
# Florida Power and Light Company

# New Nuclear Project

# Quality Assurance Program Description

# FPL-2

**Florida Power and Light Company**

# POLICY STATEMENT

Florida Power and Light (FPL) shall design, procure, construct and operate nuclear plants in a manner that will ensure the health and safety of the public and workers. These activities shall be performed in compliance with the requirements of the Code of Federal Regulations (CFR), the applicable Nuclear Regulatory Commission (NRC) Facility Operating Licenses, and applicable laws and regulations of the state and local governments.

The FPL New Nuclear Project (NNP) Quality Assurance Program (QAP) is the Quality Assurance Program Description (QAPD) provided in this document and the associated implementing documents. Together they provide for control of FPL activities that affect the quality of safety-related nuclear plant structures, systems, and components (SSCs) and include all planned and systematic activities necessary to provide adequate confidence that such SSCs will perform satisfactorily in service. The QAPD may also be applied to certain equipment and activities that are not safety-related, but support safe plant operations, or where other NRC guidance establishes program requirements.

The QAPD is the top-level policy document that establishes the manner in which quality is to be achieved, and presents FPL's overall philosophy regarding achievement and assurance of quality. Implementing documents assign more detailed responsibilities and requirements and define the organizational interfaces involved in conducting activities within the scope of the QAP. Compliance with the QAPD and implementing documents is mandatory for personnel directly or indirectly associated with implementation of the FPL NNP QAP.

Signed: _____

Lewis Hay, III
FPL Group Chairman and Chief Executive Officer

**Florida Power and Light Company**

**FPL-2**

**Revision 0**

Approved By:

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5/4/09
Date

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5/11/09
Date

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5/13/09
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# PART I INTRODUCTION

## SECTION 1 GENERAL

The Florida Power and Light (FPL) New Nuclear Project (NNP) Quality Assurance Program Description (QAPD) is the top-level policy document that establishes the quality assurance policy and assigns major functional responsibilities for construction, pre-operation and operations activities conducted by or for FPL. The QAPD describes the methods and establishes quality assurance (QA) and administrative control requirements that meet 10 CFR 50, Appendix B and 10 CFR 52. The QAPD is based on the requirements and recommendations of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," Parts I, II and III, as specified in this document.

The QAP is defined by the NRC-approved regulatory document that describes the QA elements (i.e. the QAPD), along with the associated implementing documents. Procedures and instructions that control NNP activities will be developed prior to commencement of those activities. Policies establish high-level responsibilities and authority for carrying out important administrative functions which are outside the scope of the QAPD. Procedures establish practices for certain activities which are common to all FPL organizations performing those activities so that the activity is controlled and carried out in a manner that meets QAPD requirements. Procedures specific to a site, organization, or group establish detailed implementation requirements and methods, and may be used to implement policies or be unique to particular functions or work activities.

### 1.1 Scope / Applicability

The QAPD applies to construction, pre-operation and operations activities affecting the quality and performance of safety-related structures, systems, and components, including, but not limited to:

| | | |
|---|---|---|
| Designing | Receiving | Pre-Operational Activities (Including ITAAC) |
| Siting | Storing | Operating |
| Procuring | Constructing | Maintaining |
| Fabricating | Erecting | Repairing |
| Cleaning | Installing | Modifying |
| Handling | Inspecting | Refueling |
| Shipping | Testing | Training |
| | Startup | Decommissioning |

ITAAC are Inspections, Tests, Analyses and Acceptance Criteria that the applicant must satisfy as determined by the Nuclear Regulatory Commission in accordance with 10 CFR Part 52.

Safety-related SSCs, under the control of the QAPD, are identified by design documents. The technical aspects of these items are considered when determining program applicability, including, as appropriate, an item's design safety function. The QAPD may be applied to certain activities where regulations other than 10 CFR 50 and 10 CFR 52 establish QA requirements for activities within their scope.

# PART I INTRODUCTION (CONTINUED)

The policy of FPL is to assure a high degree of availability and reliability of the nuclear plants while ensuring the health and safety of its workers and the public. Towards this end, selected elements of the QAPD are also applied to certain equipment and activities that are not safety-related, but support safe, economic, and reliable plant operations, or where other NRC guidance establishes quality assurance requirements. Implementing documents establish program element applicability.

The definitions provided in ASME NQA-1–1994, Part I, Section 1.4, apply to select terms as used in this document.

# PART II QAPD DETAILS

## SECTION 1 ORGANIZATION

This section describes the FPL organizational structure, functional responsibilities, levels of authority and interfaces for establishing, executing, and verifying QAPD implementation. The organizational structure includes corporate and on-site functions for NNP including interface responsibilities for multiple organizations that perform quality-related functions. Implementing documents assign more specific responsibilities and duties, and define the organizational interfaces involved in conducting activities and duties within the scope of the QAPD. Management gives careful consideration to the timing, extent and effects of organizational structure changes.

The FPL management senior position responsible for the Quality Assurance organization is responsible to size the Quality Assurance organization commensurate with the duties and responsibilities assigned.

The FPL NNP organization is responsible for new nuclear plant licensing, engineering, procurement, construction, startup and operations development activities. There are several organizations within FPL which implement and support the QAPD. These organizations include, but are not limited to, the NNP organization, Corporate Services and Quality Assurance.

Design, engineering and construction services are provided to the FPL New Nuclear Projects organization by two primary contractors in accordance with their own QAPDs. These two contractors are the A/E Firm and the NSSS vendor.

The following sections describe the reporting relationships, functional responsibilities and authorities for the organizations that implement and support the NNP QA Program. The NNP construction and startup organization and the FPL Fleet operating organization are shown in Figures 1-1, 1-2 and 1-3, respectively.

### 1.1 NNP Construction and Startup Organization

1.1.1 FPL Group Chairman and Chief Executive Officer (CEO)

This position is responsible for overall corporate policy and provides executive direction and guidance for the corporation as well as for the promulgation of corporate policy through the Company's senior management staff. Responsibility for developing, implementing, and verifying execution of the FPL Quality Assurance Program is delegated to the Chief Operating Officer.

1.1.2 FPL Group President and Chief Operating Officer (COO)

This position reports to the CEO and is responsible for promulgating corporate policy and for providing corporate direction to the CNO and other members of the senior management staff. Responsibility for implementing the FPL Quality Assurance Program is delegated to the Chief Nuclear Officer and the authority for developing and verifying execution of the program is delegated to the Director Nuclear Assurance.

## SECTION I ORGANIZATION (CONTINUED)

1.1.3 Executive Vice President – Engineering, Construction and Corporate Services

This position reports to the COO and is the project executive responsible for construction of the new nuclear plant. This position is the interface between the NNP project and the senior executive staff.

1.1.4 Vice President – New Nuclear Projects

The Vice President – New Nuclear Projects, reports to the Executive Vice President - Engineering, Construction and Corporate Services and is responsible for the overall safe and efficient licensing, engineering, construction and pre-operational test of the New Nuclear Project, and for the implementation of quality assurance requirements in the areas specified by the QAPD.

1.1.5 Chief Nuclear Officer (CNO)

This position reports to the CEO through the Chief Operating Officer (COO) and has overall responsibility for the implementation of the QAP and for Nuclear Division activities including corporate responsibility for overall plant nuclear safety. This responsibility includes setting and implementing policies, objectives, and priorities to ensure activities are performed in accordance with QAP and other corporate requirements. The CNO is designated as the Company Officer responsible for assuring that defects and non-compliances are reported to the NRC as required by 10CFR21.

1.1.6 Licensing Director – New Nuclear Projects

The Licensing Director – New Nuclear Projectors reports to the Vice President – New Nuclear Projects and is responsible for the generation of the Combined Operating License (COL) application, and is responsible for the day-to-day oversight of the COL application contractor and assuring corrective action is taken for any quality concerns that are raised. This position is also responsible for the licensing actions associated with the new nuclear project through the final licensing action associated with the new nuclear project.

1.1.7 Project Director – New Nuclear Projects

The Project Director – New Nuclear Projects, reports to the Vice President – New Nuclear Projects, is responsible for the construction and test of the new nuclear plant and is accountable for ensuring that company policy and procedures are properly implemented at the nuclear site.

1.1.8 Construction Director – New Nuclear Projects

The Construction Director reports to the Project Director – New Nuclear Projects, and is responsible to interface with the NSSS supplier, the selected A/E, and the constructor. This position is responsible for the day to day oversight of the construction effort as the new nuclear plant is constructed, and for assuring corrective action is robust for any construction quality concerns that are raised by the Contractor or by FPL personnel.

## SECTION I ORGANIZATION (CONTINUED)

1.1.9 Engineering Director – New Nuclear Projects

The Engineering Director reports to the Project Director – New Nuclear Projects, and is responsible to interface with the NSSS supplier, and the selected A/E. This position is responsible for the day to day oversight of the engineering effort as the new nuclear plant is designed and constructed, and for assuring that corrective action is robust for any engineering issues that are raised by the Contractor or by FPL personnel.

1.1.10 Quality Assurance Project Manager– New Nuclear Projects

The New Nuclear Projects Quality Assurance Project Manager (QAPM) reports directly to the Director Nuclear Assurance, and is responsible for the development and verification of implementation of the QAPD described in this document. The QAPM is responsible for verifying compliance with regulatory requirements and procedures through audits and technical reviews; for monitoring organization processes to ensure conformance to commitments and licensing document requirements; for verifying that vendors who provide quality services, parts and materials to the new nuclear project are meeting the requirements of 10 CFR 50, Appendix B through NUPIC or FPL vendor audits. The QAPM has sufficient independence from other New Nuclear Project priorities to bring forward issues affecting safety and quality and make judgments regarding quality in all areas necessary regarding FPL's nuclear development activities. The QAPM may make recommendations to the New Nuclear Projects management regarding improvement in the quality of work processes. If the QAPM disagrees with actions taken by the organization in this regard and is unable to obtain resolution, the QAPM shall inform the Director Nuclear Assurance.

1.1.11 Plant General Manager – New Nuclear Project

The Plant General Manager – New Nuclear Project reports directly to the Chief Nuclear Officer for plant operation and administratively to the Vice President New Nuclear Project during construction. This position is responsible for development of the site operating and support staff, and for operation of the new nuclear plant during the test phase. During construction, the Plant General Manager coordinates activities with the Vice President New Nuclear Project to provide for equipment operation, maintenance and test including ITACC.

In this position, as the plant moves into the operations phase, the Plant General Manager assures the safe, reliable, and efficient operation of the plant within the constraints of applicable regulatory requirements, combined operating license, and the QAP. Functional areas of responsibility also include chemistry activities, fuel handling (receipt, movement, and storage), health physics/radiological protection, operations and support, maintenance and production planning, and related procedures and programs.

1.1.12 Testing Director

The Testing Director reports to the Project Director – NNP, and is responsible to coordinate the test program for the new nuclear plant. This position is responsible to develop the test program and to support the contractors and the operating staff through the plant test and startup phase.

## SECTION I ORGANIZATION (CONTINUED)

1.1.13 Vice President - Integrated Supply Chain

This position reports to the CEO through the Executive Vice President Engineering, Construction and Corporate Services and the COO and is responsible for procurement engineering; negotiating, generating, and issuing procurement documents for required items, coordinating contract activities and for services that support the operation, licensing, maintenance, modification, and inspection of FPL nuclear plants, as well as for materials and equipment to support the Nuclear Division staff. Responsibilities also include the review of procurement documents to ensure that technical and quality requirements are properly incorporated and for the performance of receipt inspection to verify that purchased items comply with procurement document requirements (other than at stations where receipt inspection is performed by the Quality Assurance Organization), and for the control of materials received at each FPL nuclear plant site in accordance with company policy and procedures.

1.1.14 Manager - Sourcing

This position reports to the Vice President Integrated Supply Chain with direct interface with the VP-NNP. The position has functional areas of responsibility that include the authority for day-to-day material support activities at the site. Activities include contract coordination, procurement document control, and receipt and control of material.

1.1.15 Nuclear Steam Supply System (NSSS) Design Control Document (DCD) Holder

The NSSS DCD Holder provides plant design and licensing of the plant on the FPL site. These engineering services for new nuclear generation include engineering and design necessary to support construction activities within the scope of the certified design.

1.1.16 A/E / Constructor

The A/E Firm provides engineering services. These engineering services include site specific design activities necessary to support planning for preconstruction and construction of new nuclear generation. The Constructor provides construction services for the new plant.

## SECTION I ORGANIZATION (CONTINUED)

### 1.2 FPL Nuclear Fleet Corporate Operating Organization

The following positions have the described corporate functional responsibilities. Some titles and reporting relationships may vary between corporate and some sites, but in all cases there is a designated position to carry out the defined responsibilities.

1.2.1 FPL Group Chairman and Chief Executive Officer (CEO)

This position is responsible for overall corporate policy and provides executive direction and guidance for the corporation as well as promulgates corporate policy through the Company's senior management staff. Responsibility for developing, implementing, and verifying execution of the FPL Quality Assurance Program is delegated to the Chief Operating Officer.

1.2.2 FPL Group President and Chief Operating Officer (COO)

This position reports to the CEO and is responsible for promulgating corporate policy and corporate direction to the CNO and other members of the senior management staff. Responsibility for implementing the FPL Quality Assurance Program is delegated to the Chief Nuclear Officer and authority for developing and verifying execution of the program is delegated to the Director Nuclear Assurance.

1.2.3 Chief Nuclear Officer (CNO)

This position reports to the CEO through the Chief Operating Officer (COO) and has overall responsibility for the implementation of the QAP and for Nuclear Division activities including corporate responsibility for overall plant nuclear safety. This responsibility includes setting and implementing policies, objectives, and priorities to ensure activities are performed in accordance with QAP and other corporate requirements. The CNO is designated as the Company Officer responsible for assuring that defects and non-compliances are reported to the NRC as required by 10CFR21.

1.2.4 Vice Presidents Nuclear Fleet Operations (Regional)

These positions report to the CNO and are responsible for oversight of the day-to-day nuclear site operations, providing direction for each of the nuclear operating units, ensuring the highest standards of nuclear safety and the overall operating efficiencies and cost effectiveness of nuclear generation.

1.2.5 Vice President Safety Assurance

This position reports to the CNO and is responsible for safety assurance, including: nuclear assurance, and for providing corporate direction in the areas of licensing, performance improvement, emergency preparedness, operating experience, document control, and records management. The organizations that implement these latter responsibilities report to the Site Vice President(s).

## SECTION I ORGANIZATION (CONTINUED)

1.2.6 Vice President Nuclear Plant Support

This position reports to the CNO and is responsible for nuclear plant operations support via staff at both the corporate and site levels. Responsibilities include security, nuclear information technology, reactor and turbine services, and for providing corporate direction in the areas of chemistry, radiation protection, maintenance, operations, training and outage planning. The organizations that implement these latter responsibilities report to the Site Vice President(s).

1.2.7 Vice President Nuclear Projects (Uprate)

This position reports to the CNO and is responsible for power uprate and other major projects via staff at both the corporate and site levels. Responsibilities include major nuclear projects, major project engineering, and nuclear fuel.

1.2.8 Vice President Nuclear Engineering Support

This position reports to the CNO and is responsible for nuclear plant engineering support via staff at the corporate level. Responsibilities include plant design engineering, engineering programs, probabilistic safety analysis, and other engineering support activities.

1.2.9 Vice President Nuclear Projects

This position reports to the Vice President Nuclear Power Uprate and is responsible for all activities associated with major projects from inception to completion, including budget accountability. Responsibilities include overall management and allocation of supplemental labor at all sites, during both outage and non-outage periods.

1.2.10 Vice President Integrated Supply Chain

This position reports to the CEO through the Executive Vice President Engineering, Construction and Corporate Services and the COO and is responsible for procurement engineering; negotiating, generating, and issuing procurement documents for required items, coordinating contract activities and for services that support the operation, licensing, maintenance, modification, and inspection of FPL nuclear plants, as well as for materials and equipment to support the Nuclear Division staff. Responsibilities also include the review of procurement documents to ensure that technical and quality requirements are properly incorporated and for the performance of receipt inspection to verify that purchased items comply with procurement document requirements (other than at stations where receipt inspection is performed by the Quality Assurance Organization), and for the control of materials received at each FPL nuclear plant site in accordance with company policy and procedures.

## SECTION I ORGANIZATION (CONTINUED)

1.2.11 Director Nuclear Assurance

This position reports to the Vice President Safety Assurance and is responsible for activities that include establishing, maintaining, and interpreting quality assurance practices and policies (including this QAPD); managing independent assessment (Quality Assurance (QA)) and for establishing quality control practices and policies for quality verification activities. The Director Nuclear Assurance has direct access (dotted line) to the Chief Nuclear Officer for resolution of any areas in question. When audits or surveillances involve other groups that also report to the Vice President Safety Assurance, the Director Nuclear Assurance reports directly to the Chief Nuclear Officer.

Additional responsibilities include the facilitation of actions deemed necessary to prevent unsafe plant conditions or a significant violation of the QAP; periodically apprising the CNO of the status of the quality assurance program at FPL facilities; immediately apprising senior management of significant problems affecting quality and verifying implementation of solutions for significant conditions adverse to quality that have been identified by QA. The Director of Nuclear Assurance is also responsible for establishing requirements for assessor and inspector certification; providing for supplier evaluation; the conduct of supplier assessments or surveys; and for verification that supplier quality assurance programs comply with FPL requirements. This position has Stop Work authority at the sites and corporate offices.

1.2.12 Director of Licensing and Performance Improvement

This position reports to the Vice President Safety Assurance and is responsible for corporate corrective action and licensing activities and for providing corporate direction concerning site corrective action and self-assessment programs and regulatory interfaces and licensing action. The organizations that implement some of these responsibilities report to the Site Vice Presidents(s).

1.2.13 Director Nuclear Fleet Security

This position reports to the Vice President Nuclear Plant Support and is responsible for FPL Nuclear Fleet Security and Fleet Access Authorization (AA)/Fitness for Duty (FFD) programs. This includes direct authority/responsibility for all Site Security/AA/FFD functions.

1.2.14 Vice President Information Management

This position is the FPL Group Chief Information Officer or CIO, and reports to the FPL CEO through the FPL Executive Vice President, Business Strategy & Policy. The CIO is responsible for information management for the Nuclear Division including computer-related hardware and software acquisition, deployment, maintenance, control and replacement; telecommunications; information / cyber security; and applicable training.

## SECTION I ORGANIZATION (CONTINUED)

### 1.3 FPL Nuclear Fleet Site Organization

The following site FPL management positions describe typical site QAP functional responsibilities, which may be delegated to others as established in this document. The on-site operating organization includes one or more individuals knowledgeable in the following fields: nuclear power plant operation; nuclear power plant mechanical, electrical and electronic systems; nuclear engineering; chemistry and radiochemistry; radiation protection; and quality assurance.

1.3.1 Site Vice President (SVP)

This position reports to a Vice President Nuclear Fleet Operations and is responsible for the operation, maintenance, licensing, training, emergency planning, and modification of the plant. In this position, the SVP acts as a liaison between the plants and the corporate organization and is accountable for ensuring that the company policy and procedures are properly implemented and continued at the nuclear site.

1.3.2 Plant General Manager

This position reports to the Site Vice President and is responsible for the safe operation of the nuclear plant. The Plant General Manager has control of the onsite resources necessary for the safe operation and maintenance regardless of organizational reporting.

In this position, the Plant General Manager assures the safe, reliable, and efficient operation of the plant as dictated by applicable regulatory requirements, operating license, and the QAP. Functional areas of responsibility also include chemistry activities, environmental services, fuel handling (receipt, movement, and storage), health physics/radiological protection, operations and support, maintenance and production planning, and related procedures and programs.

1.3.3 Director Plant Support

This position reports to the Site Vice President and has overall responsibility for plant support activities. Plant support activities include document control, performance improvement, security, projects, materials management, and information technology.

1.3.4 Licensing Manager

This position reports to the SVP and is responsible for site regulatory interfaces and licensing actions.

1.3.5 Performance Improvement Manager

This position reports to the Director Plant Support and is responsible for administration of the corrective action and self-assessment programs.

## SECTION I ORGANIZATION (CONTINUED)

1.3.6 Engineering Director

This position reports to the Site Vice President, and interfaces with the Vice President Nuclear Engineering Support (offsite) for governance and oversight. The position has functional areas of responsibility that include day-to-day engineering support, design engineering, engineering document control, engineering administration, modifications and their implementation, plant design configuration control, reactor engineering, system engineering, system testing, and technical support.

1.3.7 Training Manager

This position reports to the Site Vice President and interfaces with the Director of Training (offsite) and is responsible for training. The Site Training Manager provides direction, control, and overall supervision of training personnel and training for all site personnel as required. Functional areas of responsibility include training support services, technical training, and operations training.

1.3.8 Emergency Preparedness Manager

This position reports to the Site Vice President and functionally interfaces with the Director of Emergency Preparedness (offsite) and is responsible for maintaining and implementing the emergency plan for the station.

The following positions report directly offsite, but functionally report to a site position:

1.3.9 Site Manager of Projects

This position reports to the Vice President Nuclear Projects (offsite) with direct interface to the Director Plant Support and is responsible for installing plant modifications as a result of design changes and implementing other major projects.

1.3.10 Site Quality Manager

This position reports to the Director Nuclear Assurance (offsite) and is responsible for site quality activities. Significant safety or quality issues requiring escalated action are directed through this position to senior management, as necessary. Functional responsibilities include conducting independent assessments of line and support activities; monitoring and assessing day-to-day station activities; stop work authority at the site; periodic reporting on the status and adequacy of the quality program; and providing quality verification and inspections.

1.3.11 Nuclear Materials Manager

This position reports to the Vice President Integrated Supply Chain (offsite) with direct interface with the Director Plant Support. The position has functional areas of responsibility that include authority for day-to-day material support activities at the site. Activities include contract coordination, procurement document control, and receipt and control of material.

## SECTION I ORGANIZATION (CONTINUED)

### 1.4 Authority

1.4.1 Authority to Stop Work

Quality assurance and inspection personnel have the authority, and the responsibility, to stop work in progress which is not being done in accordance with approved procedures or where safety or SSC integrity may be jeopardized. This extends to off-site work performed by suppliers that furnish safety-related materials and services to FPL.

1.4.2 Quality Assurance Organizational Independence

For construction, independence shall be maintained between the organization or organizations performing the checking (quality assurance and control) functions and the organizations performing the functions. This provision is not applicable to design review/verification.

1.4.3 NQA-1-1994 Commitment

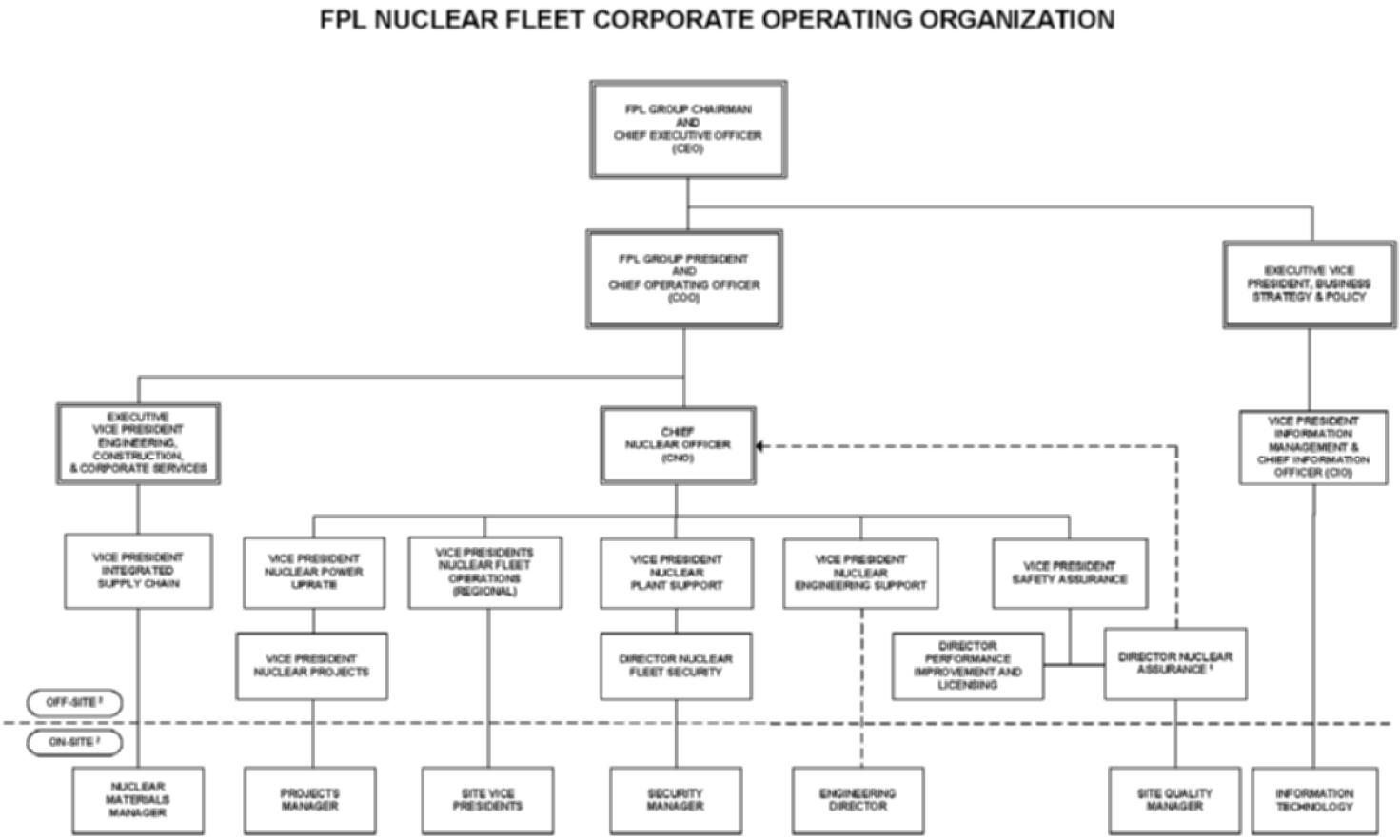
In establishing its organizational structure, FPL commits to compliance with NQA-1-1994, Basic Requirement 1 and Supplement 1S-1.

## SECTION I ORGANIZATION (CONTINUED)

### Figure 1-1: NPP Construction and Startup Organization

## SECTION I ORGANIZATION (CONTINUED)

### Figure 1-2: FPL Nuclear Fleet Corporate Operating Organization



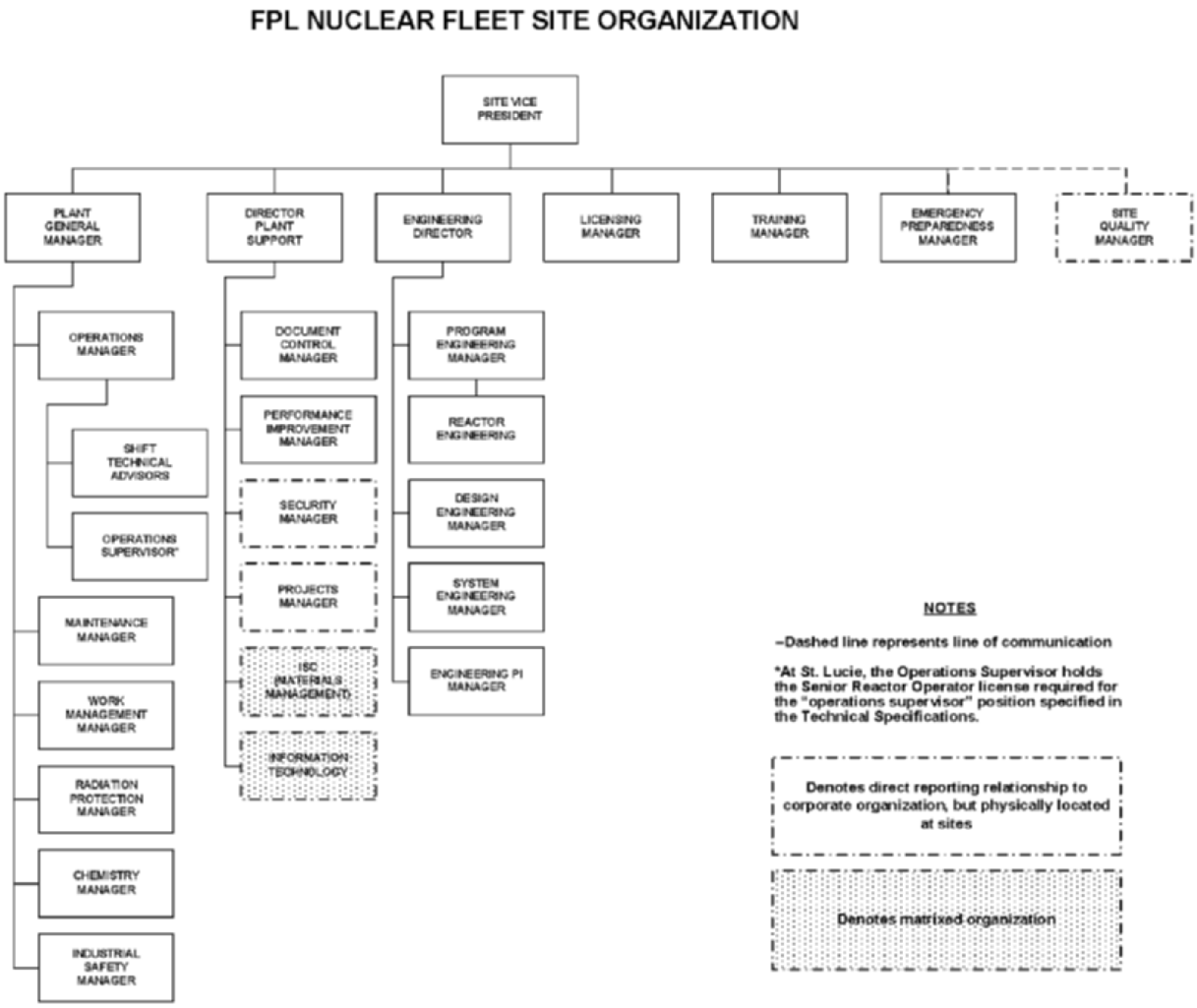

**NOTES**

1. The Director Nuclear Assurance reports directly to the Vice President Safety Assurance. The Director Nuclear Assurance has direct access (dotted line) to the CNO for resolution of any areas in question. When audits or surveillances involve other groups that also report to the Vice President Safety Assurance, the Director Nuclear Assurance reports to the CNO.

2. The on-site management positions may report directly to the off-site executives as shown or to a management position within the off-site executive's organization.

## SECTION I ORGANIZATION (CONTINUED)

**Figure 1-3: FPL Nuclear Fleet Site Organization**



## SECTION 2 QUALITY ASSURANCE PROGRAM

FPL has established the necessary measures and governing procedures to implement the QAP as described in the QAPD. FPL is committed to implementing the QAP for all aspects of work that are important to the safety of the nuclear plant[s] as described and to the extent delineated in the QAPD. Further, FPL ensures through the systematic process described herein that its suppliers of safety-related equipment or services meet the applicable requirements of 10 CFR 50, Appendix B. Senior management is regularly apprised of the adequacy of implementation of the QAPD through the audit functions described in Part II, Section 18.

The objective of the QAPD is to assure that FPL's nuclear generating plants are designed, constructed, and operated in accordance with governing regulations and license requirements. The program is based on the requirements of ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," as further described in this document. The QAPD applies to those quality-related activities that involve the functions of safety-related structures, systems, and components (SSCs) associated with the design (excluding Design Certification activities), fabrication, construction, and testing of the SSCs of the facility and to the managerial and administrative controls to be used to assure safe operations. A list or system that identifies SSCs and activities to which this program applies is maintained at the appropriate facility. The Design Certification Document is used as the basis for this list. Cost and scheduling functions do not prevent proper implementation of the QAPD.

As described in Part III of the QAPD, specific program controls are applied to nonsafety-related SSCs, for which 10 CFR 50, Appendix B, is not applicable, that are significant contributors to plant safety. The specific program controls consistent with applicable sections of the QAPD are applied to those items in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to plant safety. Delegated responsibilities may be performed under a supplier's or principal contractor's QAPD, provided that the supplier or principal contractor has been approved as a supplier in accordance with the QAPD. Periodic audits and assessments of supplier QA programs are performed to assure compliance with the supplier's or principal contractor's QAPD and implementing procedures. In addition, routine interfaces with supplier personnel provide added assurance that quality expectations are met.

New nuclear plant construction will be the responsibility of FPL's NNP organization. Detailed engineering specifications and construction procedures will be developed to implement the QAPD and NSSS QA programs prior to commencement of construction activities.

In general, the program requirements specified herein are detailed in implementing procedures that are either FPL implementing procedures, or supplier implementing procedures governed by a supplier quality assurance program.

## SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)

A grace period of 90 days may be applied to provisions that are required to be performed on a periodic basis, unless otherwise noted. Annual evaluations and audits that must be performed on a triennial basis are examples where the 90 day general period could be applied. The grace period does not allow the "clock" for a particular activity to be reset forward. The "clock" for an activity is reset backwards by performing the activity early. Audits schedules are based on the month in which the audit starts.

### 2.1 Responsi bilities

Personnel who work directly or indirectly for FPL are responsible for achieving acceptable quality in the work covered by the QAPD. This includes the activities delineated in Part I, Section 1.1. FPL personnel performing verification activities are responsible for verifying the achievement of acceptable quality. Activities governed by the QAPD are performed as directed by documented instructions, procedures and drawings that are of a detail appropriate for the activity's complexity and effect on safety. Instructions, procedures and drawings specify quantitative or qualitative acceptance criteria as applicable or appropriate for the activity. Verification is performed against these criteria. Provisions are established to designate or identify the proper documents to be used for an activity, and to ascertain that such documents are being used. The Quality Assurance Project Manager is responsible for verification that processes and procedures comply with QAPD and other applicable requirements, that such processes or procedures are implemented, and that management appropriately ensures compliance.

### 2.2 Delegati on of Work

FPL retains and exercises the responsibility for the scope and implementation of an effective QAP. Positions identified in Part II, Section 1, of this QAPD may delegate all or part of the activities of planning, establishing, and implementing the program for which they are responsible to others, but retain the responsibility for the program's effectiveness. Decisions affecting safety are made at the level appropriate for their nature and effect, and with any necessary technical advice or review.

### 2.3 Site-specific Safety-Related Design Basis Activities

Site-specific safety-related design basis activities are defined as those activities, including sampling, testing, data collection, and supporting engineering calculations and reports, that will be used to determine the bounding physical parameters of the site. Appropriate quality assurance measures are applied.

### 2.4 Periodic Review of the Quality Assurance Program

Management of those organizations implementing the QA program, or portions thereof, assesses the adequacy of that part of the program for which it are responsible to ensure effective implementation at least once each year or at least once during the life of the activity, whichever is shorter. However, the required periodicity for the assessment of QA programs during the operations phase may be extended to once every two years.

## SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)

### 2.5 Issuance and Revision to Quality Assurance Program

Administrative control of the QAPD will be in accordance with 10 CFR 50.55(f) and 10 CFR 50.54(a). Changes to the QAPD are evaluated by the Quality Assurance Project Manager to ensure that such changes do not degrade previously approved quality assurance controls specified in the QAPD. This document shall be revised as appropriate to incorporate additional QA commitments that may be established during the Combined Operating License (COL) application development process. Revisions to the document will be reviewed, at a minimum, by the FPL Director Nuclear Assurance and approved by the Vice President – New Nuclear Projects.

Regulations require that the Final Safety Analysis Report (FSAR) include, among other things, the managerial and administrative controls to be used to assure safe operation, including a discussion of how the applicable requirements of Appendix B will be satisfied. In order to comply with this requirement, the FSAR references the QAPD and, as a result, the requirements of 10 CFR 50.54(a) are satisfied by and apply to the QAPD.

### 2.6 Personnel Qualifications

Personnel assigned to implement elements of the QAPD shall be capable of performing their assigned tasks. To this end, FPL establishes and maintains formal indoctrination and training programs for personnel performing, verifying, or managing activities within the scope of the QAPD to assure that suitable proficiency is achieved and maintained. Plant and support staff minimum qualification requirements are as delineated in the unit Technical Specifications. Other qualification requirements may be established but will not reduce those required by Technical Specifications. Sufficient managerial depth is provided to cover absences of incumbents. When required by code, regulation, or standard, specific qualification and selection of personnel is conducted in accordance with those requirements as established in applicable FPL procedures. Indoctrination includes the administrative and technical objectives, requirements of the applicable codes and standards, and the QAPD elements to be employed. Training for positions identified in 10 CFR 50.120 is accomplished according to programs accredited by the National Nuclear Accrediting Board of the National Academy of Nuclear Training that implement a systematic approach to training. Records of personnel training and qualification are maintained.

The minimum qualifications of the Director – Nuclear Assurance and the New Nuclear Projects Quality Assurance Project Manager are that each holds an engineering or related science degree and a minimum of four years of related experience including two years of nuclear power plant experience, one year of supervisory or management experience, which one year of the experience is in performing quality verification activities. Special requirements shall include management and supervisory skills and experience or training in leadership, interpersonal communication, management responsibilities, motivation of personnel, problem analysis and decision making, and administrative policies and procedures. Individuals who do not possess these formal education and minimum experience requirements should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

## SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)

The minimum qualifications of the individuals responsible for planning, implementing, and maintaining the programs for the QAPD are that each has a high school diploma or equivalent and has a minimum of one year of related experience. Individuals who do not possess these formal education and minimum experience requirements should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

### 2.7 Independent Review

Activities occurring during the operational phase shall be independently reviewed on a periodic basis. The independent review program shall be functional prior to initial core loading. The independent review function performs the following:

1. Reviews proposed changes to the facility as described in the safety analysis report (SAR). The Independent Review Committee (IRC) also verifies that changes do not adversely affect safety and if a technical specification change or NRC review is required.

2. Reviews proposed tests and experiments not described in the SAR. Changes to proposed tests and experiments not described in the SAR that do require a technical specification change must be reviewed by the IRC prior to NRC submittal and implementation.

3. Reviews proposed technical specification changes and license amendments relating to nuclear safety prior to NRC submittal and implementation, except in those cases where the change is identical to a previously approved change.

4. Reviews violations, deviations, and events that are required to be reported to the NRC. This review includes the results of investigations and recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.

5. Reviews any matter related to nuclear safety that is requested by the Site Vice President, or any IRC member.

6. Reviews corrective actions for significant conditions adverse to quality.

7. Reviews the adequacy of the audit program every 24 months.

## SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)

Independent Review Committee

1. An independent review committee is assigned independent review responsibilities.

2. The independent review committee reports to a management level above the plant manager.

3. The independent review committee is composed of no less than 5 persons and no more than a minority of members are from the on-site operating organization.

   For example, at least 3 of the 5 members must be from off-site if there are 5 members on the committee. A minimum of the chairman or alternative chairman and 2 members must be present for all meetings.

4. During the period of initial operation, meetings are conducted no less frequently than once per calendar quarter. Afterwards meetings are conduced no less than twice a year.

5. Results of the meeting are documented and recorded.

6. Consultants and contractors are used for the review of complex problems beyond the expertise of the off site/on site independent review committee.

7. Persons on the independent review committee are qualified as follows:

   a. Supervisor or Chairman of the Independent Review Committee

      - Education: baccalaureate in engineering or related science
      - Minimum experience: 6 years combined managerial and technical support

   b. Independent Review Committee members

      Education: Baccalaureate in engineering or related science for those Independent review personnel who are required to review problems in:

      - nuclear power plant operations,
      - nuclear engineering,
      - chemistry and radiochemistry,
      - metallurgy,
      - nondestructive testing,
      - instrumentation and control,
      - radiological safety,
      - mechanical engineering, and electrical engineering.

**SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)**

High school diploma for those independent review personnel who are required to review problems in administrative control and quality assurance practices, training, and emergency plans and related procedures and equipment.

Minimum experience: 5 years experience in their own area of responsibility (nuclear power plant operations, nuclear engineering, chemistry and radiochemistry, metallurgy, nondestructive testing, instrumentation and control, radiological safety, mechanical engineering, and electrical engineering, administrative control and quality assurance practices, training, and emergency plans and related procedures and equipment).

## 2.8 NQA-1-1994 Commitment / Exceptions

In establishing qualification and training programs, FPL commits to compliance with NQA-1-1994, Basic Requirement 2 and Supplements 2S-1, 2S-2, 2S-3 and 2S-4, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 2S-1

  - Supplement 2S-1 will include use of the guidance provided in Appendix 2A-1 in the same manner as if it were part of the Supplement. The following two alternatives may be applied to the implementation of this Supplement and Appendix:

    - (1) In lieu of being certified as Level I, II, or III in accordance with NQA-1-1994, personnel that perform independent quality verification inspections, examinations, measurements, or tests of material, products, or activities may possess qualifications equal to or better than those required for performing the task being verified provided that the verification is within the skills of these personnel and/or is addressed by procedures. These individuals will not be responsible for the planning of quality verification inspections and tests (i.e., establishing hold points and acceptance criteria in procedures, and determining who will be responsible for performing the inspections), evaluating inspection training programs, nor certifying inspection personnel.

    - (2) A qualified engineer may be used to plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for inspectors. For the purpose of these functions, a qualified engineer is one who has a baccalaureate in engineering in a discipline related to the inspection activity (such as electrical, mechanical, civil) and has a minimum of five years engineering work experience with at least two years of this experience related to nuclear facilities.

**SECTION 2 QUALITY ASSURANCE PROGRAM (Continued)**

- NQA-1-1994, Supplement 2S-2

  - In lieu of Supplement 2S-2, for qualification of nondestructive examination personnel, FPL will follow the applicable standard cited in the version(s) of Section III and Section XI of the ASME Boiler and Pressure Vessel Code approved by the NRC for use at FPL sites.

- NQA-1-1994, Supplement 2S-3

  - The requirement that prospective Lead Auditors have participated in a minimum of five (5) audits in the previous three (3) years is replaced by the following, "The prospective lead auditor shall demonstrate his/her ability to properly implement the audit process, as implemented by FPL, to effectively lead an audit team, and to effectively organize and report results, including participation in at least one nuclear audit within the year preceding the date of qualification."

## SECTION 3 DESIGN CONTROL

FPL has established and implements a process to control the design, design changes, and temporary modifications (e.g., temporary bypass lines, electrical jumpers and lifted wires, and temporary setpoints) for items that are subject to the provisions of the QAPD. The design process includes provisions to control design inputs, outputs, changes, interfaces, records, and organizational interfaces within FPL and with suppliers. These provisions assure that design inputs (such as design bases and the performance, regulatory, quality, and quality verification requirements) are correctly translated into design outputs (such as analyses, specifications, drawings, procedures, and instructions) so that the final design output can be related to the design input in sufficient detail to permit verification. Design change processes and the division of responsibilities for design-related activities are detailed in FPL and supplier procedures. The design control program includes interface controls necessary to control the development, verification, approval, release, status, distribution, and revision of design inputs and outputs. Design changes and disposition of nonconforming items as "use as is" or "repair" are reviewed and approved by the FPL design organization or by other organizations so authorized by FPL.

Design documents are reviewed by individuals knowledgeable in QA to ensure the documents contain the necessary QA requirements.

### 3.1 Design Verification

FPL design processes provide for design verification to ensure that items and activities subject to the provisions of the QAPD are suitable for their intended application, consistent with their effect on safety. Design changes are subjected to these controls, which include verification measures commensurate with those applied to original plant design.

Design verifications are performed by competent individuals or groups other than those who performed the original design but who may be from the same organization. The verifier shall not have taken part in the selection of design inputs, the selection of design considerations, or the selection of a singular design approach, as applicable. This verification may be performed by the originator's supervisor provided the supervisor did not specify a singular design approach, rule out certain design considerations, and did not establish the design inputs used in the design, or if the supervisor is the only individual in the organization competent to perform the verification. If the verification is performed by the originator's supervisor, the justification of the need is documented and approved in advance by management.

The extent of the design verification required is a function of the importance to safety of the item under consideration, the complexity of the design, the degree of standardization, the state-of-the-art, and the similarity with previously proven designs. This includes design inputs, design outputs, and design changes. Design verification procedures are established and implemented to assure that an appropriate verification method is used, the appropriate design parameters to be verified are chosen, the acceptance criteria are identified, and the verification is satisfactorily accomplished and documented. Verification methods may include, but are not limited to, design reviews, alternative calculations and qualification testing. Testing used to verify the acceptability of a specific design feature demonstrates acceptable performance under conditions that simulate the most adverse design conditions expected for item's intended use.

## SECTION 3 DESIGN CONTROL (Continued)

FPL normally completes design verification activities before the design outputs are used by other organizations for design work, and before they are used to support other activities such as procurement, manufacture, or construction. When such timing cannot be achieved, the design verification is completed before relying on the item to perform its intended design or safety function.

### 3.2 D esign Records

FPL maintains records sufficient to provide evidence that the design was properly accomplished. These records include the final design output and any revisions thereto, as well as record of the important design steps (e.g., calculations, analyses and computer programs) and the sources of input that support the final output.

Plant design drawings reflect the properly reviewed and approved configuration of the plant.

### 3.3 Computer Application and Digital Equipment Software

The QAPD governs the development, procurement, testing, maintenance, and use of computer applications and digital equipment software when used in safety-related applications and designated nonsafety-related applications. FPL and suppliers are responsible for developing, approving, and issuing procedures, as necessary, to control the use of such computer applications and digital equipment software. The procedures require that the application software be assigned a proper quality classification and that the associated quality requirements be consistent with this classification. Each software application and revision thereto is documented and approved by authorized personnel. The QAPD is also applicable to the administrative functions associated with the maintenance and security of computer hardware where such functions are considered essential in order to comply with other QAPD requirements such as QA records.

### 3.4 Setpoin t Control

Instrument and equipment setpoints that could affect nuclear safety shall be controlled in accordance with written instructions. As a minimum, these written instructions shall:

1. Identify responsibilities and processes for reviewing, approving, and revising setpoints and setpoint changes originally supplied by the NSSS supplier, the A/E, and the plant's technical staff.

2. Ensure that setpoints and setpoint changes are consistent with design and accident analysis requirements and assumptions.

3. Provide for documentation of setpoints, including those determined operationally.

4. Provide for access to necessary setpoint information by personnel who write or revise plant procedures, operate or maintain plant equipment, develop or revise design documents, or develop or revise accident analyses.

## SECTION 3 DESIGN CONTROL (Continued)

### 3.5 NQA-1-19 94 Commitment

In establishing its program for design control and verification, FPL commits to compliance with NQA-1-1994, Basic Requirement 3, and Supplement 3S-1, and the standards for computer software in Subpart 2.7.

## SECTION 4 PROCUREMENT DOCUMENT CONTROL

FPL has established the necessary measures and governing procedures to assure that purchased items and services are subject to appropriate quality and technical requirements. Procurement document changes shall be subject to the same degree of control as utilized in the preparation of the original documents. These controls include provisions such that:

- Where original technical or quality assurance requirements cannot be determined, an engineering evaluation is performed and documented by qualified staff to establish appropriate requirements and controls to assure that interfaces, interchangeability, safety, fit and function, as applicable, are not adversely affected and are not contrary to applicable regulatory requirements.

- Applicable technical, regulatory, administrative, quality and reporting requirements (such as specifications, codes, standards, tests, inspections, special processes, and 10 CFR 21) are invoked for procurement of items and services. 10 CFR 21 requirements concerning posting, evaluating, and reporting will be followed and imposed on suppliers when applicable. Applicable design bases and other requirements necessary to assure adequate quality shall be included or referenced in documents for procurement of items and services. To the extent necessary, procurement documents shall require that suppliers have a documented QA program that is determined to meet the applicable requirements of 10 CFR 50, Appendix B, as appropriate to the circumstances of procurements (or the supplier may work under FPL's approved QA program).

Reviews of procurement documents shall be performed by personnel who have access to pertinent information and who have an adequate understanding of the requirements and intent of the procurement documents.

### 4.1 NQA-1-1994 Commitment / Exceptions

In establishing controls for procurement, FPL commits to compliance with NQA-1-1994, Basic Requirement 4 and Supplement 4S-1, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 4S-1

  - Section 2.3 of this Supplement 4S-1 includes a requirement that procurement documents require suppliers to have a documented QAP that implements NQA-1-1994, Part 1. In lieu of this requirement, FPL may require suppliers to have a documented supplier QAP that is determined to meet the applicable requirements of 10 CFR 50, Appendix B, as appropriate to the circumstances of the procurement.

  - With regard to service performed by a supplier, FPL procurement documents may allow the supplier to work under the FPL QAP, including implementing procedures, in lieu of the supplier having its own QAP.

**SECTION 4 PROCUREMENT DOCUMENT CONTROL (Continued)**

- Section 3 of supplement 4S-1 requires procurement documents to be reviewed prior to bid or award of contract. The quality assurance review of procurement documents is satisfied through review of the applicable procurement specification, including the technical and quality procurement requirements, prior to bid or award of contract. Procurement document changes (e.g., scope, technical or quality requirements) will also receive the quality assurance review.

- Procurement documents for Commercial Grade Items that will be procured by FPL for use as safety-related items shall contain technical and quality requirements such that the procured item can be appropriately dedicated.

## SECTION 5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

FPL has established the necessary measures and governing procedures to ensure that activities affecting quality are prescribed by and performed in accordance with instructions, procedures or drawings of a type appropriate to the circumstances and which, where applicable, include quantitative or qualitative acceptance criteria to implement the QAPD. Such documents are prepared and controlled according to Part II, Section 6. In addition, means are provided to disseminate to the staff instructions of both general and continuing applicability, as well as those of short-term applicability. Provisions are included for reviewing, updating, and canceling such procedures.

### 5.1 Procedure Adherence

FPL's policy is that procedures are followed, and the requirements for use of procedures have been established in administrative procedures. Where procedures cannot be followed as written, provisions are established for making changes in accordance with Part II, Section 6. Requirements are established to identify the manner in which procedures are to be implemented, including identification of those tasks that require: (1) the written procedure to be present and followed step-by-step while the task is being performed, (2) the user to have committed the procedure steps to memory, (3) verification of completion of significant steps, by initials or signatures or use of check-off lists. Procedures that are required to be present and referred to directly are those developed for extensive or complex jobs where reliance on memory cannot be trusted, tasks that are infrequently performed, and tasks where steps must be performed in a specified sequence.

In cases of emergency, personnel are authorized to depart from approved procedures when necessary to prevent injury to personnel or damage to the plant. Such departures are recorded describing the prevailing conditions and reasons for the action taken.

### 5.2 Procedure Content

The established measures address the applicable content of procedures as described in the introduction to Part II of NQA-1-1994. In addition, procedures governing tests, inspections, operational activities and maintenance will include as applicable, initial conditions and prerequisites for the performance of the activity.

### 5.3 NQA-1-199 4 Commitment

In establishing procedural controls, FPL commits to compliance with NQA-1-1994, Basic Requirement 5.

## SECTION 6 DOCUMENT CONTROL

FPL has established the necessary measures and governing procedures to control the preparation of, issuance of, and changes to documents that specify quality requirements or prescribe how activities affecting quality, including organizational interfaces, are controlled to assure that correct documents are being employed. The control systems (including electronic systems used to make documents available) are documented and provide for the following:

(a) identification of documents to be controlled and their specified distribution;

(b) a method to identify the correct document (including revision) to be used and control of superseded documents;

(c) identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents;

(d) review of documents for adequacy, completeness, and correctness prior to approval and issuance;

(e) a method for providing feedback from users to continually improve procedures and work instructions; and

(f) coordinating and controlling interface documents and procedures.

The types of documents to be controlled include:

(a) drawings such as design, construction, installation, and as-built drawings;

(b) engineering calculations;

(c) design specifications;

(d) purchase orders and related documents;

(e) vendor-supplied documents;

(f) audit, surveillance, and quality verification/inspection procedures;

(g) inspection and test reports;

(h) instructions and procedures for activities covered by the QAPD including design, construction, installation, operating (including normal and emergency operations), maintenance, calibration, and routine testing;

(i) technical specifications

(j) nonconformance reports and corrective action reports.

During the operational phase, where temporary procedures are used, they shall include a designation of the period of time during which it is acceptable to use them.

## SECTION 6 DOCUMENT CONTROL (Continued)

### 6.1 Review and Approval of Documents

Documents are reviewed for adequacy by qualified persons other than the preparer. During the construction phase, procedures for design, construction, and installation are also reviewed by the organization responsible for quality verification to ensure quality assurance measures have been appropriately applied. The documented review signifies concurrence.

During the operations phase, documents affecting the configuration or operation of the station as described in the SAR are screened to identify those that require review by the IRC prior to implementation as described in Part II, Section 2.

To ensure effective and accurate procedures during the operational phase, applicable procedures are reviewed, and updated as necessary, based on the following conditions:

(a) following any modification to a system;

(b) following an unusual incident, such as an accident, significant operator error, or equipment malfunction;

(c) when procedure discrepancies are found;

(d) prior to use if not used in the previous two years; or

(e) results of QA audits conducted in accordance with Part II, Section 18.1.

Prior to issuance or use, documents including revisions thereto, are approved by the designated authority. A listing of all controlled documents identifying the current approved revision, or date, is maintained so personnel can readily determine the appropriate document for use.

### 6.2 Changes to Documents

Changes to documents, other than those defined in implementing procedures as minor changes, are reviewed and approved by the same organizations that performed the original review and approval unless other organizations are specifically designated. The reviewing organization has access to pertinent background data or information upon which to base their approval. Where temporary procedure changes are necessary during the operations phase, changes that clearly do not change the intent of the approved procedure may be implemented provided they are approved by two members of the staff knowledgeable in the areas affected by the procedures. Minor changes to documents, such as inconsequential editorial corrections, do not require that the revised documents receive the same review and approval as the original documents. To avoid a possible omission of a required review, the type of minor changes that do not require such a review and approval and the persons who can authorize such a classification shall be clearly delineated in implementing procedures.

### 6.3 NQA-1-199 4 Commitment

In establishing provisions for document control, FPL commits to compliance with NQA-1-1994, Basic Requirement 6 and Supplement 6S-1.

## SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

FPL has established the necessary measures and governing procedures to control the procurement of items and services to assure conformance with specified requirements. Such control provides for the following as appropriate: source evaluation and selection, evaluation of objective evidence of quality furnished by the supplier, source inspection, audit, and examination of items or services.

### 7.1 Acceptance of Item or Service

FPL establishes and implements measures to assess the quality of purchased items and services, whether purchased directly or through contractors, at intervals and to a depth consistent with the item's or service's importance to safety, complexity, quantity, and the frequency of procurement. Verification actions include testing, as appropriate, during design, fabrication and construction activities. Verifications occur at the appropriate phases of the procurement process, including, as necessary, verification of activities of suppliers below the first tier.

Measures to assure the quality of purchased items and services include the following, as applicable:

- Items are inspected, identified, and stored to protect against damage, deterioration, or misuse.

- Prospective suppliers of safety-related items and services are evaluated to assure that only qualified suppliers are used. Qualified suppliers are audited on a triennial basis. In addition, if a subsequent contract or a contract modification significantly enlarges the scope of, or changes the methods or controls for, activities performed by the same supplier, an audit of the modified requirements is conducted, thus starting a new triennial period. FPL may utilize audits conducted by outside organizations for supplier qualification provided that the scope and adequacy of the audits meet FPL requirements. Documented annual evaluations are performed for qualified suppliers to assure they continue to provide acceptable products and services. Industry programs, such as those applied by ASME, Nuclear Procurement Issues Committee (NUPIC), or other established utility groups, are used as input or the basis for supplier qualification whenever appropriate. The results of the reviews are promptly considered for effect on a supplier's continued qualification and adjustments made as necessary (including corrective actions, adjustments of supplier audit plans, and input to third party auditing entities, as warranted). In addition, results are reviewed periodically to determine if, as a whole, they constitute a significant condition adverse to quality requiring additional action.

## SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES (Continued)

- Provisions are made for accepting purchased items and services, such as source verification, receipt inspection, pre- and post-installation tests, certificates of conformance, and document reviews (including Certified Material Test Report/Certificate). Acceptance actions/documents should be established by the Purchaser with appropriate input from the Supplier and be completed to ensure that procurement, inspection, and test requirements, as applicable, have been satisfied before relying on the item to perform its intended safety function.

- Controls are imposed for the selection, determination of suitability for intended use (critical characteristics), evaluation, receipt and acceptance of commercial-grade services or items to assure they will perform satisfactorily in service in safety-related applications.

- If there is insufficient evidence of implementation of a QA program, the initial evaluation is of the existence of a QA program addressing the scope of services to be provided. The initial audit is performed after the supplier has completed sufficient work to demonstrate that its organization is implementing a QA program.

### 7.2 NQA-1-1994 Commitment / Exceptions

In establishing procurement verification controls, FPL commits to compliance with NQA-1-1994, Basic Requirement 7 and Supplement 7S-1, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 7S-1

  - FPL considers that other 10 CFR 50 licensees, Authorized Nuclear Inspection Agencies, National Institute of Standards and Technology, or other State and Federal agencies which may provide items or services to FPL plants are not required to be evaluated or audited.

  - When purchasing commercial grade calibration services from a calibration laboratory, procurement source evaluation and selection measures need not be performed provided each of the following conditions are met:

    (1) The purchase documents impose any additional technical and administrative requirements, as necessary, to comply with the FPL QA program and technical provisions. At a minimum, the purchase document shall require that the calibration certificate/report include identification of the laboratory equipment/standard used.

    (2) The purchase documents require reporting as-found calibration data when calibrated items are found to be out-of-tolerance.

**SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES (Continued)**

(3) A documented review of the supplier's accreditation will be performed and will include a verification of the following:

- The calibration laboratory holds a domestic (United States) accreditation by any one of the following accrediting bodies, which are recognized by the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA):
  - National Voluntary Laboratory Accreditation Program (NVLAP), administered by the National Institute of Standards & Technology;
  - American Association for Laboratory Accreditation (A2LA);
  - ACLASS Accreditation Services (ACLASS);
  - International Accreditation Service (IAS);
  - Laboratory Accreditation Bureau (L-A-B);
  - Other NRC-approved laboratory accrediting body.
- The accreditation encompasses ANS/ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories."
- The published scope of accreditation for the calibration laboratory covers the necessary measurement parameters, range, and uncertainties.

- For Section 8.1, FPL considers documents that may be stored in approved electronic media under FPL or vendor control, not physically located on the plant site, but are accessible from the respective nuclear facility site as meeting the NQA-1 requirement for documents to be available at the site. Following completion of the construction period, sufficient as-built documentation will be turned over to FPL to support operations. The FPL records management system will provide for timely retrieval of necessary records.

- In lieu of the requirements of Section 10, Commercial Grade Items, controls for commercial grade items and services are established in FPL documents using 10 CFR 21 and the guidance of EPRI NP-5652 as discussed in Generic Letter 89-02 and Generic Letter 91-05.
  - For commercial grade items, special quality verification requirements are established and described in FPL documents to provide the necessary assurance an item will perform satisfactorily in service. The FPL documents address determining the critical characteristics that ensure an item is suitable for its intended use, technical evaluation of the item, receipt requirements, and quality evaluation of the item.

## SECTION 7 CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES (Continued)

- FPL will also use other appropriate approved regulatory means and controls to support FPL commercial grade dedication activities. One example of this is Electric Power Research Institute (EPRI) Topical Report TR-106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," dated July 17, 1997. FPL will assume 10 CFR 21 reporting responsibility for all items that FPL dedicates as safety-related.

## SECTION 8 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

FPL has established the necessary measures and governing procedures to identify and control items to prevent the use of incorrect or defective items. This includes controls for consumable materials and items with limited shelf life. The identification of items is maintained throughout fabrication, erection, installation and use so that the item can be traced to its documentation, consistent with the item's effect on safety. Identification locations and methods are selected so as not to affect the function or quality of the item.

### 8.1 NQA-1-1994 Commitment

In establishing provisions for identification and control of items, FPL commits to compliance with NQA-1-1994, Basic Requirement 8 and Supplement 8S-1.

## SECTION 9 CONTROL OF SPECIAL PROCESSES

FPL has established the necessary measures and governing procedures to assure that special processes that require interim process controls to assure quality, such as welding, heat treating, and nondestructive examination, are controlled. These provisions include assuring that special processes are accomplished by qualified personnel using qualified procedures and equipment. Personnel are qualified and special processes are performed in accordance with applicable codes, standards, specifications, criteria or other specially established requirements. Special processes are those where the results are highly dependent on the control of the process or the skill of the operator, or both, and for which the specified quality cannot be fully and readily determined by inspection or test of the final product.

### 9.1 NQA-1-199 4 Commitment

In establishing measures for the control of special processes, FPL commits to compliance with NQA-1-1994, Basic Requirement 9 and Supplement 9S-1.

## SECTION 10 INSPECTION

FPL has established the necessary measures and governing procedures to implement inspections that assure items, services, and activities affecting safety meet established requirements and conform to applicable documented specifications, instructions, procedures, and design documents. Inspection may also be applied to items, services, and activities affecting plant reliability and integrity. Types of inspections may include those verifications related to procurement, such as source, in-process, final, and receipt inspection, as well as construction, installation, and operations activities. Inspections are carried out by properly qualified persons independent of those who performed or directly supervised the work. Inspection results are documented.

### 10.1 Inspection Program

The inspection program establishes inspections (including surveillance of processes), as necessary to verify quality: (1) at the source of supplied items or services, (2) in-process during fabrication at a supplier's facility or at a Company facility, (3) for final acceptance of fabricated and/or installed items during construction, (4) upon receipt of items for a facility, as well as (5) during maintenance, modification, in-service, and operating activities.

The inspection program establishes requirements for planning inspections, such as the group or discipline responsible for performing the inspection, where inspection hold points are to be applied, determining applicable acceptance criteria, the frequency of inspection to be applied, and identification of special tools needed to perform the inspection. Inspection planning is performed by personnel qualified in the discipline related to the inspection and includes qualified inspectors or engineers. Inspection plans are based on, as a minimum, the importance of the item to the safety of the facility, the complexity of the item, technical requirements to be met, and design specifications. Where significant changes in inspection activities for the facilities are to occur, management responsible for the inspection programs evaluate the resource and planning requirements to ensure effective implementation of the inspection program.

Inspection program documents establish requirements for performing the planned inspections, and documenting required inspection information such as rejection, acceptance, and re-inspection results, and the person(s) performing the inspection.

Inspection results are documented by the inspector, reviewed by authorized personnel qualified to evaluate the technical adequacy of the inspection results, and controlled by instructions, procedures, and drawings.

### 10.2 Inspector Qualification

FPL has established qualification programs for personnel performing quality inspections. The qualification program requirements are described in Part II, Section 2. These qualification programs are applied to individuals performing quality inspections regardless of the functional group where they are assigned.

## SECTION 10 INSPECTION (Continued)

### 10.3 NQA-1-1994 Commitment / Exceptions

In establishing inspection requirements, FPL commits to compliance with NQA-1-1994, Basic Requirement 10, Supplement 10S-1 and Subpart 2.4, with the following clarification. In addition, FPL commits to compliance with the requirements of Subparts 2.5 and 2.8 for establishing appropriate inspection requirements.

- Subpart 2.4 commits FPL to IEEE 336-1985. IEEE 336-1985 refers to IEEE 498-1985. Both IEEE 336 -1985 and IEEE 498-1985 use the definition of "Safety Systems Equipment" from IEEE 603-1980. FPL commits to the definition of Safety Systems Equipment in IEEE 603- 1980, but does not commit to the balance of that standard. This definition is only applicable to equipment in the context of Subpart 2.4.

- An additional exception to Subpart 2.4 is addressed in Part II, Section 12 of the QAPD.

- Where inspections at the operating facility are performed by persons within the same organization (e.g., Maintenance group), FPL takes exception to the requirements of NQA-1-1994, Supplement 10S-1, Section 3.1, the inspectors report to the quality control management while performing those inspections.

## SECTION 11 TEST CONTROL

FPL has established the necessary measures and governing procedures to demonstrate that items subject to the provisions of the QAPD will perform satisfactorily in service, that the plant can be operated safely and as designed, and that the coordinated operation of the plant as a whole is satisfactory. These programs include criteria for determining when testing is required, such as proof tests before installation, pre-operational tests, post-maintenance tests, post-modification tests, in-service tests, and operational tests (such as surveillance tests required by Plant Technical Specifications), to demonstrate that performance of plant systems is in accordance with design. Programs also include provisions to establish and adjust test schedules, and to maintain status for periodic or recurring tests. Tests are performed according to applicable procedures that include, consistent with the effect on safety: (1) instructions and prerequisites to perform the test, (2) use of proper test equipment, (3) acceptance criteria, and (4) mandatory verification points as necessary to confirm satisfactory test completion. Test results are documented and evaluated by the organization performing the test and reviewed by a responsible authority to assure that the test requirements have been satisfied. If acceptance criteria are not met, re-testing is performed as needed to confirm acceptability following correction of the system or equipment deficiencies that caused the failure.

The initial start-up test program is planned and scheduled to permit safe fuel loading and start-up; to increase power in safe increments; and to perform major testing at specified power levels. If tests require the variation of operating parameters outside of their normal range, the limits within which such variation is permitted will be prescribed. The scope of the testing demonstrates, insofar as practicable, that the plant is capable of withstanding the design transients and accidents. For new facility construction, the suitability of facility operating procedures is checked to the maximum extent possible during the pre-operational and initial start-up test programs.

Tests are performed and results documented in accordance with applicable technical and regulatory requirements, including those described in the Technical Specifications and SAR. Test programs ensure appropriate retention of test data in accordance with the records requirements of the QAPD. Personnel that perform or evaluate tests are qualified in accordance with the requirements established in Part II, Section 2.

### 11.1 NQA-1-199 4 Commitment

In establishing provisions for testing, FPL commits to compliance with NQA-1-1994, Basic Requirement 11 and Supplement 11S-1.

### 11.2 NQA-1-1994 Commitment for Computer Program Testing

FPL establishes and implements provisions to assure that computer software used in applications affecting safety is prepared, documented, verified and tested, and used such that the expected output is obtained and configuration control maintained. To this end FPL commits to compliance with the requirements of NQA-1-1994, Supplement 11S-2, and Subpart 2.7 to establish the appropriate provisions.

## SECTION 12 CONTROL OF MEASURING AND TEST EQUIPMENT

FPL has established the necessary measures and governing procedures to control the calibration, maintenance, and use of measuring and test equipment (M&TE) that provides information important to safe plant operation. The provisions of such procedures cover equipment such as indicating and actuating instruments and gages, tools, reference and transfer standards, and nondestructive examination equipment. The suppliers of commercial-grade calibration services are controlled as described in Part II, Section 7.

### 12.1 Installed Instrument and Control Devices

For the operations phase of the facilities, FPL has established and implements procedures for the calibration and adjustment of instrument and control devices installed in the facility. The calibration and adjustment of these devices is accomplished through the facility maintenance programs to ensure the facility is operated within design and technical requirements. Appropriate documentation will be maintained for these devices to indicate the control status, when the next calibration is due, and identify any limitations on use of the device.

### 12.2 NQA-1-1994 Commitment / Exceptions

In establishing provisions for control of measuring and test equipment, FPL commits to compliance with NQA-1-1994, Basic Requirement 12 and Supplement 12S-1 with the following clarification and exception:

- The out of calibration conditions described in paragraph 3.2 of Supplement 12S-1 refers to when the M&TE is found out of the required accuracy limits (i.e., out of tolerance) during calibration.

- Measuring and test equipment are not required to be marked with the calibration status where it is impossible or impractical due to equipment size or configuration (such as the label will interfere with operation of the device) provided the required information is maintained in suitable documentation traceable to the device. This exception also applies to the calibration labeling requirement stated in NQA-1-1994, Subpart 2.4, Section 7.2.1 (ANSI/IEEE Std. 336-1985).

## SECTION 13 HANDLING, STORAGE, AND SHIPPING

FPL has established the necessary measures and governing procedures to control handling, storage, packaging, shipping, cleaning, and preservation of items to prevent inadvertent damage or loss, and to minimize deterioration. These provisions include specific procedures, when required to maintain acceptable quality of the items important to the safe operations of the plant. Items are appropriately marked and labeled during packaging, shipping, handling and storage to identify, maintain, and preserve the item's integrity and indicate the need for special controls. Special controls (such as containers, shock absorbers, accelerometers, inert gas atmospheres, specific moisture content levels and temperature levels) are provided when required to maintain acceptable quality.

Special or additional handling, storage, shipping, cleaning and preservation requirements are identified and implemented as specified in procurement documents and applicable procedures. Where special requirements are specified, the items and containers (where used) are suitably marked.

Special handling tools and equipment are used and controlled as necessary to ensure safe and adequate handling. Special handling tools and equipment are inspected and tested at specified time intervals and in accordance with procedures to verify that the tools and equipment are adequately maintained.

Operators of special handling and lifting equipment are experienced or trained in the use the equipment. During the operational phase, FPL establishes and implements controls over hoisting, rigging and transport activities to the extent necessary to protect the integrity of the items involved, as well as potentially affected nearby structures and components. Where required, FPL complies with applicable hoisting, rigging and transportation regulations and codes.

### 13.1 Housekeeping

Housekeeping practices are established to account for conditions or environments that could affect the quality of structures, systems and components within the plant. This includes control of cleanliness of facilities and materials, fire prevention and protection, disposal of combustible material and debris, control of access to work areas, protection of equipment, radioactive contamination control and storage of solid radioactive waste. Housekeeping practices help assure that only proper materials, equipment, processes and procedures are used and that the quality of items is not degraded. Necessary procedures or work instructions, such as for electrical bus and control center cleaning, cleaning of control consoles, and radioactive decontamination are developed and used.

## SECTION 13 HANDLING, STORAGE, AND SHIPPING (Continued)

### 13.2 NQA-1-1994 Commitment / Exceptions

In establishing provisions for handling, storage and shipping, FPL commits to compliance with NQA-1-1994, Basic Requirement 13 and Supplement 13S-1. FPL also commits, during the construction and pre-operational phase of the plant, to compliance with the requirements of NQA-1-1994, Subpart 2.1, Subpart 2.2, and Subpart 3.2, Appendix 2.1, with the following clarifications and exceptions:

- NQA-1-1994, Subpart 2.2

  - Subpart 2.2, section 6.6, "Storage Records:" This section requires written records be prepared containing information on personnel access. As an alternative to this requirement, FPL documents establish controls for storage areas that describe those authorized to access areas and the requirements for recording access of personnel. However, these records of access are not considered quality records and will be retained in accordance with the administrative controls of the applicable plant.

  - Subpart 2.2, section 7.1 refers to Subpart 2.15 for requirements related to handling of items. The scope of Subpart 2.15 includes hoisting, rigging and transporting of items for the nuclear power plant[s] during construction.

- NQA-1-1994, Subpart 3.2

  - Subpart 3.2, Appendix 2.1: Only Section 3 precautions are being committed to in accordance with RG 1.37. In addition, a suitable chloride stress-cracking inhibitor should be added to the fresh water used to flush systems containing austenitic stainless steels.

## SECTION 14 INSPECTION, TEST, AND OPERATING STATUS

FPL has established the necessary measures and governing procedures to identify the inspection, test, and operating status of items and components subject to the provisions of the QAPD in order to maintain personnel and reactor safety and avoid inadvertent operation of equipment. Where necessary to preclude inadvertent bypassing of inspections or tests, or to preclude inadvertent operation, these measures require the inspection, test or operating status be verified before release, fabrication, receipt, installation, test or use. These measures also establish the necessary authorities and controls for the application and removal of status indicators or labels.

In addition, temporary design changes (temporary modifications), such as temporary bypass lines, electrical jumpers and lifted wires, and temporary trip-point settings, are controlled by procedures that include requirements for appropriate installation and removal, independent/concurrent verifications and status tracking.

Administrative procedures also describe the measures taken to control altering the sequence of required tests, inspections, and other operations. Review and approval for these actions is subject to the same control as taken during the original review and approval of tests, inspections, and other operations.

### 14.1 NQA-1-199 4 Commitment

In establishing measures for control of inspection, test and operating status, FPL commits to compliance with NQA-1-1994, Basic Requirement 14.

## SECTION 15 NONCONFORMING SERVICES, MATERIALS, PARTS, OR COMPONENTS

FPL has established the necessary measures and governing procedures to control items, including services, that do not conform to specified requirements to prevent inadvertent installation or use. Controls provide for identification, documentation, evaluation, segregation when practical, and disposition of nonconforming items, and for notification to affected organizations. Controls are provided to address conditional release of nonconforming items for use on an at-risk basis prior to resolution and disposition of the nonconformance, including maintaining identification of the item and documenting the basis for such release. Conditional release of nonconforming items for installation requires the approval of the designated management. Nonconformances are corrected or resolved prior to depending on the item to perform its intended safety function. Nonconformances are evaluated for impact on operability of quality structures, systems, and components to assure that the final condition does not adversely affect safety, operation, or maintenance of the item or service. Nonconformances to design requirements dispositioned as repair or use-as-is are subject to design control measures commensurate with those applied to the original design. Nonconformance dispositions are reviewed for adequacy, analysis of quality trends, and reports provided to the designated management. Significant trends are reported to management in accordance with FPL procedures, regulatory requirements, and industry standards.

### 15.1 Reporting Program

FPL has the necessary measures and governing procedures that implement a reporting program that conforms to the requirements of 10 CFR 52, 10 CFR 50.55 and 10 CFR 21 during design and construction and 10 CFR 21 during operations.

### 15.2 NQA-1-199 4 Commitment

In establishing measures for nonconforming materials, parts, or components, FPL commits to compliance with NQA-1-1994, Basic Requirement 15, and Supplement 15S-1.

## SECTION 16 CORRECTIVE ACTION

FPL has established the necessary measures and governing procedures to promptly identify, control, document, classify and correct conditions adverse to quality. FPL procedures assure that corrective actions are documented and initiated following the determination of conditions adverse to quality in accordance with regulatory requirements and applicable quality standards. FPL procedures require personnel to identify known conditions adverse to quality. When complex issues arise where it cannot be readily determined if a condition adverse to quality exists, FPL documents establish the requirements for documentation and timely evaluation of the issue. Reports of conditions adverse to quality are analyzed to identify trends. Significant conditions adverse to quality and significant adverse trends are documented and reported to responsible management. In the case of a significant condition adverse to quality, the cause is determined and actions to preclude recurrence are taken.

In the case of suppliers working on safety-related activities, or other similar situations, FPL may delegate specific responsibilities of the Corrective Action program but FPL maintains responsibility for the program's effectiveness.

### 16.1 Reporting Program

FPL has the necessary measures and governing procedures that implement a reporting program that conforms to the requirements of 10 CFR 52, 10 CFR 50.55 and/or 10 CFR 21 during design and construction, and 10 CFR 21 during operations.

### 16.2 NQA-1-199 4 Commitment

In establishing provisions for corrective action, FPL commits to compliance with NQA-1-1994, Basic Requirement 16.

## SECTION 17 QUALITY ASSURANCE RECORDS

FPL has the necessary measures and governing procedures to ensure that sufficient records of items and activities affecting quality are developed, reviewed, approved, issued, used, and revised to reflect completed work. The provisions of such procedures establish the scope of the records retention program for FPL and include requirements for records administration, including receipt, preservation, retention, storage, safekeeping, retrieval, access controls, user privileges, and final disposition.

### 17.1 Record Retention

Measures are required to be established that ensure that sufficient records of completed items and activities affecting quality are appropriately stored. Such records and their retention times are defined in appropriate procedures. In all cases where state, local, or other agencies have more restrictive requirements for record retention, those requirements will be met.

### 17.2 Electronic Records

When using electronic records storage and retrieval systems, FPL complies with NRC guidance Generic Letter 88-18, "Plant Record Storage on Optical Disks." FPL will manage the storage of QA Records in electronic media consistent with the intent of RIS 2000-18 and associated NIRMA Guidelines TG 11-1998, TG15-1998, TG16-1998, and TG21-1998.

### 17.3 NQA-1-1994 Commitment / Exceptions

In establishing provisions for records, FPL commits to compliance with NQA-1-1994, Basic Requirement 17 and Supplement 17S-1, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 17S-1
  - Supplement 17S-1, Section 4.2(b), requires records to be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers. For hard-copy records maintained by FPL, the records are suitably stored in steel file cabinets or on shelving in containers, except that methods other than binders, folders or envelopes may be used to organize the records for storage.

## SECTION 18 AUDITS

FPL has established the necessary measures and governing procedures to implement audits to verify that activities covered by the QAPD are performed in conformance with the requirements established. The audit programs are themselves reviewed for effectiveness as a part of the overall audit process.

### 18.1 Performance of Audits

Internal audits of selected aspects of licensing, design, construction phase and operating activities are performed with a frequency commensurate with safety significance and in a manner which assures that audits of safety-related activities are completed. During the early portions of NNP activities, audits will focus on areas including, but not limited to, procurement, and corrective action. Functional areas of an organization's QA program for auditing include, at a minimum, verification of compliance and effectiveness of implementation of internal rules, procedures (e.g., operating, design, procurement, maintenance, modification, refueling, surveillance, test, security, radiation control procedures, and the emergency plan), Technical Specifications, regulations and license conditions, programs for training, retraining, qualification and performance of operating staff, corrective actions, and observation of performance of operating, refueling, maintenance and modification activities, including associated record keeping.

The audits are scheduled on a formal preplanned audit schedule. The audit system is reviewed periodically and revised as necessary to assure coverage commensurate with current and planned activities. Additional audits may be performed as deemed necessary by management. The scope of the audit is determined by the quality status and safety importance of the activities being performed. These audits are conducted by trained personnel not having direct responsibilities in the area being audited and in accordance with preplanned and approved audit plans or checklists, under the direction of a qualified lead auditor and the cognizance of the Quality Manager responsible for the day to day program as documented in Section 1.

FPL is responsible for conducting periodic internal and external audits. Internal audits are conducted to determine the adequacy of programs and procedures (by representative sampling), and to determine if they are meaningful and comply with the overall QAPD. External audits determine the adequacy of supplier and contractor quality assurance programs.

The results of each audit are reported in writing to the responsible Senior Executive responsible for the Quality Assurance program at the Site, or designee, as appropriate. Additional internal distribution is made to other concerned management levels in accordance with approved procedures.

Management responds to all audit findings and initiates corrective action where indicated. Where corrective action measures are indicated, documented follow-up of applicable areas through inspections, review, re-audits, or other appropriate means is conducted to verify implementation of assigned corrective action.

Audits of suppliers of safety-related components and/or services are conducted as described in Section 7.1.

**SECTION 18 AUDITS (Continued)**

**18.2 Internal Audits**

Internal audits of organization and facility activities, conducted prior to placing the facility in operation, should be performed in such a manner as to assure that an audit of all applicable QA program elements is completed for each functional area at least once each year or at least once during the life of the activity, whichever is shorter.

Internal audits of activities, conducted after placing the facility in operation, should be performed in such a manner as to assure that an audit of all applicable QA program elements is completed for each functional area within a period of two years. Internal audit frequencies of well established activities, conducted after placing the facility in operation, may be extended one year at a time beyond the above two-year interval based on the results of an annual evaluation of the applicable functional area and objective evidence that the functional area activities are being satisfactorily accomplished. The evaluation should include a detailed performance analysis of the functional area based upon applicable internal and external source data and due consideration of the impact of any functional area changes in responsibility, resources or management. However, the internal audit frequency interval should not exceed a maximum of four years. If an adverse trend is identified in the applicable functional area, the extension of the internal audit frequency interval should be rescinded and an audit scheduled as soon as practicable.

During the operations phase, audits are performed at a frequency commensurate with the safety significance of the activities and in such a manner to assure audits of all applicable QA program elements are completed within a period of two years. These audits will include, as a minimum, activities in the following areas:

1. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions including administrative controls.

2. The performance, training, and qualifications of the facility staff.

3. The performance of activities required by the QAPD to meet the criteria of 10 CFR 50, Appendix B.

4. The Fire Protection Program and implementing procedures. A fire protection equipment and program implementation inspection and audit are conducted utilizing either a qualified off-site licensed fire protection engineer or an outside qualified fire protection consultant.

5. Other activities and documents considered appropriate by the Chief Nuclear Officer.

Audits may also be used to meet the periodic review requirements for Security, Emergency Preparedness, and Radiological Protection programs within the provisions of the applicable regulation.

**SECTION 18 AUDITS (Continued)**

Internal audits include verification of compliance and effectiveness of the administrative controls established for implementing the requirements of the QAPD; regulations and license provisions; provisions for training, retraining, qualification, and performance of personnel performing activities covered by the QAPD; corrective actions taken following abnormal occurrences; and, observation of the performance of construction, fabrication, operating, refueling, maintenance, and modification activities including associated record keeping.

**18.3 NQA-1-199 4 Commitment**

In establishing the independent audit program, FPL commits to compliance with NQA-1-1994, Basic Requirement 18 and Supplement 18S-1.

# PART III NONSAFETY-RELATED SSC QUALITY CONTROL

## SECTION 1 NON-SAFETY RELATED SSCs - SIGNIFICANT CONTRIBUTORS TO PLANT SAFETY

Specific program controls are applied to nonsafety-related SSCs, for which 10 CFR 50, Appendix B is not applicable, that are significant contributors to plant safety. The specific program controls consistent with applicable sections of the QAPD are applied to those items in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to plant safety.

The following clarify the applicability of the QA Program to the nonsafety-related SSCs and related activities, including the identification of exceptions to the QA Program described in Part II, Sections 1 through 18 taken for nonsafety-related SSCs.

### 1.1 Organi zation

The verification activities described in this part may be performed by the FPL line organization. The QA organization described in Part II is not required to perform these functions.

### 1.2 Q A Program

FPL QA requirements for nonsafety-related SSCs are established in the QAPD and appropriate procedures. Suppliers of these SSCs or related services describe the quality controls applied in appropriate procedures. A new or separate QA program is not required.

### 1.3 Desig n Control

FPL has design control measures to ensure that the contractually established design requirements are included in the design. These measures ensure that applicable design inputs are included or correctly translated into the design documents, and deviations from those requirements are controlled. Design verification is provided through the normal supervisory review of the designer's work.

### 1.4 Procurement Document Control

Procurement documents for items and services obtained by or for FPL include or reference documents describing applicable design bases, design requirements, and other requirements necessary to ensure component performance. The procurement documents are controlled to address deviations from the specified requirements.

## SECTION 1 NON-SAFETY RELATED SSCs - SIGNIFICANT CONTRIBUTORS TO PLANT SAFETY (Continued)

### 1.5 Instructions, Procedures, and Drawings

FPL provides documents such as, but not limited to, written instructions, plant procedures, drawings, vendor technical manuals, and special instructions in work orders, to direct the performance of activities affecting quality. The method of instruction employed provides an appropriate degree of guidance to the personnel performing the activity to achieve acceptable functional performance of the SSC.

### 1.6 Document Control

FPL controls the issuance and change of documents that specify quality requirements or prescribe activities affecting quality to ensure that correct documents are used. These controls include review and approval of documents, identification of the appropriate revision for use, and measures to preclude the use of superseded or obsolete documents.

### 1.7 Control of Purchased Items and Services

FPL employs measures, such as inspection of items or documents upon receipt or acceptance testing, to ensure that all purchased items and services conform to appropriate procurement documents.

### 1.8 Identification and Control of Purchased Items

FPL employs measures where necessary, to identify purchased items and preserve their functional performance capability. Storage controls take into account appropriate environmental, maintenance, or shelf life restrictions for the items.

### 1.9 Control of Special Processes

FPL employs process and procedure controls for special processes, including welding, heat treating, and nondestructive testing. These controls are based on applicable codes, standards, specifications, criteria, or other special requirements for the special process.

### 1.10 Inspect ion

FPL uses documented instructions to ensure necessary inspections are performed to verify conformance of an item or activity to specified requirements or to verify that activities are satisfactorily accomplished. These inspections are performed by knowledgeable personnel who may be in the same line organization as those performing the activity being inspected.

## SECTION 1 NON-SAFETY RELATED SSCs - SIGNIFICANT CONTRIBUTORS TO PLANT SAFETY (Continued)

### 1.11 Test Control

FPL employs measures to identify required testing that demonstrates that equipment conforms to design requirements. These tests are performed in accordance with test instructions or procedures. The test results are recorded, and authorized individuals evaluate the results to ensure that test requirements are met.

### 1.12 Control of Measuring and Test Equipment (M&TE)

FPL employs measures to control M&TE use, and calibration and adjustment at specific intervals or prior to use.

### 1.13 Handling, Storage, and Shipping

FPL employs measures to control the handling, storage, cleaning, packaging, shipping, and preservation of items to prevent damage or loss and to minimize deterioration. These measures include appropriate marking or labels, and identification of any special storage or handling requirements.

### 1.14 Inspection, Test, and Operating Status

FPL employs measures to identify items that have satisfactorily passed required tests and inspections and to indicate the status of inspection, test, and operability as appropriate.

### 1.15 Control of Nonconforming Items

FPL employs measures to identify and control items that do not conform to specified requirements to prevent their inadvertent installation or use.

### 1.16 C orrective Action

FPL employs measures to ensure that failures, malfunctions, deficiencies, deviations, defective components, and nonconformances are properly identified, reported, and corrected.

### 1.17 Records

FPL employs measures to ensure records are prepared and maintained to furnish evidence that the above requirements for design, procurement, document control, inspection, and test activities have been met.

## SECTION 1 NON-SAFETY RELATED SSCs - SIGNIFICANT CONTRIBUTORS TO PLANT SAFETY (Continued)

### 1.18 A udits

FPL employs measures for line management to periodically review and document the adequacy of the process, including taking any necessary corrective action. Audits independent of line management are not required. Line management is responsible for determining whether reviews conducted by line management or audits conducted by any organization independent of line management are appropriate. If performed, audits are conducted and documented to verify compliance with design and procurement documents, instructions, procedures, drawings, and inspection and test activities. Where the measures of this part (Part III) are implemented by the same programs, processes, or procedures as the comparable activities of Part II, the audits performed under the provisions of Part II may be used to satisfy the review requirements of this Section (Part III, Section 1.18).

## SECTION 2 NONSAFETY-RELATED SSCs CREDITED FOR REGULATORY EVENTS

The following criteria apply to fire protection (10 CFR 50.48), anticipated transients without scram (ATWS) (10 CFR 50.62), the station blackout (SBO) (10 CFR 50.63) SSCs that are not safety-related;

- FPL implements quality requirements for the fire protection system in accordance with Regulatory Position 1.7, "Quality Assurance," in Regulatory Guide 1.189, "Fire Protection for Operating Nuclear Power Plants."

- FPL implements the quality requirements for ATWS equipment in accordance with Generic Letter 85-06, "Quality Assurance Guidance for ATWS Equipment That Is Not Safety Related."

- FPL implements quality requirements for SBO equipment in accordance with Regulatory Position 3.5, "Quality Assurance and Specific Guidance for SBO Equipment That Is Not Safety Related," and Appendix A, "Quality Assurance Guidance for Nonsafety Systems and Equipment," in Regulatory Guide 1.155, "Station Blackout."

# PART IV REGULATORY COMMITMENTS

## NRC REGULATORY GUIDES AND QUALITY ASSURANCE STANDARDS

This section identifies the NRC Regulatory Guides and the other quality assurance standards which have been selected to supplement and support the FPL QAPD. FPL commits to compliance with these standards to the extent described herein. Commitment to a particular Regulatory Guide or other QA standard does not constitute a commitment to the Regulatory Guides or QA standards that may be referenced therein.

### Regulatory Guides

**Regulatory Guide 1.26,** Revision 4, March 2007 - Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants
Regulatory Guide 1.26 defines classification of systems and components.

FPL commits to the applicable regulatory position guidance provided in this regulatory guide for the NNP with the exception of Criteria C.1, C.1.a, C.1.b, and C.3. Refer to the Westinghouse AP1000 Design Control Document, Appendix 1A for a detailed discussion of these exceptions.

**Regulatory Guide 1.29,** Revision 4, March 2007 - Seismic Design Classification

Regulatory Guide 1.29 defines systems required to withstand a safe shutdown earthquake (SSE).

FPL commits to the applicable regulatory position guidance provided in this regulatory guide for the NNP with the exception of Criteria C.1.d, C.1.g, and C.1.n. Refer to the Westinghouse AP1000 Design Control Document, Appendix 1A, for a detailed discussion of these exceptions.

**Regulatory Guide 1.3 7**, Revision 1, March 2007 – Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants

Regulatory Guide 1.37 provides guidance on specifying water quality and precautions related to the use of alkaline cleaning solutions and chelating agents.

FPL commits to the applicable regulatory position guidance provided in this regulatory guide for the NNP, during the construction and preoperational phase of the plant.

### Standards

**ASME NQA-1-1994 Edition** - Quality Assurance Requirements for Nuclear Facility Applications

FPL commits to NQA-1-1994, Parts I and II, as described in the foregoing sections of this document.

**Nuclear Informatio n a nd Reco rds Manage ment Asso ciation, In c. (NIRMA) Technica l Guides (TGs)**

FPL commits to NIRMA TGs as described in Part II, Section 17.