FPLTQAR 1-76A

(FPL-NQA-100A)
REVISION 16
JUNE 12, 1990

TOPICAL QUALITY ASSURANCE REPORT

FPL

SUMMARY OF MANUAL REVISIONS

PROC. NO.	REV.	C/N	SUMMARY
Introduction	13		
TQR 1.0	27		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 2.0	12		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 3.0	10		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 4.0	7		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 5.0	10		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 6.0	9		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 7.0	7		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 8.0	3		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 9.0	10		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 10.0	11		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 11.0	4		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 12.0	5		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 13.0	8		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 14.0	10		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.

PROC. NO.	REV.	C/N	SUMMARY
TQR 15.0	10		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 16.0	8		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 17.0	3		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
TQR 18.0	8		This revision incorporates responsibilities from the Quality Procedures (QP) which were deleted.
Glossary	17		This revision incorporates responsibilities from the Quality Procedure (QP) which was deleted.
Appendix A Figure 1	21		This revision reflects the current organization.
Appendix A Figure 1-2	6		This revision reflects the current organization.
Appendix A Figure 1-3	7		This revision reflects the current organization.
Appendix E			Deleted through the QP Deletion Project.
QP 2.3	11		Deleted through the QP Deletion Project.
QP 2.4	7	32,36	Deleted through the QP Deletion Project.
QP 2.5	11		Deleted through the QP Deletion Project.
QP 2.7	3		Deleted through the QP Deletion Project.
QP 2.8	5	38	Deleted through the QP Deletion Project.
QP 2.9	8	37, 39	Deleted through the QP Deletion Project.
QP 2.10	3	38	Deleted through the QP Deletion Project.
QP 2.12	6		Deleted through the QP Deletion Project.
QP 2.13	6		Deleted through the QP Deletion Project.
QP 2.14	2	40	Deleted through the QP Deletion Project.
QP 2.15	1		Deleted through the QP Deletion Project.

PROC. NO.	REV.	C/N	SUMMARY
QP 2.17	3		Deleted through the QP Deletion Project.
QP 3.2	8	39	Deleted through the QP Deletion Project.
QP 3.4	10		Deleted through the QP Deletion Project.
QP 3.5	4	38,40	Deleted through the QP Deletion Project.
QP 3.6	5	31	Deleted through the QP Deletion Project.
QP 3.7	2		Deleted through the QP Deletion Project.
QP 4.6	3		Deleted through the QP Deletion Project.
QP 4.7	1		Deleted through the QP Deletion Project.
QP 5.1	8		Deleted through the QP Deletion Project.
QP 5.2	2		Deleted through the QP Deletion Project.
QP 6.1	3		Deleted through the QP Deletion Project.
QP 6.2	8		Deleted through the QP Deletion Project.
QP 6.6	4		Deleted through the QP Deletion Project.
QP 6.7	2		Deleted through the QP Deletion Project.
QP 7.1	14		Deleted through the QP Deletion Project.
QP 7.4	14		Deleted through the QP Deletion Project.
QP 7.6	6	39	Deleted through the QP Deletion Project.
QP 7.9	3		Deleted through the QP Deletion Project.
QP 8.1	6		Deleted through the QP Deletion Project.
QP 9.1	5		Deleted through the QP Deletion Project.
QP 9.4	2	38	Deleted through the QP Deletion Project.
QP 10.3	9		Deleted through the QP Deletion Project.
QP 11.4	10		Deleted through the QP Deletion Project.

PROC. NO.	REV.	C/N	SUMMARY
QP 12.1	10	37, 38	Deleted through the QP Deletion Project.
QP 12.2	2		Deleted through the QP Deletion Project.
QP 13.1	7	40	Deleted through the QP Deletion Project.
QP 14.3	0	38,40	Deleted through the QP Deletion Project.
QP 15.2	7		Deleted through the QP Deletion Project.
QP 15.3	0		Deleted through the QP Deletion Project.
QP 16.1	11		Deleted through the QP Deletion Project.
QP 16.4	11	38,40	Deleted through the QP Deletion Project.
QP 17.1	17	40	Deleted through the QP Deletion Project.
QP 18.1	18		Deleted through the QP Deletion Project.

Florida Power & Light Company (FPL) has established and implemented a Quality Assurance Program to provide assurance that the design, procurement, modification and operation of nuclear power plants conform with applicable regulatory requirements. The FPL Quality Assurance Program described in this Topical Report is in compliance with the requirements of Appendix B to 10 CFR Part 50.

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.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

August 11, 1993

Docket Nos. 50-335, 50-389, 50-250, 50-251
License Nos. DPR-31, DPR-41, DPR-67, NPF-16

Florida Power and Light Company
ATTN: Mr. J. H. Goldberg
President - Nuclear
P. O. Box 14000
Juno Beach, FL 33408-0420

Gentlemen:

SUBJECT: ACCEPTANCE OF CHANGES TO THE TOPICAL QUALITY ASSURANCE REPORT (FPLTQAR 1-76A) FOR ST. LUCIE UNITS 1 AND 2 AND TURKEY POINT UNITS 3 AND 4

We have reviewed the changes addressed in the annual update of the Florida Power and Light Company Topical Quality Assurance Report dated June 2, 1993. Our review of the TQAR included the following material: TQAR Program - Changes through Rev. 34 dated April 1, 1993. We have concluded that the changes are administrative in nature and reflect organizational changes made throughout Florida Power and Light Company.

This review indicates that FPLTQAR 1-76A (Revision 34) continues to satisfy 10 CFR 50, Appendix B requirement and is therefore acceptable.

Any questions you may have concerning this review should be directed to F. Jape of my staff on 404-331-4182.

Sincerely,

for Albert F. Gibson, Director
Division of Reactor Safety

cc: D. A. Sager
Site Vice President
St. Lucie Nuclear Plant
P. O. Box 128
Ft. Pierce, FL 34954-0128

R. E. Grazio, Director
Nuclear Licensing
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

(cc cont'd - See page 2)

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

AUG 20 1991

RECEIVED
AUG 26 1991
Nuclear Licensing

SGTB:TOM
71-0169

Florida Power & Light Company
ATTN: Mr. J. H. Goldberg, President
Nuclear Division
P.O. Box 14000
Juno Beach, FL 33408

Dear Mr. Goldberg:

Enclosed is Quality Assurance Program Approval for Radioactive Material Packages No. 0169, Revision No. 4.

Please note the conditions in the approval.

Sincerely,

Charles E. MacDonald, Chief
Transportation Branch
Division of Safeguards
and Transportation, NMSS

Enclosure:
As stated

NRC FORM 311 (9-87)

U. S. NUCLEAR REGULATORY COMMISSION

QUALITY ASSURANCE PROGRAM APPROVAL FOR RADIOACTIVE MATERIAL PACKAGES

1. APPROVAL NUMBER: 0169
REVISION NUMBER: 4

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and Title 10, Code of Federal Regulations, Chapter 1, Part 71, and in reliance on statements and representations heretofore made in Item 5 by the person named in Item 2, the Quality Assurance Program identified in Item 5 is hereby approved. This approval is issued to satisfy the requirements of Section 71.101 of 10 CFR Part 71. This approval is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

2. NAME
Florida Power & Light Company

STREET ADDRESS
P.O. Box 14000

CITY: Juno Beach | STATE: FL | ZIP CODE: 33408

3. EXPIRATION DATE
August 31, 1994

4. DOCKET NUMBER
71-0169

QUALITY ASSURANCE PROGRAM APPLICATION DATE(S)
July 17, 1989 and August 9, 1991

5. CONDITIONS

1. Activities conducted with regard to transportation packages under applicable criteria of Appendix B to 10 CFR Part 50 authorized by this approval: procurement, maintenance, repair and use. All other activities (i.e., design, fabrication, assembly, and modification) shall be satisfied by obtaining certifications from package suppliers that these activities were conducted in accordance with an NRC-approved QA program. It shall remain the responsibility of the licensee-user that all transportation activities meet the requirements of 10 CFR §71.101.

2. Records for each shipment of licensed material as required by 10 CFR 71.91(a) must be retained for a period of three years.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Charles E. MacDonald

CHIEF, TRANSPORTATION BRANCH
DIVISION OF SAFEGUARDS AND TRANSPORTATION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

AUG 20 1991

DATE

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 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.

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.

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 1.3.1.

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.

1.3.1 Nuclear Division

1.3.1.1 Plant Vice Presidents

1.3.1.2 Nuclear Services

1.3.1.3 Nuclear Engineering and Licensing

1.3.1.4 Nuclear Assurance

1.3.1.5 Nuclear Business Services

1.3.2 Support Departments

1.3.2.1 Administrative Services
- Corporate Records
- Documentary Files

1.3.2.2 Environmental Affairs

1.3.2.3 Protection &Control Systems

1.3.2.4 Information Management

1.3.1 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, , and the Manager Nuclear 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.

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, providing work direction to this group.

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.

1.3.1.2 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.

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 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.

Nuclear Engineering 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;

- o Administering the Commitment Tracking System;
- o Administering the Operating Experience and Feedback System.

c. Materials Management

Materials Management is responsible for:

- o negotiation, generation, 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;
- o reviewing procurement documents to assure that technical and quality requirements developed by others are incorporated into the procurement documents which it authorizes;
- o ensuring that requisitioning documents have the required approvals;
- o maintaining traceability of procurement document records for which they are responsible until transmitted to an approved storage facility.

d. Nuclear Technical Support

Nuclear 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 coordinating and directing the computer hardware and telecommunication planning and control within the Nuclear Division;

- 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.

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 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;

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.

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

- 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 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 Materials Management and maintain the Quality Assurance Department list of approved suppliers;

- 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 instructions;
- 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;
- 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;
- 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

1.3.1.5 Nuclear Business Services

The Manager Nuclear Business Services 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.

1.3.2 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.

1.3.2.1 Administrative Services

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

1.3.2.2 Environmental Affairs

Environmental Affairs is responsible for obtaining the federal and state environmental permits required for FPL facilities and operations. Environmental Affairs is also responsible for providing technical support on environmental regulatory requirements, including regulatory development, enforcement actions, compliance with environmental

1.3.2.4 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.

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 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.

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.

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.

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. 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.

Instructions shall also require the head of each 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. 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

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. 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.

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

Design methods, materials, parts, equipment and processes, including those associated with commercial grade items that are essential to the function of the 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 item. Quality standards and quality requirements shall be specified on design output documents. Changes from approved quality- 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.

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 instructions that govern design verification. These 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

d. 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;
e. Performing design verification, including evaluation of the effects of proposed design changes on overall design adequacy (design integration);
f. Providing Nuclear Engineering approval of design documents;
g. Updating design documents and drawings according to applicable procedures;
h. Coordinating the NRC interface for 10 CFR 50.59 reports.

3.3.2 The Site Vice President is responsible for:

a. Reviewing, tracking the status of, and maintaining a file on proposed PC/Ms;
b. 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;
c. 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;
d. maintaining design documents as Quality Assurance records.
e. assuring that all plant design changes and drawing changes are coordinated through Nuclear Engineering;
f. determining whether or not a proposed design change affects nuclear safety;
g. 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);
h. 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;
i. reviewing design changes to ensure that the implementation of the design change is coordinated with any necessary changes to operating practices and procedures.

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 Instructions shall identify the responsibilities and actions required of the organizations originating, reviewing, approving, and controlling procurement documents. These 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;

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

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 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:

a. Clearly describing the technical and quality considerations for the procurement of items or services;
b. Specifying any special requirements;
c. Specifying documentation required from the supplier;
d. Specifying special handling, preservation, storage, cleaning, packaging, and shipping requirements, as appropriate.

d. Referencing and attaching appropriate Quality Assurance Program requirements, as referenced on respective procurement requisitions, requests for bid proposals, purchase orders and contracts;

e. 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;

f. 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 the Topical Quality Assurance Report which complies with the criteria of 10 CFR 50, Appendix B. 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 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

5.2.4 Acceptance Criteria

Quality Instructions shall require that 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 Quality Instructions shall delineate the control measures 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;

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 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.

6.3.3 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 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 Evaluation of Suppliers

Procurement source evaluation and selection measures shall be specified in 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 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 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

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:

a. Determining the methods of acceptance for services requested by them;
b. The performance of the acceptance methods selected, when assigned to them.

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

a. Requesting that Nuclear Assurance perform a supplier evaluation;
b. Determining the methods of acceptance for items and services.

7.3.3 The Vice President Nuclear Assurance is responsible for:

a. Assuring that evaluations of suppliers are performed and the results documented in accordance with approved Quality Instructions;
b. Determining the methods of source verification;
c. Performing receipt inspections in accordance with approved Quality Instructions;

7.3.4 The Site Vice President is responsible for:

a. Requesting that Nuclear Assurance perform a supplier evaluation;
b. Examining items for shipping damage upon receipt;
c. 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 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;

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

Special process requirements shall be included in design outputs and changes thereto. Special processe procedures shall be developed, reviewed, approved and controlled, and special process personnel and equipment 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.

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. Others, (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.

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.

9.2.5 Special Process 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, these records shall be retained by the vendor or supplied to FPL as required by contract or purchase order. 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.

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:

a. Ensuring that special process procedures used by their department are reviewed, approved, controlled, and are qualified prior to or during initial use;
b. Ensuring that special process personnel in their department are qualified and certified;
c. Ensuring that records associated with special processes under their control are reviewed and maintained;

c. 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. 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

For plant operations, maintenance, or modification activities, a program for on-site inspection of activities affecting quality shall be established. 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 preoperational start-up and testing of plant modifications, Nuclear Division personnel may report functionally to the 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.

10.2.4 Inspection Procedures

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 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.

10.3.2 The Vice President Nuclear Assurance is responsible for:

a. Implementation of a program for inspection and surveillance activities;

b. Ensuring that required QC inspections are incorporated into inspection/test/ maintenance procedures, design change documents, and work process control documents;

c. Ensuring that inspections and surveillances are correctly performed and documented;

d. 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, 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 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

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 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:

a. Assuring that plant tests are identified, scheduled, controlled, performed and documented;
b. Assuring that plant test procedures are reviewed and approved.

11.3.2 The Vice President Nuclear Assurance is responsible for:

a. 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:

a. Assuring the identification, scheduling, control, performance, and documentation of tests performed by Protection & Control Systems;
b. Submitting test procedures to the Plant General Manager for review;
c. Coordinating test schedules with the Plant General Manager.

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

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:

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"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.

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.

13.3 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

A suitable system for identifying the inspection, test, and operating status of materials, equipment, systems, and components shall be established. Each system established shall be implemented and maintained in accordance with written 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. Methods to verify adequacy of the controls shall be established and implemented, as appropriate.

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 Instructions shall define the responsibilities and methods for identifying, documenting, segregating and dispositioning nonconforming items. 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. 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 shall be documented and reported for corrective action. Measures shall be delineated in 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 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, shall be initiated by the Site Vice President, and approved by Nuclear Engineering. 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.

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.

15.3.4 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 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.

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.

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 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.

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.

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

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 Instructions shall delineate requirements for the conduct of audits. These 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 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 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

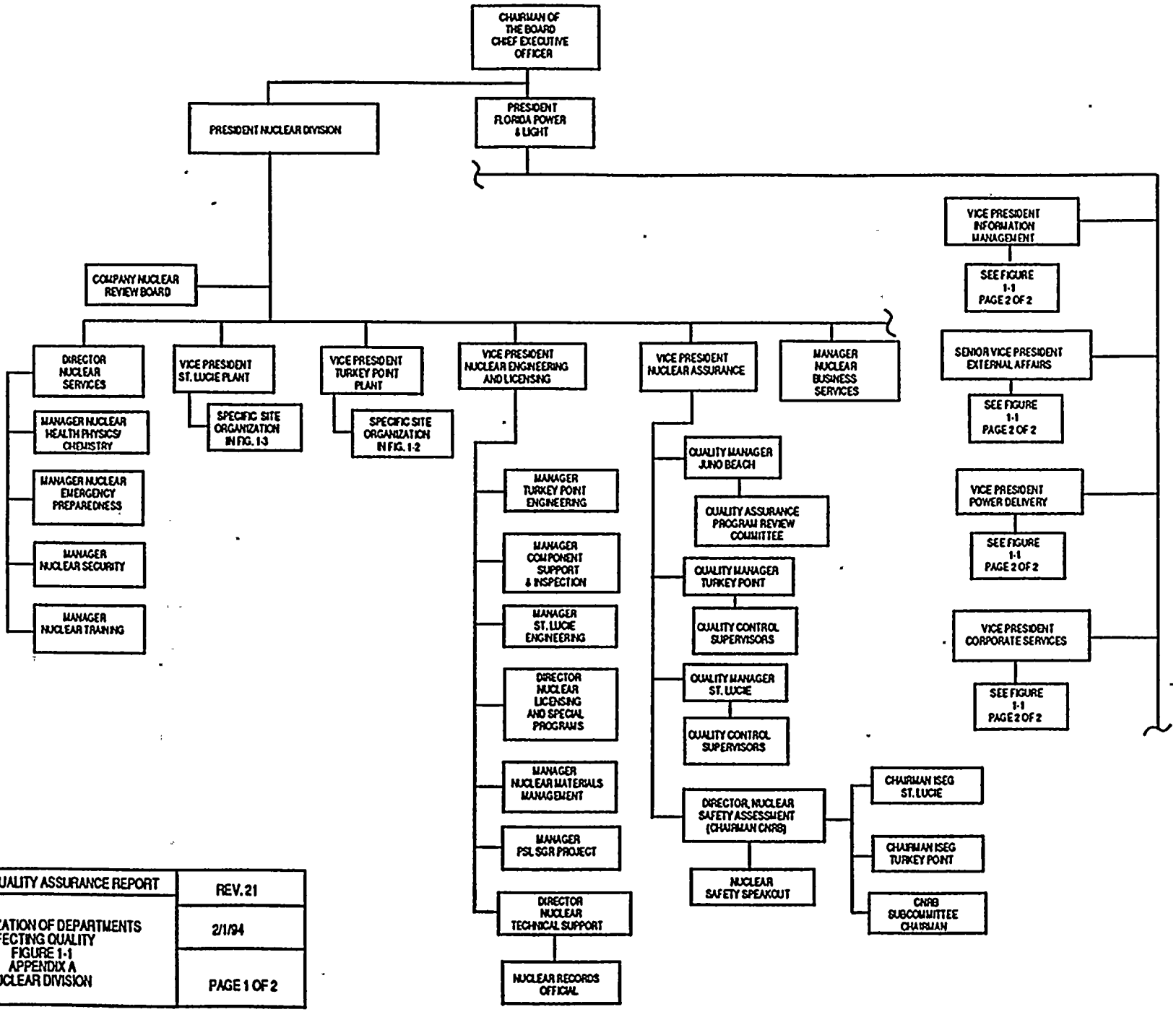
Audit findings shall be documented in written reports. Audit reports shall be distributed to the responsible management of the audited FPL organization within thirty calendar days after completion of the audit.

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

d. Designating a qualified replacement Lead Auditor (in writing) if the audit team leader transfers from the respective QA group or is otherwise unable to continue the assigned audit;

e. The qualification of 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 instructions.



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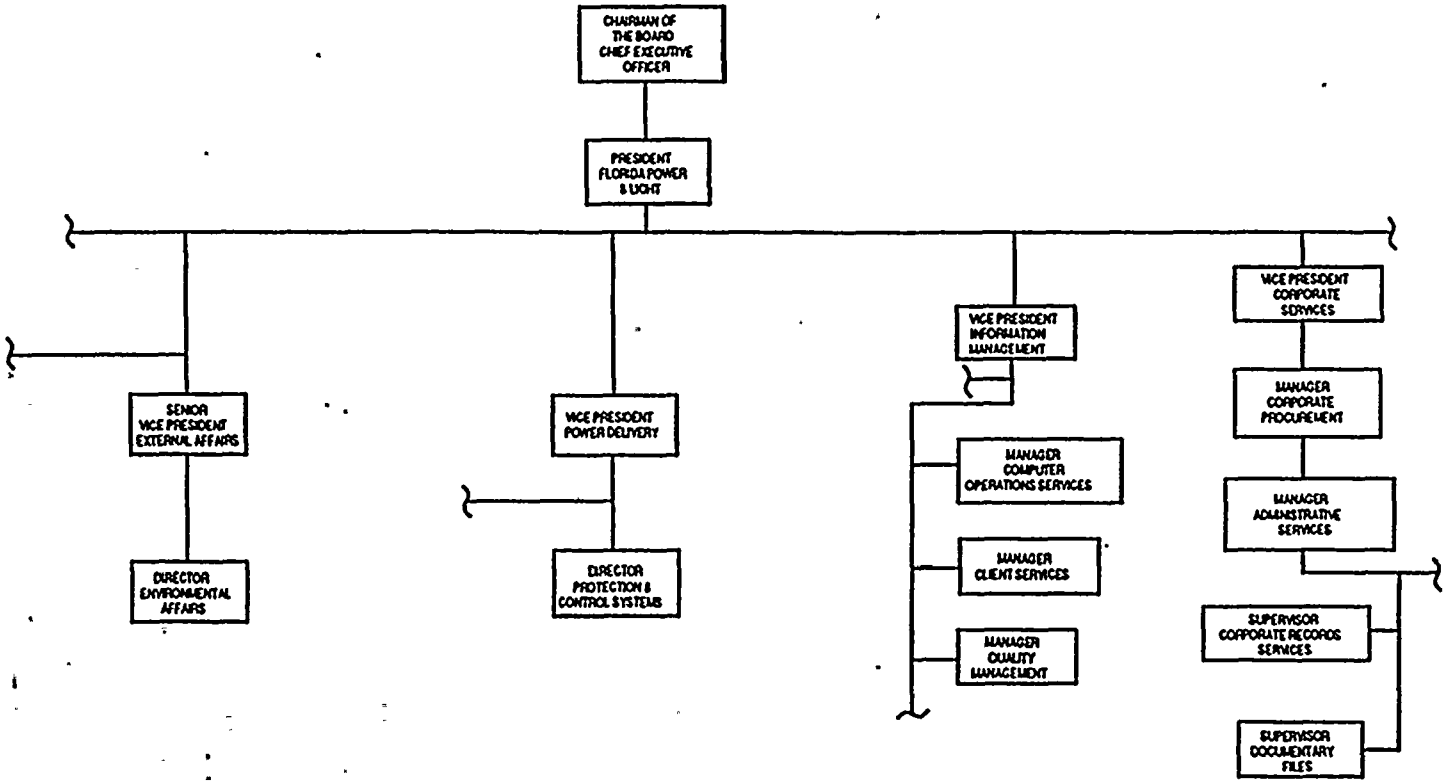

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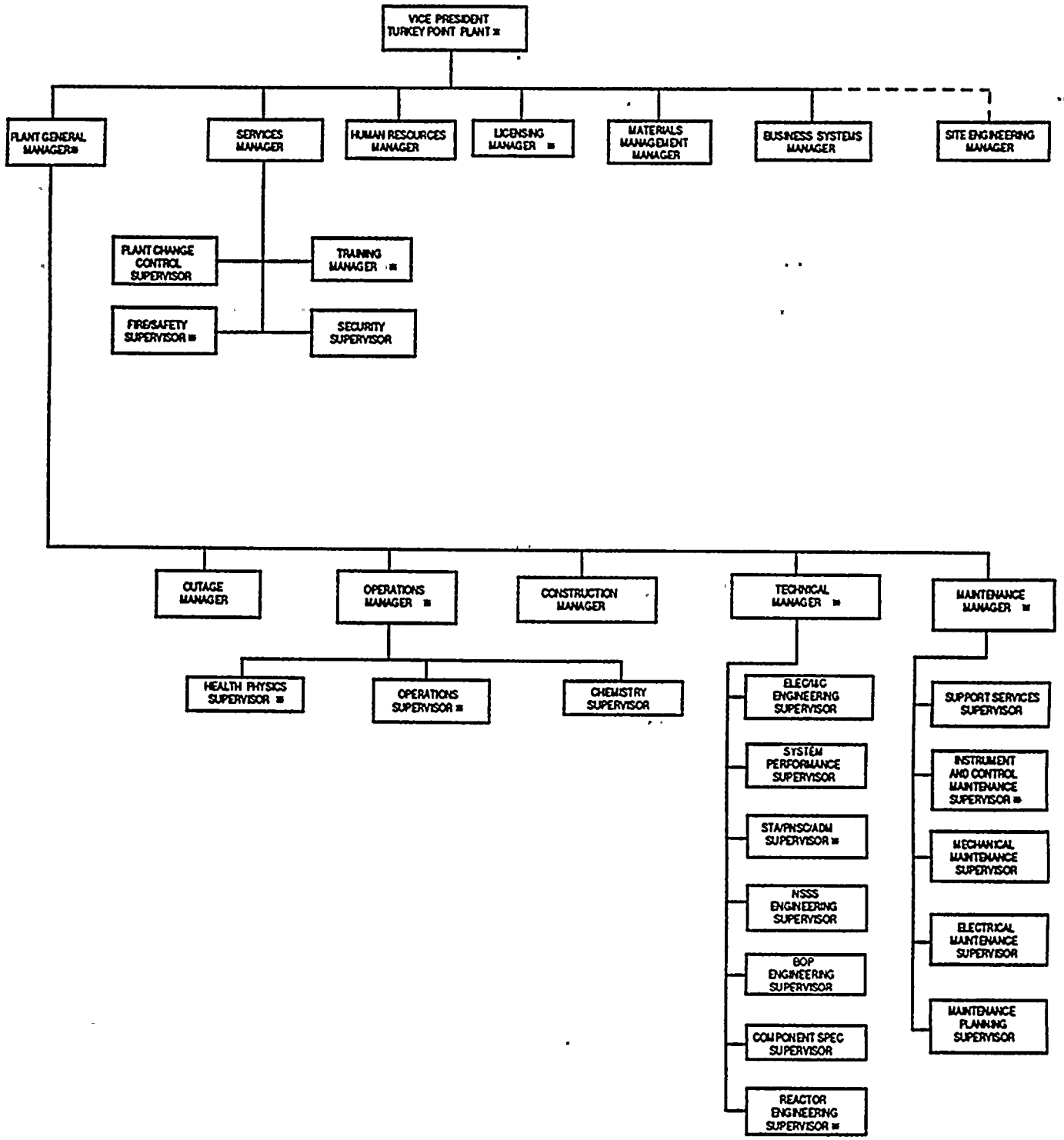

* - Indicates position with accountabilities in Technical Specifications.

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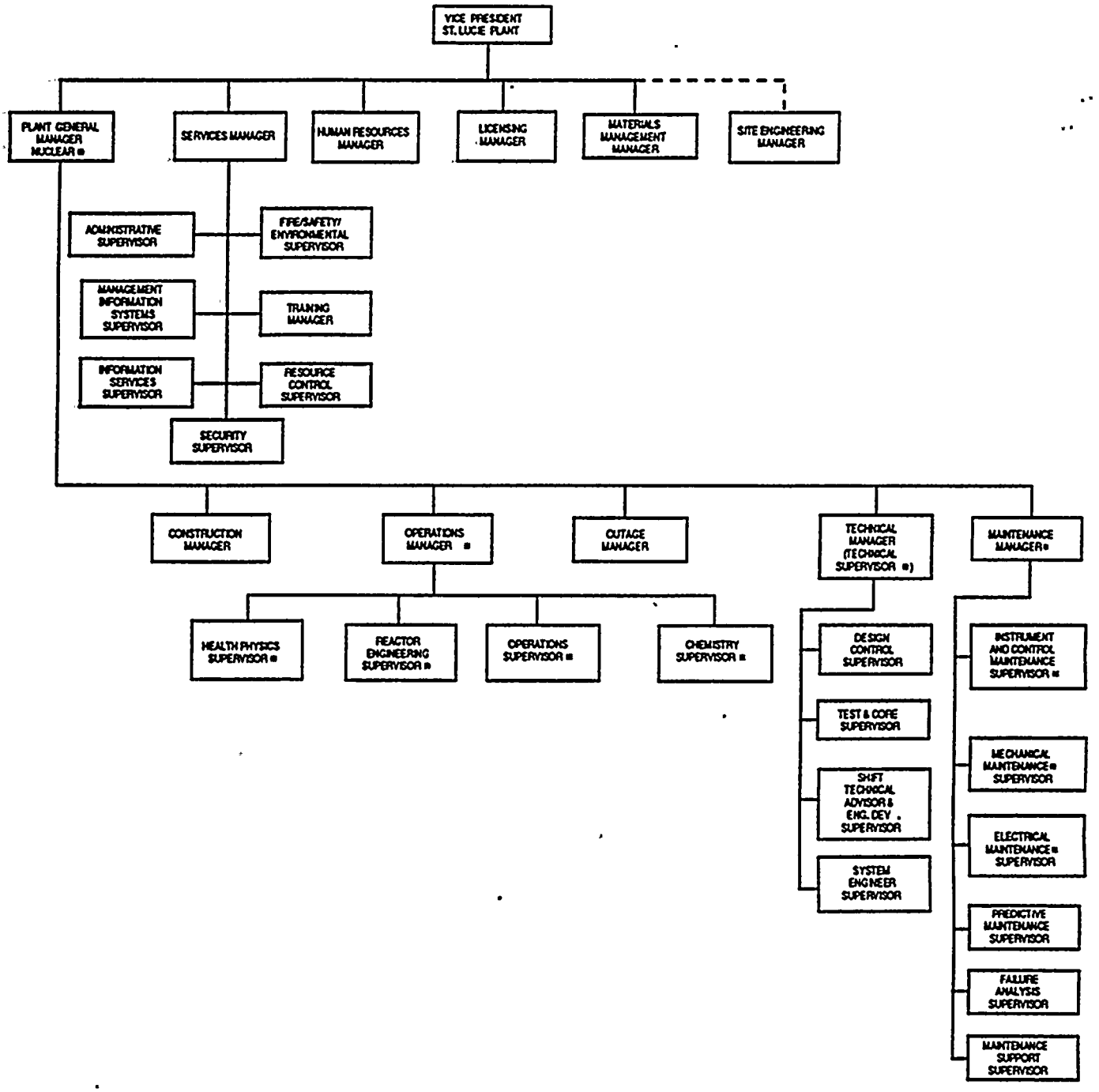

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■ - Indicates position with accountabilities in Technical Specifications.
Where multiple titles occur, the first position listed shall act in the capacity of the other listed titles.

QUALIFICATION AND EXPERIENCE REQUIREMENTS FOR FPL QUALITY ASSURANCE PERSONNEL

TITLE EXPERIENCE*	EDUCATION AND BACKGROUND
Quality Managers (JB/PTN/PSL)	Shall satisfy the following set of requirements: Graduate of a four year accredited engineering or science college or university, plus seven years of industrial experience, including five (5) years in positions of leadership such as lead engineer, project engineer, audit team leader, etc. At least two (2) years of this five (5) years experience shall be nuclear power plant experience in the implementation of the Quality Assurance Program. Six (6) months of the two (2) years experience shall be obtained within a Quality Assurance organization. A masters degree in engineering or business management is considered equivalent to two (2) years of general industry experience.

* The education and experience requirements should not be treated as absolute when similar training or an outstanding record will provide reasonable assurance that a person can perform the required tasks.

This topical report contains the program requirements for Florida Power & Light Company's Quality Assurance Program. The Quality Assurance Program is described in detail in the Florida Power & Light Company Quality Assurance Manual.

The Regulatory Guides, codes, and standards specifically listed in the matrix of this appendix (on page 2) represent the baseline documents used in the preparation of FPL's QA Manual and this topical report. These documents, therefore, provide the basis for the FPL QA Program, but they are not considered to be part of the QA Program unless specifically addressed in the applicable SAR, technical specifications, etc.

The FPL Quality Assurance Program meets the requirements of the documents referenced in this appendix. Any alternatives or clarifications made to the requirements contained in these documents are stated on pages subsequent to the second page of this appendix.

GOVERNMENT DOCUMENT	DATED	REFERENCE INDUSTRY STANDARD	DRAFT REV. ISSUED DATE
10 CFR PART 50, APPENDIX B	2/19/75	ANSI-N45.2	1971
10 CFR PART 50.55a		ASME B&PV Code Section III & XI	Specified in the SAR document of the respective plant
Regulatory Guide 1.8 Rev. 1	9/75	ANSI-N18.1 ANSI/ANS 3.1	1971 1978
Regulatory Guide 1.28	6/7/72	ANSI-N45.2	1971
Regulatory Guide 1.30	8/11/72	ANSI-N45.2.4	1972
Regulatory Guide 1.33 Rev. 2	2/78	ANSI-N18.7	1976
Regulatory Guide 1.37	3/16/73	ANSI-N45.2.1	1973
Regulatory Guide 1.38 Rev. 2	5/77	ANSI-N45.2.2	1972
Regulatory Guide 1.39 Rev. 2	9/77	ANSI-N45.2.3	1973
Regulatory Guide 1.58 Rev. 1	9/80	ANSI-N45.2.6	1978
Regulatory Guide 1.64 Rev. 2	6/76	ANSI-N45.2.11	1974
Regulatory Guide 1.74	2/74	ANSI-N45.2.10	1973
Regulatory Guide 1.88 Rev. 2	10/76	ANSI-N45.2.9	1974
Regulatory Guide 1.94 Rev. 1	4/76	ANSI-N45.2.5	1974
Regulatory Guide 1.116	6/76	ANSI-N45.2.8	1975
Regulatory Guide 1.123 Rev. 1	7/77	ANSI-N45.2.13	1976
Regulatory Guide 1.144 Rev. 1	9/80	ANSI-N45.2.12	1977
Regulatory Guide 1.146	8/80	ANSI-N45.2.23	1978

Florida Power & Light Company position regarding conflicting guidance and exceptions:

TOAR Appendix C Clarification, ANSI/ANS 3.1 - 1978 (PSL-2)

The Regulatory Guides and industry standards listed in Appendix C to the Topical Quality Assurance Report take precedence over any Regulatory Guide or industry standard which may be referenced in any one of these documents.

Regulatory Guide 1.8, Rev. 1, ANSI N18.1-1971, ANSI/ANS 3.1 (PSL-2)

ANSI N18.1 describes the training and education requirements for plant staff positions and is endorsed by Reg. Guide 1.8 with an exception. That exception is the requirements for the Supervisor - Radiation Protection. ANSI N18.1 is invoked by Technical Specifications (Appendix A of the Facility Operating License) at the Turkey Point plants and PSL-1. ANSI/ANS 3.1-1978 is invoked by Technical Specification at PSL-2. Reg. Guide 1.8 is also invoked by Technical Specifications at our St. Lucie plant and a license amendment has been approved for our Turkey Point plant to specify the Health Physics Supervisor qualifications addressed in Reg. Guide 1.8.

To avoid duplication of requirements, FPL will address Plant Staff Qualifications in only the Technical Specifications.

Regulatory Guide 1.30/ANSI N45.2.4-1972

ANSI N45.2.4-1972, Paragraph 2.3 addresses installation specifications and requires the inclusion of inspection and test objectives. FPL maintains that test values and inspection scope are inherently contained in the applicable procedures.

ANSI N45.2.4-1972, Paragraph 6.1.2 requires that the inspection of installed equipment verify that "good and proper workmanship" has prevailed. FPL maintains that acceptable parameter compliance with codes and standards along with company preference is the verification of "good and proper workmanship".

ANSI N45.2.4-1972, Paragraph 6.2.1 requires that "Items requiring calibration shall be tagged or labeled on completion indicating date of calibration and identity of person that performed the calibration." In lieu of tagging or labeling equipment, FPL has chosen to control calibration of installed instrumentation and control equipment by maintaining records for each piece of equipment by instrument tag number (or equivalent) to show that established schedules and procedures for calibration have been followed.

Regulatory Guide 1.33, Rev. 2, ANSI N18.7 - 1976

FPL's method of addressing Paragraphs 4.0, 5.2.2, 5.2.15 and 5.3 of ANSI 18.7 - 1976 as modified by Regulatory Guide 1.33, Rev. 2 is covered in Section 6 of each individual plant's Technical Specifications.

ANSI N18.7-1976, Section 4.3, requires that personnel performing the independent review and audit be specified in number and technical discipline. This standard is invoked by the Technical Specifications (Appendix A of the Facility Operating Licenses) which have been approved for the FPL nuclear plants at St. Lucie and Turkey Point. Specifically this function is performed by the Company Nuclear Review Board (CNRB) identified in Section 6.5.2 of the Technical Specifications.

To avoid duplication of requirements, FPL will address the personnel and functions of this independent review and audit only in the Technical Specifications.

FPL's method of addressing Section 5.2 of ANSI N18.7-1976, as modified by Regulatory Guide 1.33, Rev. 2, is by administratively controlling licensed operator hours on shift and by our Duty Call Supervisor system. Further, FPL has developed a response to NUREG 0654 which provides staffing availability.

FPL's method of addressing Paragraph 5.2.8 of ANSI N18.7-1976, as modified by Regulatory Guide 1.33, Rev. 2, is covered in Section 4 of each plant's Technical Specifications.

FPL's method of addressing Paragraph 5.2.9 of ANSI N18.7-1976, as modified by Regulatory Guide 1.33, Rev. 2, is covered in 10 CFR 73 and each plant's Security Plan, and as such is not included in the Quality Assurance Program.

Chemical cleaning is not presently controlled as a special process per se; however, the requirements of ANSI N45.2.1-1973 and Regulatory Guide 1.37 dated 3/16/73 are part of the FPL QA Program and are met in our program. FPL proposes these requirements to be an alternative to the requirements of ANSI N18.7-1976, Paragraph 5.2.18. Further, TQR 9.0, Paragraph 9.2 explains the review of potential special processes and determination of their status as special processes.

FPL meets the intent of Section 5.2.19.3 of ANSI N18.7-1976 as modified by Regulatory Guide 1.33, Rev. 2, as applied to significant changes to operating procedures, by the technical review of the procedure change by knowledgeable plant professionals, by the safety review of the procedure change by the on-site facility review group, by the regulatory and QA review of the procedure by plant Quality Control, by training the licensed operators in the change through the training report system, and by trained, licensed operators using the revised operating procedure and observing the proper result. In addition, procedure changes will be reviewed to assure 10 CFR 50.59 requirements are met.

Paragraph 5.3.5(4) - Clarification - When FPL uses vendor manuals and drawings which provide adequate instructions for maintenance, these documents are attached or referenced with Plant Work Orders which are reviewed and approved by Supervisory and Quality Control personnel and are considered to be adequate procedures in themselves. These vendor manuals and drawings, when received at site, are controlled documents and changes to the applicable sections and instructions of these documents require the same level of review and approval as the operating procedures.

Appendix A of Regulatory Guide 1.33 lists "typical safety related activities which should be covered by written procedures". Regulatory Guide 1.33 is invoked by the Technical Specifications at FPL Nuclear Plants.

In order to avoid duplication of requirements invoked in our licensing documents, the FPL Quality Assurance Program does not list those required operating procedures specified in Appendix A.

Regulatory Guide 1.37/ANSI N45.2.1-1973

ANSI N45.2.1-1973, Paragraph 5 states in part that, "Fitted and tackwelded joints (which will not be immediately sealed by welding) shall be wrapped with polyethylene or other non-halogenated plastic film until the welds can be completed". The FPL QA Manual shall require that the weld be covered to prevent entry of moisture and contaminants but will not specify the material to be employed. Materials employed to cover openings shall meet the requirements of Regulatory Guide 1.37, Position 4.

ANSI N45.2.1-1973, Paragraph 7.1 states in part, "provisions shall be made to collect leakage and protect insulation from being wetted". FPL Quality Assurance Program includes the above requirements. However, FPL's program allows the wetting of metallic type insulations which are not adversely affected by wetting.

ANSI N45.2.1-1973, Paragraphs 7.2.2, 7.2.3, and 7.3 address specific cleaning methods (Alkaline, Chelate, Acid) and make recommendations associated with several types of cleaning methods. FPL's QA manual does not specifically delineate these paragraphs. However, the procedure developed per Paragraph 2.2 of ANSI N45.2.1 will ensure that any specific cleaning method chosen will be properly considered and controlled.

Regulatory Guide 1.38, Rev. 2/ANSI N45.2.2 - 1972

FPL will meet the requirements of Reg. Guide 1.38, Rev. 2, Position 2C, D and E for safety related applications during preoperational and operational activities. Restrictions imposed for tapes to be color contrasting will only be applied to the extent that these colors are dissimilar or otherwise distinguishable. This does not preclude using other tapes when precautions are taken to ensure these tapes do not come in contact with austenitic stainless steel or nickel alloy materials.

Vapor barrier material (other than metal) shall be colored to contrast with or be otherwise distinguishable from safety related systems to prevent undisclosed entry into the system.

These requirements do not apply to components in storage which would require removal of such tapes and barriers to effect installation.

ANSI N45.2.2-1972 Section 2.7 requires that items governed by this standard be classified into one of four levels by the buyer or the contractor. FPL intends to consider what care is appropriate for each item individually rather than generically classifying the material into protection levels and providing care required of that level. The following shall be considered when determining the handling, storage, and shipping requirements:

1. The vendor's recommended handling, shipping, and storage standards.

2. Environmental requirements which may include such requirements as inert gas atmosphere, humidity limits, temperature limits, chemical requirements, acceleration (g force) requirements.

3. Special tools or equipment which are provided and controlled as necessary to ensure safe and adequate handling. These tools or equipment shall be inspected and tested at specified times to verify that they are adequately maintained.

4. Packaging, covering or coatings required to meet environmental requirements such as barrier and wrap material, desiccants, pipe caps, plugs, contact preservatives, etc.

5. Container, crating, skids of sufficient strength to support the item (including stacking).

6. Cushioning, blocking, bracing, and anchoring to prevent movement during shipment or handling.

7. Special handling or storage procedures for unique situations.

8. Marking and identification of the item and its packaging.

9. Anticipated "shelf life" of the item.

FPL considers this to be a more effective approach since the quantity of spare and replacement material, parts and components governed by this standard will be afforded protection commensurate with the recommendations of Section 2.7 of this standard.

ANSI N45.2.2-1972 Sections 3.0, 4.0, and the Appendix address all the requirements applicable to the packaging and shipping of material. FPL in general does not package or ship material governed by this standard. Suppliers of material are required by purchase order to provide adequate packaging and shipping protection. Isolated cases of material packaging or shipping are treated on a case-by-case basis and receive protection comparable to that required by the manufacturer of that material. Loading, rigging and handling precautions identified in Section 4.3 are applied to material unloaded by FPL from a transport vehicle.

ANSI N45.2.2-1972 Section 5.2 requires that specific attributes of material and components received by FPL be inspected. For plants with operating licenses FPL verifies conformance to procurement documents during receipt inspections. Any of these attributes identified in these procurement documents are verified during this inspection.

ANSI N45.2.2-1972 Section 5.2, paragraph 5.2.1, requires certain preliminary inspections to be done "prior to unloading" of material which is received. We believe that the sequence specified in the standard is to facilitate commercial claims, and should these preliminary inspections occur "after unloading" that control of materials quality would not be degraded. Accordingly, required shipping damage inspections may be performed after unloading.

The requirements of ANSI N45.2.2, Paragraph 7.2 for items that require special handling instructions is clarified by FPL to be limited to those items covered in the scope of NUREG 0612, entitled "Control of Heavy Loads at Nuclear Power Plants".

ANSI N45.2.2-1972, Paragraph 7.4 requires that an inspection program be established for handling equipment and rigging, including methods for identifying acceptable and nonconforming items. In lieu of having a program of periodic, documented inspections of rigging and handling equipment, FPL's practice is to have the individual user determine the equipment's acceptability prior to each use. This prior-to-use inspection is exactly the same as that required during periodic inspections, and uses criteria identified in ANSI N45.2.2-1972, paragraph 7.4. This practice also precludes the need for a system to indicate the acceptability of rigging and handling equipment. Implementation of this prior-to-use inspection will be assured through periodic surveillances and audits performed by Quality Assurance and Quality Control. Cranes are inspected on a periodic basis and will not be subjected to this prior-to-use inspection.

Certain mechanical components of the PSL-2 nuclear unit have been designed for a service environment of the site area because portions of the plant are exposed to the temperature, humidity, and ocean salt spray during operations. Extreme air temperature variations, snow or slush are not encountered during operations or in the out-of-doors storage environment. As an alternative to the rigid requirements of storage levels B and C in paragraph 6.1 of ANSI N45.2.2-1972, FPL proposes to store these particular mechanical components outdoors, but within controlled areas, with sufficient periodic surveillances and inspections to minimize the possibility of damage or lowering of quality due to corrosion, contamination, deterioration, or physical damage. In cases where special environmental conditions are present (i.e., hurricanes, paint sprays, concrete pours, etc.) precautions or additional steps will be taken to further protect the items.

Regulatory Guide 1.39, Rev. 2/ANSI N45.2.3-1973

For FPL's operating nuclear plants, alternative methods are followed to achieve equivalent objectives for the below listed sections of ANSI N45.2.3-1973:

The zone designations of Section 2.1 of N45.2.3 and the requirements associated with each zone are not consistent with the FPL Housekeeping requirements at our operating nuclear units. In lieu of the zone designation, cleanliness is maintained at a level consistent with the work being performed, so as to prevent the entry of foreign material into safety related systems. Documented cleanliness inspections are performed immediately prior to system closure. Control of personnel, tools, equipment, and supplies is established with approved procedures 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.

Regulatory Guide 1.58, Revision 1/ANSI N45.2.6-1978

ANSI N45.2.6-1978, Paragraphs 1.1, 3.1, 3.2.2(a) and 4 (Table-1) identify requirements which apply to personnel who perform inspections, tests or nondestructive examinations or who participate in the approval of procedures, the handling of data or test results, or the control of reports and records.

FPL proposes an alternative to capability requirements for those who participate in: (1) the approval of procedures, (2) the handling of data or test results and (3) the control of reports and records. FPL accomplishes this by having personnel determined to be qualified and competent by management through consideration of education, training, and experience.

The Florida Power & Light Company position on the scope of ANSI N45.2.6-1978 is that personnel participating in testing who take data or make observations, where special training is not required to perform this function, need not be qualified in accordance with ANSI N45.2.6 but need only be trained to the extent necessary to perform the assigned function.

For leak testing conducted as part of the preoperational and operational testing programs, FPL considers that the qualification requirements of Regulatory Guide 1.8 (ANSI N18.1-1971) and ANSI N45.2.6-1978, Paragraph 3.0 to be an acceptable alternative to SNT-TC-1A-1975 requirements for leak testing, except for leak testing defined in and performed under Section III of the ASME Code, where in such cases, the Code shall govern.

For preoperational and operational inspection, examination and testing by Quality Control Inspectors, FPL considers that Position C.1 of Regulatory Guide 1.58, Revision 1 and ANSI N45.2.6-1978, Paragraph 3.0 are acceptable requirements for training and qualification, except for inspections, tests and examinations defined in and performed under Section III of the ASME Code, where in such cases, the Code shall govern.

For all other preoperational and operational inspection, examination and testing performed by operating plant and support personnel, FPL considers that training and qualification to the requirement of ANSI N18.1-1971 and Regulatory Guide 1.8 are sufficient for the type and scope of activities performed and that qualifications to ANSI N45.2.6-1978 is unnecessary and redundant. These preoperational and operational inspections, examinations and tests shall be supervised or directed by personnel qualified to Position C.1 of Regulatory Guide 1.58, Revision 1.

FPL shall comply with Position C.10 of Regulatory Guide 1.58, Revision 1, effective with Revision 4 of the Topical Quality Assurance Report, in that all new certifications issued for personnel shall meet the education and experience requirements or shall document objective evidence demonstrating that the individual indeed does have comparable or equivalent competence to that which would be gained from having the required education and experience.

FPL's position on ANSI N45.2.6-1978, Paragraph 2.3 is that an initial and periodic review (not to exceed two years) of personnel shall determine the capabilities in his qualified area. If during this review, or at any other time, it is determined that the individual's capabilities are not in accordance with the specified requirements, that individual shall be removed from that activity until the required capability has been demonstrated. In addition, during this review a determination shall be made that an individual has been actively involved in the inspection process in his qualified area.

Regulatory Guide 1.64, Rev. 2/ANSI N45.2.11-1974

FPL's exception to Regulatory Guide position C.2 is as follows:

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 when 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.

ANSI N45.2.11-1974, Paragraph 11.4 requires that "audits shall include an evaluation of design quality assurance policies, practices, procedures and instructions . . . ." FPL's design quality assurance (and all other QA elements) policies, procedures and instructions are included in FPL's Quality Assurance Program documentation. The Quality Assurance Department evaluates all of this documentation in reviews performed during its development and revision. Accordingly, FPL does not require subsequent (and redundant) evaluations of these Quality Assurance Program policies, procedures and instructions during audits. FPL audits will include evaluations of the adequacy of the practices which are the implementation of these policies, procedures and instructions.

Regulatory Guide 1.68 (11/73)

Regulatory Guide 1.68 (11/73) entitled "Preoperational and Initial Start-up Test Programs for Water Cooled Power Reactors" is addressed in Section 14.2.1 of the St. Lucie Unit 2 FSAR which states in part, "The start-up test program is developed using the recommendations of Regulatory Guide 1.68". To avoid duplication of requirements, FPL will address Regulatory Guide 1.68 in the FSAR.

Regulatory Guide 1.74/ANSI N45.2.10 - 1973

ANSI N45.2.10 - 1973 identifies terms and their definitions important to the uniform understanding of the intent of required quality assurance practices for the construction of nuclear power plants. Regulatory Guide 1.74 (2-74) endorses these terms and definitions and extends them through the operational phase and includes a clarification of procurement documents.

FPL has developed a glossary of terms and their definitions as part of the Quality Assurance Manual which is being used throughout its nuclear construction and operating plant activities.

The following definitions are currently listed in our glossary and are alternatives or clarifications to those listed in the ANSI Standard and Regulatory Guide:

Assembly	A combination of subassemblies or components or both, fitted together to form a workable unit.
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.
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.

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.
Inspection	Examination, observation, or measurement to determine the conformance of materials, supplies, components, parts, appurtenances, systems, processes, or structures to predetermined requirements.
Procurement 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.
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.
Quality 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.
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.

Storage	That period following the release of an item for shipment until turnover for start-up preoperational testing. This would include inplace storage.
System	An integral part of a nuclear power plant comprised of electrical, electronic, or mechanical components (or combinations thereof) that may be operated as a separate entity to perform a specific function.
Testing	Performance of those steps necessary to determine that systems or components function in accordance with predetermined specifications.

"Requirements" Clarification for Glossary

REQUIREMENT:	A mandatory action, denoted by the word shall. (See "Guidelines") Requirements are generally based on statutes or regulations, but may be internally generated within the company. "Shall" is therefore used for both external, legally enforceable actions and internal requirements not enforceable under current NRC practices.

Regulatory Guide 1.88, Rev. 2/ANSI N45.2.9-1974

ANSI N45.2.9-1974, Section 3.2.5 requires Quality Assurance Records be classified as lifetime or non-permanent and further defines lifetime and non-permanent in Section 2.2 of the Standard. FPL provides the following definitions as an alternative to the above.

Lifetime Records: Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10CFR, the FSAR, or other NRC commitments to be retained for the life of the plant.

Non-permanent Records: Records which are required by the NRC facility operating license, the NRC construction permit, applicable parts of 10CFR, the FSAR, or other NRC commitments to be retained for periods of time less than the life of the plant.

ANSI N45.2.9-1974, requirements for Section 5.6, "Facility", are clarified by FPL as follows:

QA Records shall be stored in a manner as to protect contents from possible destruction by causes such as fire, flooding, tornados, insects, rodents, and from possible deterioration by a combination of extreme variations in temperature and humidity conditions.

A QA Record Storage Evaluation Team (QARSET) shall be responsible for determining methods utilized to assure that QA Records are adequately stored and protected.

The QARSET shall consist of the following: the Quality Manager - Juno Beach, the Loss Prevention Engineer, and the Nuclear Records Official, who shall be responsible for maintaining records of evaluations and establishing schedules to assure that reevaluations are performed every two (2) years. If necessary, the QARSET may delegate appropriate designees to serve as team members.

As part of their responsibility, 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. Preferably, such evaluations should be performed during the design phase.

ANSI N45.2.9-1974 will be utilized in the evaluation of potential record storage facilities. Section 5.6 "Facilities" is modified as follows and shall be the basis for QARSET approved QA Record Storage Facilities.

1. A 2-hour vault meeting NFPA No. 232 without additional provisions.

2. 2-hour rated fire resistant file room as defined in NFPA No. 232- 1980 if the following additional provision are provided:

a. Early warning fire detection and automatic fire suppression shall be provided, with electronic supervision at a constantly monitored central station.

b. Records shall be stored in fully enclosed metal cabinets. Records shall not be permitted on open steel shelving. No storage of records shall be permitted on the floor of the facility. Adequate access and aisle space shall be maintained at all times throughout the facility.

c. Work not directly associated with records storage or retrieval shall be prohibited within the storage facility.

d. Smoking, eating and drinking shall be prohibited throughout the records storage facility.

e. Ventilation, temperature, and humidity control equipment shall be provided with approved fire dampers where they penetrate fire barriers.

3. Other conditions from the above may be approved by the QARSET if, in their judgement, the condition meets the established level of protection defined above.

There are two acceptable alternatives to the establishment of an approved QA Record storage facility:

1. The maintenance of duplicate QA Records stored in separate locations which are not subject to the same destructive force at the same time.

2. The use of QARSET approved factory built record protection equipment, such as insulated record containers, fire-resistive safes, and insulated filing devices.

Where a specially constructed storage room is maintained to store the only copy of QA records, at least the following features should be considered in its construction:

(1) Reinforced concrete, concrete block, masonry, or equal construction.

(2) Concrete floor and roof with sufficient slope for drainage; if a floor drain is provided, a check valve (or equal) shall be included.

(3) Structure, doors, frames and hardware should be fire-rated with a recommended two hour minimum rating.

(4) Sealant applied over walls as a moisture or condensation barrier.

(5) Surface sealant on floor providing a hard-wear surface to minimize concrete dusting.

(6) Foundation sealant and provision for drainage.

(7) Forced-air circulation with filter system.

(8) Adequate fire detection and/or suppression system.

(9) No pipes other than those providing fire protection to the storage facility are to be located within the facility.

Regulatory Guide 1.116/ANSI N45.2.8-1975

ANSI N45.2.8-1975, Paragraph 2.3 requires that Measuring and Test Equipment (M&TE) used for inspection be identified on the Inspection Report. FPL may, as an option, employ a M&TE issue log which provides traceability between M&TE and the applicable inspections.

ANSI N45.2.8-1975, Paragraph 4.6 addresses care of items to the extent that temporary use of equipment or facilities to which the standard applies that are to become part of the completed project may be desirable.

The following clarification applies to the above statement. For FPL plants in the construction phase (to the point of plant operation license) temporary use of equipment and facilities may be required according to need and/or situation. In this case, authorization for usage shall be provided along with all the documents, conditions, safeguards and evaluations to verify permanent plant equipment adequacy.

In the operations phase all equipment, including temporary equipment, is subject to identical controls to preclude adverse effects on safety and suitability for use.

Regulatory Guide 1.123, Rev. 1/ANSI N45.2.13-1976

ANSI N45.2.13-1976 Section 1.1 states that the extent to which the individual requirements of this standard will apply will depend upon the nature and scope of the work to be performed and the required quality of the items or services purchased. For commercial grade items, FPL has determined that certain aspects of the individual requirements of ANSI N45.2.13 need not apply. Commercial grade items are those (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. These commercial items are subject to varying degrees of control as indicated in the FPL Quality Assurance Manual.

As a minimum, an evaluation is performed by qualified personnel to assure that the commercial item satisfies the necessary technical and quality requirements and the item is checked upon receipt to assure that the item received was the one ordered, damage was not sustained during shipment, and documentation, if required, was received.

ANSI N45.2.13-1976 Section 1.3 provides a definition of "procurement document" which is different from the definition contained in ANSI N45.2.10-1973 and Regulatory Guide 1.74. The Florida Power & Light (FPL) Quality Assurance Program uses the definition of "procurement document" listed in Appendix C which is an alternative to that listed in the ANSI Standard and Regulatory Guide.

ANSI N45.2.13-1976 Section 3.3.(a) requires that procurement documents be reviewed prior to release for bid and contract award. The FPL Quality Assurance Program requires procurement document reviews prior to bid and contract award for all safety related purchases. A "Confirming Purchase Order" is an order which is initially placed verbally with the supplier and then later confirmed with a written Purchase Order. A "Confirming Purchase Order" is only used when time restraints would prohibit the issuance of a written purchase order. The following controls are provided in the FPL Quality Assurance Manual to assure that the intent of ANSI N45.2.13 is satisfied for "Confirming Purchase Orders".

(1) Prior to verbally placing the order, it must be verified that the intended supplier is on the FPL Quality Assurance Approved Supplier List.

(2) The verbally placed order must be promptly followed-up (confirmed) with a written procurement document which is subject to all reviews and approvals required for safety related purchases.

Section 8.2 of ANSI N45.2.13 identifies those nonconformances which shall be submitted to the Purchaser. Florida Power & Light's (FPL) position regarding the nonconformances to be reported is as follows. Suppliers (including A/E's and Contractors) shall submit all nonconformances which consist of one or more of the following:

1) Technical or material requirements are violated.
2) Requirement in supplier documents which have been approved by the Purchaser is violated.
3) Nonconformances which would affect the quality of the item in regard to function of safety related features. In cases where the supplier cannot make this determination, they shall be submitted to the Purchaser for evaluation.

This policy assures that all nonconformances affecting safety related functions will be reviewed and approved by FPL. In all cases, the supplier's documentation on nonconformances is available for FPL's review.

Regulatory Guide 1.144, Rev. 1/ANSI N45.2.12-1977

Regulatory Guide 1.144, Positions C.3 a&b, states in part that applicable elements of an organization's Quality Assurance Program should be audited at least annually or at least once within the life of the activity, whichever is shorter.

ANSI N18.7-1976/ANS-3.2, Paragraph 4.5 (endorsed by Regulatory Guide 1.33 Revision 2) states in part; "Audits of selected aspects of operational phase activities shall be performed with a frequency commensurate with their safety significance, and in such a manner as to assure that an audit of safety related functions is completed within a period of two years."

FPL has chosen a two year cycle for auditing elements of the internal and on-site QA Program during the operation phase of plant life following initial fuel loading. FPL's position is that the two year cycle: (1) allows more in-depth and meaningful audits in each regularly scheduled area, (2) permits more audits of ongoing activities, and (3) in conjunction with the planning and scheduling requirement of TQR 18.0 provides for a comprehensive audit program. The audit frequency requirements of Regulatory Guide 1.144 will be followed during other plants' phases.

In the case of suppliers, an annual evaluation of quality performance history shall be performed to determine reaudit requirements. Reaudit requirements for suppliers shall be based on the quality performance, and the complexity and criticality of the equipment or service being procured.

ANSI N45.2.12, Paragraph 4.3.1 states: "A brief pre-audit conference shall be conducted at the audit site with cognizant organization management. The purpose of the conference shall be to confirm the audit scope, present the audit plan, introduce auditors, meet counterparts, discuss audit sequence and plans for the postaudit conference, and establish channels of communication." FPL will not require the pre-audit conference for audits of limited scope and of specific site activities conducted by the Construction and Operations Groups. This conference is omitted because the day-to- day contact of the auditors and plant management, the awareness on the part of plant management that these audits are conducted without pre-audit conferences, and the limited scope of the audits meet the intent of a pre-audit conference.

ANSI Standard N45.2.12-1977, Paragraph 4.5.1 states in part "The audited organization shall provide a follow-up report stating the corrective action taken and the date corrective action was completed". The FPL QA Program requires the QA Department to followup on all action taken by the audited department. This is documented on the corrective action followup form by the QA Department and closed by the QA Department instead of the audited department. This assures that all actions taken by the audited department are verified by the QA Department and that the QA Department concurs with the resolution. We feel that it is appropriate for this to be documented by the QA Department instead of the audited department.

Planning Clarification

ANSI N45.2.4-1972, Paragraph 2.1; ANSI N45.2.6-1973, Paragraph 2.1; ANSI N45.2.13-1976, Paragraph 7.2; ANSI N18.7-1976/ANS 3-2, Paragraph 5.2.7.1; ANSI N45.2.8-1975, Paragraph 2.1 and Paragraph 2.2 include plans and/or planning as required.

The terms plan and/or planning are included in FPL's activities as indicated in the following clarification:

> Planning is considered to be a management process or analytical tool used as an aid to help develop identification and/or development of program requirements, implementation activities, assignments and staffing, inspections, surveillances and audits, controls and other activities to assure completeness of the requirements. Planning, as such, is not always documented nor addressed as an end item and is considered to be an integral "process" within the developed item.
>
> Plans which are considered to be end type or output type documents have the term "plan" in the title, such as ISI Master Plan, Audit Plan, Start-up Plan, and others, which as such will reflect directly the requirement of these standards in the appropriate documents.

Plans which are not considered to be end type or output type documents do not have the word plan in the title. However, certain procedures, instructions, flow charts, schedules and checklists may be considered to be plans reflecting planned actions which especially require step-by-step accomplishments. In these cases, the term plan may not appear in the title but considered to be a plan only in the indirect sense and identified as a procedure or other document. FPL considers the above practice to be in compliance with the "plan" requirements of these standards.

APPENDIX D

"GRAY, GREEN, AND ORANGE BOOK MATRIX TO QA PROCEDURES

CANCELLED IN ENTIRETY

FPL	TOPICAL QUALITY ASSURANCE REPORT	APPENDIX E
	LIST OF CORPORATE QUALITY ASSURANCE PROCEDURES	Rev.
		Date 02/01/94
		Page 1 of 1

This Appendix has been deleted in its entirety.

The FPL Topical Quality Assurance Report is the statement of Florida Power & Light Company Quality Assurance Program Requirements which do not vary with plant site. These stated requirements form a description of the FPL Quality Assurance Program which does not contain identification of the involvement of principal contractors such as the Architect/Engineer, Nuclear Steam Supply System vendor, or Constructor. The contractor involvement in the Program will be described in the plant Safety Analysis Report. In addition, other detailed aspects of the Quality Assurance Program vary from plant-to-plant or with plant site. These aspects will also be described in the plant SAR. The requirements of the FPL Quality Assurance Program shall apply to the nuclear safety related structures, systems and components as defined in the applicable plant SAR.

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 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.

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.

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 Materials Management 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 havin 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)

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).
(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.
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 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 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 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 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

5.0 DEFINITIONS: (Cont'd)

(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.

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 an activity affecting quality 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:

5.0 DEFINITIONS: (Cont'd)

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,

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 to describe 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.

5.0 DEFINITIONS: (Cont'd)

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.
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.

5.0 DEFINITIONS: (Cont'd)

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.
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.

5.0 DEFINITIONS: (Cont'd)

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.
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.

5.0 DEFINITIONS: (Cont'd)

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.
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 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. Flushing, protective coating, plating applications, and nuclear cleaning should be reviewed to determine if they are special processes.

5.0 DEFINITIONS: (Cont'd)

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.
(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.

5.0 DEFINITIONS: (Cont'd)

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.
Supplier Facility Evaluation (Audit)	An evaluation by a 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 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.
Surveillance Testing	Periodic testing to verify that 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.

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

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.
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.

5.0 DEFINITIONS: (Cont'd)

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.
(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

5.0 DEFINITIONS: (Cont'd)

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.

(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.

5.0 DEFINITIONS: (Cont'd)

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.
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 operati 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.