready for operational use.

5.0 DEFINITIONS: (Cont'd)

Source Inspection	The inspection of a product by FPL or its designated agent at the supplier's plant, prior to shipment.
Source Material	Uranium or thorium, or any combination thereof, in any physical or chemical form; or, ores which contain by weight one-twentieth of one percent (0.05%) or more of uranium, thorium, or any combination thereof. Source material does not include special nuclear material.
(1) Source Surveillance	A review, observation, or inspection for the purpose of verifying that an action has been accomplished as specified at the location of material procurement or manufacture.
Special Nuclear Material	Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, determines to be special nuclear material, but does not include source material; or any material artificially enriched by any of the foregoing but does not include source material.
Special Processes	Those processes which must be qualified and controlled where quality is highly dependent on close control of process variables or operator skills; and objective verifications of end quality (inspection, examination or testing) is difficult. As a further clarification, special processes identified by applicable codes and standards shall be controlled, qualified and implemented in accordance with those codes and standards. Examples of special processes include (but are not limited to) welding, heat treating and nondestructive examination~~, and special nuclear cleaning~~. Flushing, protective coating, ~~and~~ plating applications, and nuclear cleaning should be reviewed to determine if they are special processes.
Special Quality Assurance Document (SQAD)	Standardized quality requirements which are frequently used for nuclear related purchases. Each SQAD defines a particular characteristic or set of characteristics which are commonly applied to nuclear procurement documents. They are intended as a convenience to the users for ease of inclusion in RPAs and POs. Copies of SQADs are available from Nuclear Materials Management.

5.0 DEFINITIONS: (Cont'd)

(1) Specification	A concise statement of a set of requirements to be satisfied by a product, a material, or process; indicating, whenever appropriate, the procedure by means of which it may be determined whether the requirements given are satisfied.
Start-Up Tests	Tests that are performed after initial fuel loading and proceed through several power level plateaus to 100% power.
Stop Work Order	Management order to stop all work or plant operations as defined in the order.
Stop Work Request	Request to management to issue a Stop Work Order.
(2) Storage	That period following the release of an item for shipment until turnover for start-up or preoperational testing. This includes in-place storage.
Storage Facilities	Warehouse or yard area designated and prepared for the holding of items.
Subassembly	A replaceable combination of parts which is an element of an assembly.
Substantial Safety Hazard	A loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed under applicable Parts of Title 10, Code of Federal Regulations.
(1) Subsystem	A group of assemblies or components or both, combined to perform a single function.
Subtier Procurement	Procurement by a supplier from a subsupplier of items or services.
(3) Supervision	Direction of activities of personnel or monitoring of a function or functions through a supervisor who is responsible and accountable for the activities he directs or monitors.
Supplier	Any individual or organization under contract for furnishing items or services. "Supplier" encompasses the terms Vendor, Seller, Contractor, Subcontractor, Fabricator, Consultant, and lower tier levels.
Supplier Deviation Notice (SDN)	Notification by a supplier of a deviation or discrepancy with regard to the contracted quality and/or technical requirements of a purchase order /contract.

5.0 **DEFINITIONS:** (Cont'd)

Supplier Facility Evaluation (Audit)	An evaluation by ~~a Principal~~ Lead Auditor of the effectiveness of a supplier's Quality Assurance Program and the firm's ability to supply a product of acceptable quality.
Supplier Reviewer	A ~~Principal~~ Lead Auditor, a Quality Engineer or other individual who is designated by the Quality Manager Juno Beach to review and determine the acceptability of a supplier, based upon the results of an evaluation.
Surveillance	The physical presence to monitor by observation the designated activities (including requirements for data, records, and logging), to assure that they are performed in a specified manner.
~~(3)~~ Surveillance Testing	Periodic testing to verify that ~~safety-related structures, systems, and components~~ items affecting quality continue to function or remain in the state of readiness necessary to perform their safety function.
(2) System (3)	An integral part of a nuclear power plant comprised of electrical, electrical or mechanical components (or combinations thereof) that may be operated as a separate entity to perform a specific function.
(1) System Performance Test	A test performed on a completed system including electric, instrumentation, controls, fluid and mechanical subsystems under normal or simulated normal process conditions such as temperature, flow, level, and pressure.
Technical Evaluation	An evaluation performed to assure that the correct requirements are specified for procured items. The Technical Evaluation, Commercial Grade Dedication (when required) and Item Equivalency Evaluation (when required) are controlled as one document and constitute a procurement specification.
Technical Review	A determination as to whether a deficiency or nonconformance that is detected during a design, construction, procurement, installation, test, operating, or modification activity will be accepted "as is", reworked, repaired to an acceptable condition, or rejected.
Technical Specifications (Safety)	Those specifications contained in a facility operating license which define specific technical operating limits and conditions imposed upon the facility operation; the basis for these limits and conditions, and the surveillance requirements which relate to the tests, calibrations, and inspections necessary to assure that the quality of systems and components is maintained.

5.0 **DEFINITIONS:** (Cont'd)

Temporary Procedures	Temporary Procedures are written instructions which may be issued to: 1. Direct operations during testing, refueling, maintenance, and modifications. 2. Provide guidance in unusual situations not within the scope of the normal procedures. 3. Ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures or has been modified or extended in such a manner that portions of existing procedures do not apply.
Temporary Storage Facility	A Quality Assurance Record Storage Facility that meets all of the requirements of a permanent storage facility except, the records are stored for a limited period of a time up to 18 months before being transmitted to a permanent storage facility.
(2) Testing (3)	Performance of those steps necessary to determine that systems or components function in accordance with pre-determined specifications.
Test Plan	An outline, narrative description, or flow diagram indicating the tests to be performed, the methods to be used and the points in the process where they are to be executed. May be a test procedure.
Tolerance	The range of acceptable values for a characteristic which is bounded by the specified upper and lower limits.
Topical Quality Requirement (TQR)	**A document that delineates Quality Assurance Program requirements and responsibilities and summarizes the FPL approach to activities related to items and services included in the Quality Assurance Program. TQRs are issued and controlled by the Nuclear Assurance Department.**
Traceability	Maintaining identification for the purpose of preventing the use of incorrect or defective materials, components or modules.

5.0 DEFINITIONS: (Cont'd)

(1) Transit	A state of being conveyed or transported from one place to another.
Transportation Mode	A method identified by the conveyance used for transportation of items and may include motor vehicles, ships, railroad cars, or aircraft. Each cargo-carrying body (trailer, van, boxcar, etc.) is a separate vehicle.
(1) Trip-Point	A predetermined critical level at which a bistable device changes state to indicate that the quantity under surveillance has reached the selected value.
Trouble Shooting	An activity performed by a qualified technician to determine why an item is not performing its intended function and what caused it to malfunction.
Unreviewed Environmental Question	A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns: 1) a matter which may result in significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES), supplements to the FES environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board (ASLB), 2) a significant change in effluents or power levels, 3) a matter not previously reviewed and evaluated in the documents listed in one (1) above, which may have a significant adverse environmental impact.
Unreviewed Safety Question	An Unreviewed Safety Question is defined in 10 CFR 50.59. A proposed change, test, or experiment shall be deemed to involve an Unreviewed Safety Question if: 1. The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report may be increased; or 2. If a possibility for an accident or malfunction of a different type than evaluated previously in the Safety Evaluation Report may be created, or 3. If the margin of safety as defined in the basis for any Technical Specification is reduced.
Update	Revise and/or enter into the nuclear plant drawing system.

5.0 DEFINITIONS: (Cont'd)

(1) Use-as-is	A disposition which may be imposed for a nonconformance when it can be established that no adverse conditions will exist and that the subject will satisfy all engineering functional requirements including those of performance, maintainability, fit, and safety.
User Documentation	Specifies and describes the required input data, input sequences, options, program limitations, and other activities/ items necessary for the execution of the software. User documentation shall include as a minimum: 1. User instructions that contain an introduction, a description of the user's interaction with the system, and a description of any required training for using the system. 2. A system narrative. 3. Input/output specifications. 4. Samples of all outputs, forms, reports, or displays. 5. Data entry instructions for data preparation, data keying, data verification, and error correction. 6. References to all documents or manuals intended for users. 7. A description of system limitations. 8. A description of possible error situations and how the user should respond.
Validation	The process of evaluating software at the end of the software development process to ensure compliance with software requirements.
Vendor Manual	A manual supplied by equipment manufacturers that addresses installation, operation, and maintenance of the equipment. NOTE: "Vendor Manual" also refers to all vendor supplied technical information such as Bulletins, Parts Bulletins, Notices, Letters, etc. that affects vendor manual contents.
(1) Verification (Hardware)	An act of confirming, substantiating and assuring that an activity or condition has been implemented in conformance with the specified requirements.
Verification (Software)	The process of determining whether or not the products of a given phase of the software development cycle fulfill the requirements established during the previous phase.
Vital Area	An area located within a protected area containing vital equipment or facilities.

5.0 **DEFINITIONS:** (Cont'd)

Vital Equipment	Any equipment system, device, or material; the failure, destruction or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.
Waiver	An exception to established controls, or the adoption of special procedures in lieu of controls.
Witness	To watch over, observe, or examine a specific test or work operation which includes sign-off responsibility.
Work Instructions	Instructions to personnel performing work on specific areas such as controls and identification of materials and equipment during fabrication or installation.
Workmanship	That quality of an item that expresses its skillful and artful manufacture, without apparent blemishes.
Wrap	A flexible material, formed around the item or package to exclude dirt and to facilitate handling, marking or labeling.

Enclosure III