



Serial: NPD-NRC-2009-048
March 31, 2009

10CFR52.79

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

**LEVY NUCLEAR POWER PLANT, UNITS 1 AND 2
DOCKET NOS. 52-029 AND 52-030
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 010 RELATED TO
QUALITY ASSURANCE PROGRAM DESCRIPTION**

Reference: Letter from Manny Comar (NRC) to Garry Miller (PEF), dated February 27, 2009,
"Request for Additional Information Letter No. 10 Related to SRP Section 17.5 for
the Levy County Nuclear Plant, Units 1 and 2 Combined License Application"

Ladies and Gentlemen:

Progress Energy Florida, Inc. (PEF) hereby submits our response to the Nuclear Regulatory
Commission's (NRC) request for additional information provided in the referenced letter.

A response to the NRC request is addressed in the enclosure. The enclosure also identifies
changes that will be made in a future revision of the Levy Nuclear Power Plant Units 1 and 2
application.

If you have any further questions, or need additional information, please contact Bob Kitchen at
(919) 546-6992, or me at (919) 546-6107.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 31, 2009.

Sincerely,

Garry D. Miller
General Manager
Nuclear Plant Development

Enclosure

cc : U.S. NRC Director, Office of New Reactors/NRLPO
U.S. NRC Office of Nuclear Reactor Regulation/NRLPO
U.S. NRC Region II, Regional Administrator
Mr. Brian C. Anderson, U.S. NRC Project Manager

**Levy Nuclear Power Plant Units 1 and 2
Response to NRC Request for Additional Information Letter No. 010 Related to
SRP Section 17.5 for the Combined License Application, dated February 27, 2009**

| <u>NRC RAI #</u> | <u>Progress Energy RAI #</u> | <u>Progress Energy Response</u> |
|------------------|------------------------------|---|
| 17.5-1 | L-0062 | Response enclosed – see following pages |
| 17.5-2 | L-0063 | Response enclosed – see following pages |
| 17.5-3 | L-0064 | Response enclosed – see following pages |
| 17.5-4 | L-0065 | Response enclosed – see following pages |
| 17.5-5 | L-0066 | Response enclosed – see following pages |
| 17.5-6 | L-0067 | Response enclosed – see following pages |
| 17.5-7 | L-0068 | Response enclosed – see following pages |
| 17.5-8 | L-0069 | Response enclosed – see following pages |
| 17.5-9 | L-0070 | Response enclosed – see following pages |
| 17.5-10 | L-0071 | Response enclosed – see following pages |
| 17.5-11 | L-0072 | Response enclosed – see following pages |
| 17.5-12 | L-0073 | Response enclosed – see following pages |
| 17.5-13 | L-0074 | Response enclosed – see following pages |

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-1

Text of NRC RAI:

The Levy County Applicant has provided an S-COLA which should include applicable incorporation of Standard RAI responses associated with Bellefonte R-COLA application. With respect to Chapter 17, Sections 17.1, 17.2, 17.3, and 17.5, the following standard R-COLA RAIs are applicable to the Levy County S-COLA application and require response.

- BLN 17.05-05
- BLN 17.05-06
- BLN 17.05-07
- BLN 17.05-09 + S
- BLN 17.05-013
- BLN 17.05-014
- BLN 17.05-015
- BLN 17.05-017
- BLN 17.05-018

PGN RAI #: L-0062

PGN Response to NRC RAI:

As part of its activities to develop an S-COLA for both the Harris and Levy Sites, Progress Energy reviewed the Bellefonte R-COLA requests for additional information to identify applicability to the Harris and Levy applications. Progress Energy submitted letter number NPD-NRC-2008-060, dated November 6, 2008, on the dockets for both the Shearon Harris Nuclear Power Plants Units 2 and 3, Docket Numbers 52-022 and 52-023 and the Levy Nuclear Power Plants Units 1 and 2, Docket Numbers 52-029 and 52-030, identifying that the STANDARD response identified for Bellefonte RAI-17.05-06 was not applicable to either application as it did not address the quality assurance program descriptions submitted. Progress Energy elected to implement Option I for Independent Review versus Option II implemented by Bellefonte, and therefore the STANDARD response to RAI 17.05-06 was not applicable. Additionally, Progress Energy submitted letter NPD-NRC-2008-086, dated December 15, 2008, on the dockets for both the Shearon Harris Nuclear Power Plants Units 2 and 3, Docket Number 52-022 and 52-023, and Levy Nuclear Power Plants Units 1 and 2, Docket Numbers 52-029 and 52-030, containing the Summary Identification of Concurrence with Standard Content in Response to Requests for Additional Information. This letter identified that the STANDARD responses for the additional Bellefonte RAIs identified above were applicable to the Levy Units 1 and 2 S-COLA. These changes will be incorporated into the first revision of the FSAR and QAPD.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-2

Text of NRC RAI:

Organization (QAPD Part I, Section 1) FSAR Section 17.5 states that the QAPD is maintained as a separate document; whereas QAPD Part II, Section 1 states that organization charts for various departments/locations are contained in chapter 13 of the FSARs of the respective station. NEI 06-14A, "Quality Assurance Program Description," referenced by FSAR Section 17.5, includes charts typical of the construction/preoperational phase.

Because the QAPD is a stand-alone document, periodically submitted for NRC review, it should include organization charts for the construction/preoperational phase and the operations phase. These charts should depict the flow of responsibilities from corporate positions responsible for quality-related programs to and including positions responsible for implementing and verifying elements of these programs. Generic position titles, descriptive of position functions and supplemented by descriptive text, may be used.

The QAPD describes the functions and responsibilities associated with the quality assurance requirements of Appendix B, Criteria I, Organization, Criteria II, Quality Assurance, and the administrative requirements described by American National Standard Institute (ANSI) N18.7. All positions associated with the establishment, implementation, and verification of quality-related activities should be shown on the organization charts and described in the QAPD.

For the operations phase, the level of detail to be included should include roles, responsibilities, and lines of authority for the positions necessary to implement the requirements of N18.7. Comparable detail should be provided for the construction/preoperational phase.

The following clarifications are requested, specific to the submitted QAPD, Part II, Section 1:

Section 1: The title above the list of responsibilities states, "Responsibilities, Structure, Functions, and Interfaces (Construction Phase)." Please clarify if all of the titles and responsibilities under this title is for the construction phase only. Please include a list of titles and responsibilities for the procurement, pre-operations, and operations activities that are also controlled by the QAPD.

Section 1, Organization: It is stated that engineering, procurement, and construction services are provided by primary contractors. Please clarify whether these services are provided by a single contract, as suggested in the text, and also the method for determining the "applicable" requirements of the QA program.

Section 1.7, Quality Assurance and Oversight: Is the position of the "manager responsible for quality assurance and oversight" a corporate position or a plant position? The reporting relationships incumbent with this position are not described. Please clarify the oversight responsibilities of this position, including those associated with implementation of the independent review function, described in Section 2.6.

Section 1.7 states that the manager for quality assurance and oversight is responsible for "making periodic reports on the effectiveness" of the implementation of the QAPD. To whom are these reports distributed and for what purpose?

Section 1.13, Authority to Stop Work – Reference is made to "approved procedures." If this reference pertains to the procedural controls described in Section 5, identify them as such. If these are other than procedures developed and controlled by Progress, describe the process for approving these procedures.

Section 1.14, QA Organizational Independence – What is the functional definition of "checking" and how does it differ from "verification." Since it is stated that design activities are not checked, provided clarification of how the adequacy of design activities is assured.

PGN RAI #: L-0063

PGN Response to NRC RAI:

The Progress Energy QAPD, Progress Energy New Nuclear Plant Quality Assurance Program Description Topical Report, was developed to support use of the document as a topical report applicable to all new nuclear generating plants developed and implemented by Progress Energy. The same QAPD document was submitted as Part 11 of both the Shearon Harris Nuclear Power Plant Units 2 and 3 and Levy Nuclear Plant Units 1 and 2 COL applications. As such the document was written in a generic nature without specific reference to any unit or site. The organizational descriptions and organization charts contained within the QAPD define the corporate and Nuclear Generation Group organizations that implement the quality assurance requirements in the QAPD in support of the development, construction and operation of the units. The operational phase organization chart provided in the QAPD is representative of the typical site organizational structure identifying the various reporting relationships that implement the quality assurance requirements including Nuclear Oversight functions. Since both the FSAR Chapter 13 and the QAPD require an operational phase organizational description, and the QAPD was designed to be generic and non site specific, Progress Energy elects to describe the detailed organization responsible for the operation of the new nuclear generating plants within the respective sites' FSAR Chapter 13. This detailed description is incorporated by reference into the QAPD, and changes to this organization are reviewed under the provisions of 10 CFR 50.54(a) to ensure that any reduction in commitments contained in the QAPD (as accepted by the NRC) are submitted to and approved by the NRC prior to implementation. Chapter 13 of the Levy Nuclear Power Plant Units 1 and 2 will be revised as documented below to address this process.

Progress Energy has defined the organizational structure; roles and responsibilities; and reporting relationships for the Progress Energy, Inc. organizations that will implement the requirements of this QAPD for the development, construction and operation of new nuclear generating plants. The Nuclear Plant Development (NPD) Department was created and aligned to the President and Chief Executive Officer (CEO) –Progress Energy Florida (PEF) for the development and management of the construction efforts. NPD activities were removed from the Nuclear Generation Group (NGG) to separate the construction activities from the management of the operating nuclear units. Management of all operating nuclear units within the NGG remain the responsibility of the Senior Vice President NGG and Chief Nuclear Officer (CNO). As shown on Figure II.1-1 of the QAPD, both the President and CEO-PEF and the Senior VP NGG/CNO report directly to the Chairman and CEO, Progress Energy, Inc. This separation of responsibilities allows NGG management to remain focused on improving the performance of the operating units while minimizing distractions associated with the construction

of new nuclear units. Management responsibility for the newly completed units transitions between these two positions when the newly constructed unit is ready for operations. This transition occurs prior to loading fuel in the new nuclear unit. The changes to the QAPD Part II Section 1 Organization, which reflect this alignment as noted below defining the organizational roles, responsibilities and reporting relationships including organization charts, will be included in Revision 1 to this QAPD to be submitted in conjunction with the first annual update of the Levy Nuclear Power Plant Units 1 and 2 Final Safety Analysis Report.

As stated in the text of the QAPD Part II Section 1, Organization, Engineering, Procurement and Construction Services are provided to PGN in support of the new nuclear plant by the primary contractors in accordance with their respective Quality Assurance Programs. The primary contractors for these functions are Westinghouse and Shaw Stone and Webster. Part II, Section 1.11 [Section 1.8 in revision 1 of the QAPD] was included in the QAPD as part of its intended use as a QA Topical Report for potential additional units in the future that have not yet been identified. This was included as a generic statement relative to how Progress Energy will enter into the Engineering, Procurement and Construction of new nuclear plants. Part II Section 1.11.2 [Section 1.8.2 in revision 1 of the QAPD] further clarifies this function by identifying that Westinghouse and Shaw Stone and Webster have formed a consortium to support the requirements of the Engineering, Procurement, and Construction contract for the delivery of new AP-1000 nuclear plants. At the time of this writing, Progress Energy has entered into a single Engineering, Procurement, and Construction contract with this consortium of Westinghouse and Shaw Stone and Webster for Levy Units 1 and 2. Work under the Engineering, Procurement, and Construction contract will be required to be performed in accordance with the selected contractor's QA program that satisfies 10 CFR 50 Appendix B and NQA-1 (1994). The determination of "applicable" requirements was performed in accordance with the existing procurement process that satisfies the quality assurance requirements defined in the Shearon Harris Nuclear Power Plant Unit 1 Final Safety Analysis Report (current revision), Docket Number 50-400.

Section 1.7, [Section 1.3.3 in revision 1 of the QAPD] of the QAPD will be re-written as part of the revised organizational structure discussed above and as provided below. The revised section of the QAPD will be included in Revision 1 to the QAPD to be submitted in conjunction with the first annual update of the Levy Nuclear Power Plant Units 1 and 2 Final Safety Analysis Report. The personnel responsible for the quality assurance and oversight functions will be located both at the site and in the corporate office. The Vice President Nuclear Oversight is a corporate position, however he is supported in the performance of his quality assurance and oversight responsibilities by a Director NPD Quality Assurance for the non operational phases of the new nuclear plant development activities and a Manager Site Nuclear Oversight for the operational phases of implementation. These positions will overlap as the first unit transitions to the operational phase and the second unit remains under construction. The Independent Review functions defined in Section 2.7 are managed and performed by the Site Nuclear Oversight organizations reporting to the Site Nuclear Oversight Manager at the operating units. The Nuclear Oversight managers report directly to the Vice President Nuclear Oversight. The Vice President Nuclear Oversight periodically reports findings and the effectiveness of the implementation of the QAPD to the President Progress Energy, Florida for Nuclear Plant Development activities and to the Senior Vice President Nuclear Generation Group / Chief Nuclear Officer for operational activities.

Progress Energy notes that the wording "approved procedures" in Section 1.13 [Section 1.10 in revision 1 of the QAPD] of the Progress Energy New Nuclear Plant Quality Assurance Program Description as referenced in this RAI is consistent with the standard content and wording of Section 1.8 of NEI 06-14A approved by the NRC via SER issued on April 25, 2007. The

“approved procedures” referenced in this section could either be those Progress Energy procedures developed consistent with Section 5 of this QAPD or those of organizations subcontracted to Progress Energy for the performance of work. These subcontractor procedures would be developed and approved in accordance with the respective subcontractor’s Quality Assurance Program. The procurement of these subcontracted services would be performed consistent with Section 7 of the QAPD if the contract is executed after COL approval or via the existing procurement process that satisfies the quality assurance requirements defined in the Shearon Harris Nuclear Power Plant Unit 1 Final Safety Analysis Report (current revision), Docket Number 50-400, if the contract is executed prior to approval and implementation of the QAPD. Progress Energy maintains the right to Stop Work for any activities being performed associated with the COL activities irrespective of the organization that approved the procedures for the conduct of the work activity.

Progress Energy notes that the wording “checking” and “verification” in Section 1.14 [Section 1.11 in revision 1 of the QAPD] of Progress Energy New Nuclear Plant Quality Assurance Program Description as referenced in this RAI is consistent with the standard content and wording of Section 1.9 of NEI 06-14A approved by the NRC via SER issued on April 25, 2007. This section was added to NEI 06-14A as a response to an NRC RAI during the review and approval of this template. This section addresses the implementation of SRP Section 17.5, paragraph II.A.4. The adequacy of the design activities is addressed in Section 3 of the QAPD.

Associated HAR COL Application Revisions:

The Levy Nuclear Power Plant Units 2 and 3 QAPD Part II Section 1 will be revised to read as follows:

PART II QAPD DETAILS

SECTION 1 ORGANIZATION

This Section describes the PGN organizational structure, functional responsibilities, levels of authority and interfaces for establishing, executing, and verifying QAPD implementation.

The organizational structure includes corporate/support/off-site and on-site functions for the development and construction of new nuclear plants including interface responsibilities for multiple organizations performing 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 this QAPD. Management gives careful consideration to the timing, extent and effects of organizational structure changes.

PGN management is responsible to size the Quality Assurance organization commensurate with the duties and responsibilities assigned.

The PGN Nuclear Plant Development Department is responsible for new nuclear generating plant licensing, engineering, procurement, construction, startup and operations development activities. There are several organizations within PGN which implement and support the QAPD. These organizations include, but are not limited to Nuclear Plant Development, Nuclear Engineering and Services, Nuclear Operations, Nuclear Oversight, Nuclear Information Technology, and Material Services.

Engineering, Procurement and Construction services are provided to PGN in support of the development of new nuclear plants by the primary contractors in accordance with their respective Quality Assurance Programs. The primary contractors for these functions are Westinghouse and Shaw Stone and Webster for the development of the Westinghouse AP-1000 new nuclear generating plants. This contract will extend the applicable quality assurance requirements described in this document to the applicable contractors and subcontractors.

The following sections describe the reporting relationships, functional responsibilities and authorities for organizations implementing and supporting the New Nuclear Plant QA Program.

Responsibilities, Structure, Functions, and Interfaces

The Senior Vice President, Nuclear Generation Group/Chief Nuclear Officer (CNO) has overall responsibility for establishing the quality policy and implementation of the quality program for the Nuclear Generation Group activities. The President and Chief Executive Officer – Progress Energy Florida is responsible for establishing and implementing the quality policy and program for the activities associated with the licensing, development and construction of new nuclear generation plants by the Nuclear Plant Development Department. The authority to accomplish quality assurance functions is delegated to the staff as necessary to fulfill the identified responsibilities.

PGN has established a quality policy and commitment to facilitate an organization to implement it as detailed in this QAPD. Additionally, management shall ensure that the role of QA in design and analysis activities is defined and the size of the QA organization is commensurate with its duties and responsibilities.

Individual managers are to ensure that personnel working under their management are qualified in accordance with written procedures and that personnel only perform those activities for which they are qualified. Personnel performing work activities such as, but not limited to, design, engineering, procurement, manufacturing, construction, installation, startup, maintenance, and modification shall also be responsible for achieving acceptable quality. Independence between the organization performing checking functions and the organization performing the functions shall be maintained.

When PGN delegates responsibility for planning, establishing or implementing any part of its overall QA program, sufficient authority to accomplish the assigned responsibility shall also be delegated. Additionally, when PGN delegates a major portion of its work to participant(s) outside the PGN organization, the delegation shall be identified and described such that:

- The organizational elements responsible for the work are identified.
- Management controls and lines of communication are established.
- Responsibility for an appropriate QAP and extent of PGN management oversight is established.
- Performance of delegated work is formally evaluated by PGN.

PGN assigns responsibility and authority to stop unsatisfactory work and control further processing, delivery, installation, or use of nonconforming items (such as SSCs, parts, materials, equipment, consumable materials, and software) such that cost and schedule considerations do not override safety considerations.

The organizational structure defines onsite functions and details off-site reporting relationships at the construction site. Implementing documents assign more specific responsibilities and duties, and define the organizational interfaces involved in conducting activities and duties within the scope of this QAPD.

The organizations responsible for the implementation of the requirements of this Quality Assurance Program Description Topical Report for new nuclear generating plants are described below. There are two primary organizations responsible for implementation within the corporate structure based on the activity being performed. The responsibility for the licensing, development and construction of new nuclear generating plants for Progress Energy, Inc. in the Carolinas or Florida is assigned to the Nuclear Plant Development Department that reports to the President and Chief Executive Officer - Progress Energy Florida. The responsibility for the operation of the new nuclear generating plants is assigned to the Senior Vice President Nuclear Generation Group / Chief Nuclear Officer. Each of these individuals reports directly to the Chairman and Chief Executive Officer Progress Energy, Inc. Figure II.1-1 displays the relationships of the Progress Energy, Inc. organizations described in and responsible for implementing the requirements of this QAPD. This division of responsibilities was made to allow the Chief Nuclear Officer and the NGG to remain focused on improving the performance of the operating fleet and minimize the distractions associated with the construction of new nuclear generating plants. Organizational control and responsibility for the newly constructed nuclear generating plants transfers from NPD to NGG following the completion of construction activities and prior to loading of fuel. This transition point allows for support by the NPD organization, while the organization transitions to the final structure typical of the operating fleet.

1.1 Chairman and Chief Executive Officer

The Progress Energy, Inc. Chairman and Chief Executive Officer (CEO) has the ultimate responsibility for the safe and reliable operation of each nuclear station owned and/or operated by the utility. The Chairman and CEO is responsible for the overall direction and management of the corporation, and the execution of the company policies, activities, and affairs. The Chairman and CEO is responsible for directing Progress Energy, Inc. core operational businesses including Progress Energy Florida, Progress Energy Carolinas, Nuclear Generation and Power Operations Groups. The Chairman and CEO is assisted in the direction of the Nuclear Generation Group and nuclear operations by the Senior Vice President Nuclear Generation Group (NGG) / Chief Nuclear Officer (CNO) and other executive staff in the nuclear division of the corporation. The Progress Energy, Inc. CEO is assisted in the direction of new nuclear plant development activities by the President and CEO of Progress Energy Florida and other executive staff in the Nuclear Plant Development department of the corporation.

1.2 President and Chief Executive Officer - Progress Energy Florida

The President and Chief Executive Officer (CEO) – Progress Energy, Florida (PEF) reports directly to the Chairman and CEO – Progress Energy, Inc. The President and CEO – PEF has overall responsibility for the licensing, development and construction of new nuclear generation plants in Florida and the Carolinas. The President and CEO- PEF maintains oversight

responsibility for the activities at each new nuclear generation plant under construction. The President and CEO PEF delegates the authority and responsibility for the licensing, development and construction of the new nuclear generating plants to the Vice President – Nuclear Plant Development. This organizational alignment allows the Senior Vice President Nuclear Generation Group and Chief Nuclear Officer to focus on the performance of the operating fleet until such time as a unit under construction is turned over to the operating fleet.

1.2.1 Vice President – Nuclear Plant Development

The Vice President – Nuclear Plant Development (NPD) reports through the President and CEO – PEF to the Chairman and CEO Progress Energy, Inc. This position is responsible for the licensing, development and construction of new nuclear generating plants in Florida and the Carolinas. This position will be responsible for: the construction of the new nuclear generation facilities; construction scheduling and cost control; all on-site manufacturing control of construction and testing activities; performance of maintenance; and control of start-up testing and turnover to operations for new nuclear generation facilities. This position is supported in this role by the Director Engineering and Licensing; Director Finance and Contract Management; and Director Operational Readiness. This position serves as the Owner's Project Director interfacing with the EPC contractor Project Director.

1.2.1.1 Director Engineering and Licensing

The Director Engineering and Licensing reports directly to the Vice President NPD. This position is responsible for both the overall design, engineering and licensing activities associated with the deployment of the new nuclear generating plants in both the Carolinas and Florida. This position is responsible for: directing the design and engineering of site specific structures and facilities; overseeing and managing the design products developed by contractors such as the EPC contractors; directing the development of the Combined Operating License applications; directing the development of the Site Certification Applications; obtaining and maintaining all permits, approvals and authorizations necessary to construct and operate the new nuclear generation plants; and coordinating the completion, documentation and closure of ITAAC results for submittal to the NRC. This position is supported in performing these responsibilities by the Manager Nuclear Engineering and the Manager Nuclear Licensing and Regulatory Affairs.

1.2.1.2 Director Finance and Contract Management

The Director Finance and Contract Management reports directly to the Vice President NPD. This position is responsible for the financial and contract management activities associated with the deployment of new nuclear generating plants in both the Carolinas and Florida. This position is responsible for implementation of the Progress Energy self evaluation and performance monitoring programs for NPD projects in both the Carolinas and Florida. This includes implementation of the corrective action program in accordance with the requirements of this QAPD. This position is supported in performing these responsibilities by the Manager EPC and Contract Management; the Manager Project Cost Analysis; the Supervisor Cost Recovery Interface; The Supervisor Invoice Analysis and Processing; and the Supervisor Self Evaluation and Performance Monitoring.

1.2.1.3 Director Construction

The Director Construction reports directly to the Vice President NPD. This position is responsible for the construction planning and execution of new nuclear generating plants in both

the Carolinas and Florida. This position manages and provides the technical and managerial oversight of the EPC contractor's construction planning, execution and supply chain activities. This position is also responsible for the management and execution of Owner managed projects such as the onsite training buildings. This position is responsible for facility management as buildings and structures are turned over to the Owner from the contractors. This position is responsible for the implementation of environment compliance and Health and Industrial Safety programs for the NPD projects. This position is supported in performing these responsibilities by the Manager EPC Construction Oversight; the Manger EPC Supply Chain Oversight; the Manager Owner Managed Projects; the Manager Planning and Scheduling; the Supervisor Owner Facility Management; and the Supervisor Environmental Health and Safety.

1.2.1.4 Director Operational Readiness

The Director Operational Readiness reports directly to the Vice President NPD through the completion of construction activities on site. This reporting relationship transitions to the Senior Vice President – NGG /CNO following the completion of construction activities on the new unit and prior to loading fuel. Figures II. 1-2 and II.1-3 show the construction phase and prior to fuel load organizational relationships of the Director Operational Readiness. This management transition precedes and supports the transition and integration of the new plant into the NGG fleet. This position is responsible for the overall operational readiness of the new nuclear generating plants in both the Carolinas and Florida. This responsibility includes the recruiting, hiring, and training of the permanent plant operating staffs for the new nuclear generating plants. This position is responsible for the development and implementation of all technical programs, policies, procedures and other needed infra structure necessary to start-up, operate and maintain the new nuclear generating plants. This position is supported in performing these responsibilities by the Manager Operations; the Manager Training; the Manager Maintenance; the Manager Document Control and Records Management; the Manager Environmental and Radiation Control; the Manager Security; and the Supervisor Emergency Planning.

1.3 Senior Vice President – Nuclear Generation Group / Chief Nuclear Officer

The Senior Vice President – Nuclear Generation Group (NGG) / Chief Nuclear Officer (CNO) reports directly to the Chairman and CEO Progress Energy, Inc. The CNO is responsible for overall plant nuclear safety and takes the measures needed to provide acceptable performance of the staff in operating, maintaining, and providing technical support to operating the nuclear plants. The CNO is responsible for oversight of operations at each of the operating nuclear units in the NGG Fleet. The CNO delegates authority and responsibility for the operation and support of the NGG Fleet through the respective site vice presidents; the Vice President Nuclear Engineering and Services; the Vice President – Nuclear Operations; and the Vice President – Nuclear Oversight. The CNO has no ancillary responsibilities that might detract attention from nuclear safety matters.

1.3.1 Vice President – Nuclear Engineering and Services

The Vice President – Nuclear Engineering and Services (NES) reports to the CNO and is responsible for providing integrated technical, design control and configuration management functions. This position is responsible for engineering, procurement, outsourcing engineering services, fabrication of nuclear fuel, and probabilistic safety assessment (PSA) activities along with material acquisition and administrative services for the NGG, providing analytical, chemistry and metallurgy services; environmental monitoring program support; dosimetry and strategic radiological support for the existing and new nuclear generation facilities. This position is also

responsible for the license renewal of current plants. Direction on matters relating to operational analysis, design, systems, engineering programs, and nuclear fuels is accomplished through the General Manager – Nuclear Engineering and the functional managers of site engineering departments. The Vice President NES is supported in the performance of these responsibilities by the General Manager – Nuclear Engineering; Manager – Nuclear Fuel Management and Safety Analysis; Manager Material Services; General Manager Nuclear Project Management; and Supervisor License Renewal.

1.3.2 Vice President – Nuclear Operations

The Vice President – Nuclear Operations Department reports to the Senior Vice President NGG /CNO. This position is responsible for establishing NGG fleet operating standards; assessing site and fleet operating performance; standardizing and implementing operational performance indicators; developing fleet positions for industry operational issues; providing governance over fleet peer group functions; implementing nuclear security, access authorization, and Fitness for Duty programs; and serving as the company's key nuclear industry interface. The Vice President – Nuclear Operations is assisted in performing these functions for the operating fleet of nuclear plants by the Director – Nuclear Protective Services; Director - Nuclear Work Management; Director – Nuclear Fleet Training; Director – Nuclear Fleet Support Services; and Director – Nuclear Fleet Operations.

1.3.3 Vice President – Nuclear Oversight

The Vice President – Nuclear Oversight (NOS) is responsible for and reports to the Senior Vice President NGG / CNO on all matters related to the independent monitoring and assessing of activities that are performed by the line organizations for, or in support of the NGG. The Vice President – NOS is responsible for all matters related to the independent monitoring and assessing of activities performed by or in support of the Nuclear Plant Development (NPD) Department. This responsibility is established and implemented through an interface agreement between the NGG and NPD for the quality assurance oversight of NPD activities. The Vice President – NOS shall have access to corporate management including the President and CEO – PEF to resolve any quality or nuclear safety related concerns that cannot be resolved satisfactorily at a lower management level. Nuclear Oversight reports the results of their activities directly to the Senior Vice President NGG /CNO for NGG activities and to the President and CEO-PEF for NPD activities. The Vice President Nuclear Oversight is responsible to ensure that quality assurance and oversight has the independence to conduct quality-related activities without undue pressure for cost and schedule. This position will establish the goals and objectives of the quality assurance policies, including oversight and maintenance of this QAPD in accordance with regulatory requirements. This position is responsible for the administration of the Nuclear Employee Concerns Program. The Vice President – NOS is supported in the performance of these responsibilities by the Director – Corporate Nuclear Oversight; a Manager Nuclear Oversight at each operating site; and a Director Nuclear Plant Development Quality Assurance.

1.3.3.1 Director Corporate Nuclear Oversight

The Director Corporate Nuclear Oversight reports directly to the Vice President NOS and is responsible for the overall management of oversight and assessment activities of the NGG organizations and implementation of the NGG Employee Concerns Program. These responsibilities include the development periodic oversight analysis reports and ensuring the independent assessment of the Nuclear Oversight program at least once every 24 months. This

position is supported in the performance of these responsibilities by the Manager Corporate NOS and the Supervisor Employee Concerns.

1.3.3.2 Manager Site Nuclear Oversight

The Manager Site Nuclear Oversight reports directly to the Vice President NOS. This manager is responsible for the development and implementation of quality assurance plans and oversight functions for an operational new nuclear generating plant. This position is responsible for the performance of independent oversight activities, including assessments, evaluations, and monitoring the performance of the onsite organizations responsible for implementing the requirements of the Quality Assurance Program. This position is also responsible for the implementation of the Independent Review Program described in Section 2.7 and the Quality Control activities at the operational new nuclear generating plant.

1.3.3.3 Director Nuclear Plant Development Quality Assurance

The Director Nuclear Plant Development Quality Assurance reports directly to the Vice President NOS. This director is responsible for the development and implementation of quality assurance plans and oversight functions associated with NPD activities. This position is responsible for the performance of independent oversight activities, including audits, independent assessments, evaluations, surveillances, and performance monitoring of NPD activities. This position is responsible for the identification of quality-related problems; initiation, recommendation, or provision of solutions to quality related problems; and verification of the implementation and effectiveness of solutions.

1.4 Director – Nuclear Information Technology

The Director – Nuclear Information Technology provides Information Technology services, safety related software services, and design, maintenance, and configuration control for NGG and NPD plant computing systems, structures and components. The Director Nuclear Information technology reports through the Vice President and Chief Information Officer of Information Technology and Telecommunications to the Executive Vice President Administration and Corporate Relations to the Chairman and Chief Executive Officer of Progress Energy, Inc. This position supports NPD activities through an Interface Agreement with Nuclear Engineering and Services.

1.5 Vice President – Supply Chain and Chief Procurement Officer

The Vice President – Supply Chain and Chief Procurement Officer provides procurement and contract support for NGG and NPD activities in accordance with applicable quality assurance requirements for activities affecting quality. This position reports through the Executive Vice President Administration and Corporate Relations to the Chairman and CEO Progress Energy Inc. This support is provided through an interface agreement with Nuclear Engineering and Services.

1.6 Manager – Materials Services

The Manager – Material Services is responsible for providing direction and guidance for the preparation, review, approval, and issuance of procurement requisitions; qualification of suppliers, including supplier QA Program implementation; and receipt and storage of materials,

parts and components, including receipt inspections. The Manager – Material Services reports to the Vice President – Nuclear Engineering and Services.

1.7 Plant Operations

Following completion of construction activities, the new nuclear generating plant will transition to the operations phase. The typical operations phase site organizational structure is shown in Figure II.1-4, with the Site Vice President reporting to the Senior Vice President – NRG/CNO. Nuclear Oversight for the plant operations phase is performed by the Manager Site NOS who reports to the Vice President NOS. The detailed roles, responsibilities and organizational structure and reporting relationships for the operations phase organization is detailed in Chapter 13 of the respective plant's FSAR. This description is incorporated by reference and establishes the organization responsible for implementing the operational requirements of this QAPD. Changes to the information contained within the respective plant's FSAR Chapter 13 is controlled and changes are reviewed under the provisions of 10 CFR 50.54(a) to ensure that any reduction in commitments in this QAPD (as accepted by the NRC) are submitted to and approved by the NRC, prior to implementation.

1.8 Agents and Contractors

Progress Energy contracts the Engineering, Procurement and Construction activities for the construction of new nuclear plants. These contracts include the flow down of applicable quality program requirements described in the document to applicable contractors and subcontractors. NPD personnel are responsible for the implementation of the QAPD requirements in this document assigned to the Engineering, Construction and Procurement contractors and subcontractors.

1.8.1 Design Certification Holder

Westinghouse has been selected as the Design Certification Holder/NSSS vendor and provides engineering services for plant design and licensing. In accordance with the requirements of the Engineering, Procurement, and Construction contract, Westinghouse will provide the engineering services for plant design, including site specific engineering and design necessary to support initial procurement, construction, pre-operations and operational activities for the new nuclear generating plants. This work will be performed in accordance with Westinghouse's Quality Assurance Program.

1.8.2 A/E

Shaw Stone and Webster has been selected as the A/E firm, and in accordance with the requirements of the Engineering Procurement and Construction contract will provide engineering services including planning and support for initial procurement, construction, pre-operations, and operational activities for the new nuclear plants. This work will be performed in accordance with Shaw Stone and Webster's Quality Assurance Program.

Westinghouse and Shaw Stone and Webster have formed a consortium to support the requirements of the Engineering, Procurement, and Construction contract for the delivery of new AP-1000 nuclear plants.

1.9 Authority

The program and procedures require that the authority and duties of persons and organizations performing activities affecting quality functions be clearly established and delineated in writing and these individuals and organizations have sufficient authority and organizational freedom to:

1. Identify quality, nuclear safety, and performance problems.
2. Order unsatisfactory work to be stopped and control further processing, delivery, or installation of nonconforming material.
3. Initiate, recommend, or provide solutions for conditions adverse to quality.
4. Verify implementation of solutions.

1.10 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 furnishing safety-related materials and services to PGN.

1.11 Quality Assurance Organizational Independence

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.

1.12 NQA-1-1994 Commitment

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

Figure II. 1-1

Progress Energy Inc. Organization

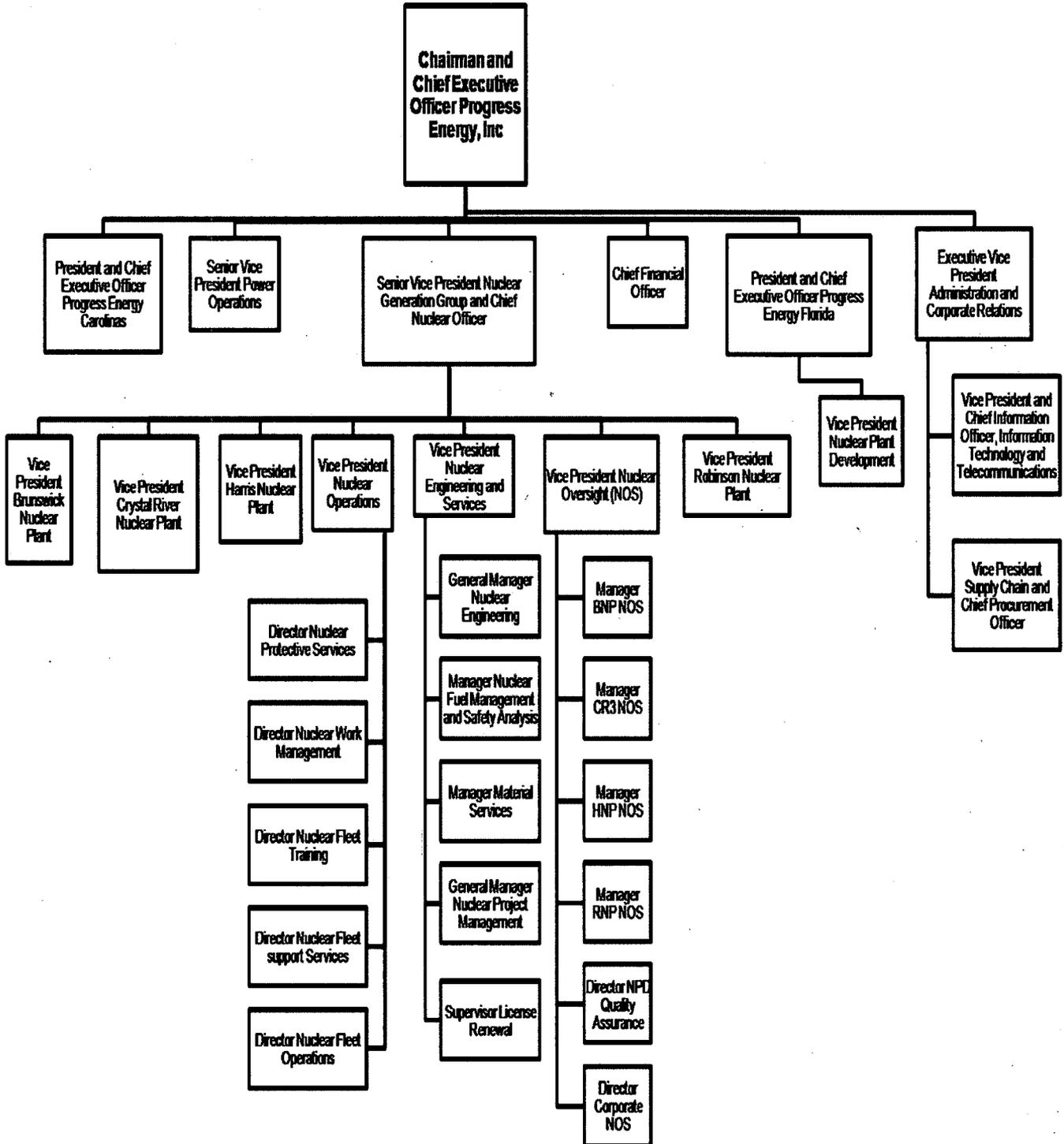


Figure II.1-2

Nuclear Plant Development Organization Construction Phase

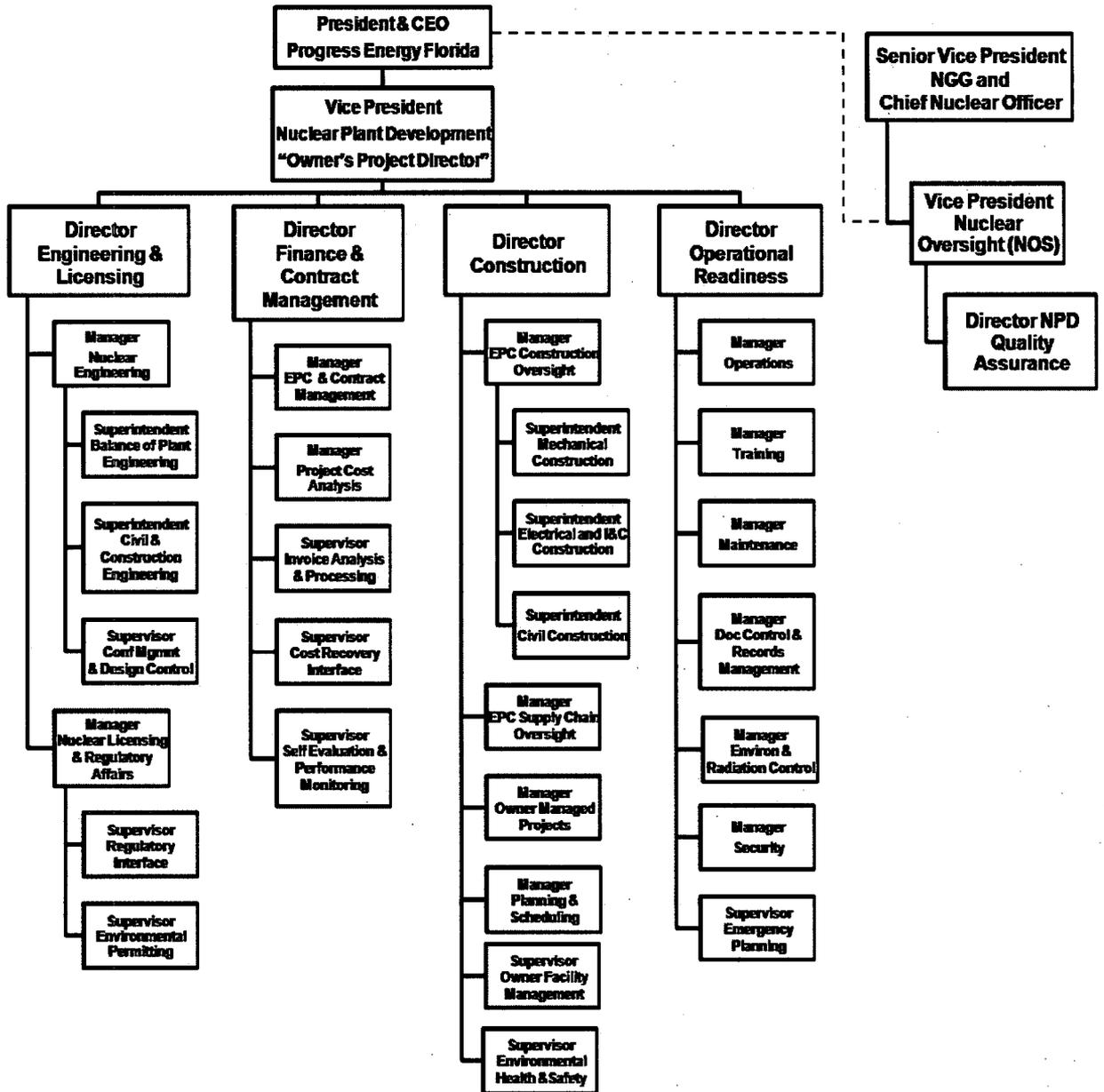


Figure II.1-3

Nuclear Plant Development Organization Prior to Fuel Load

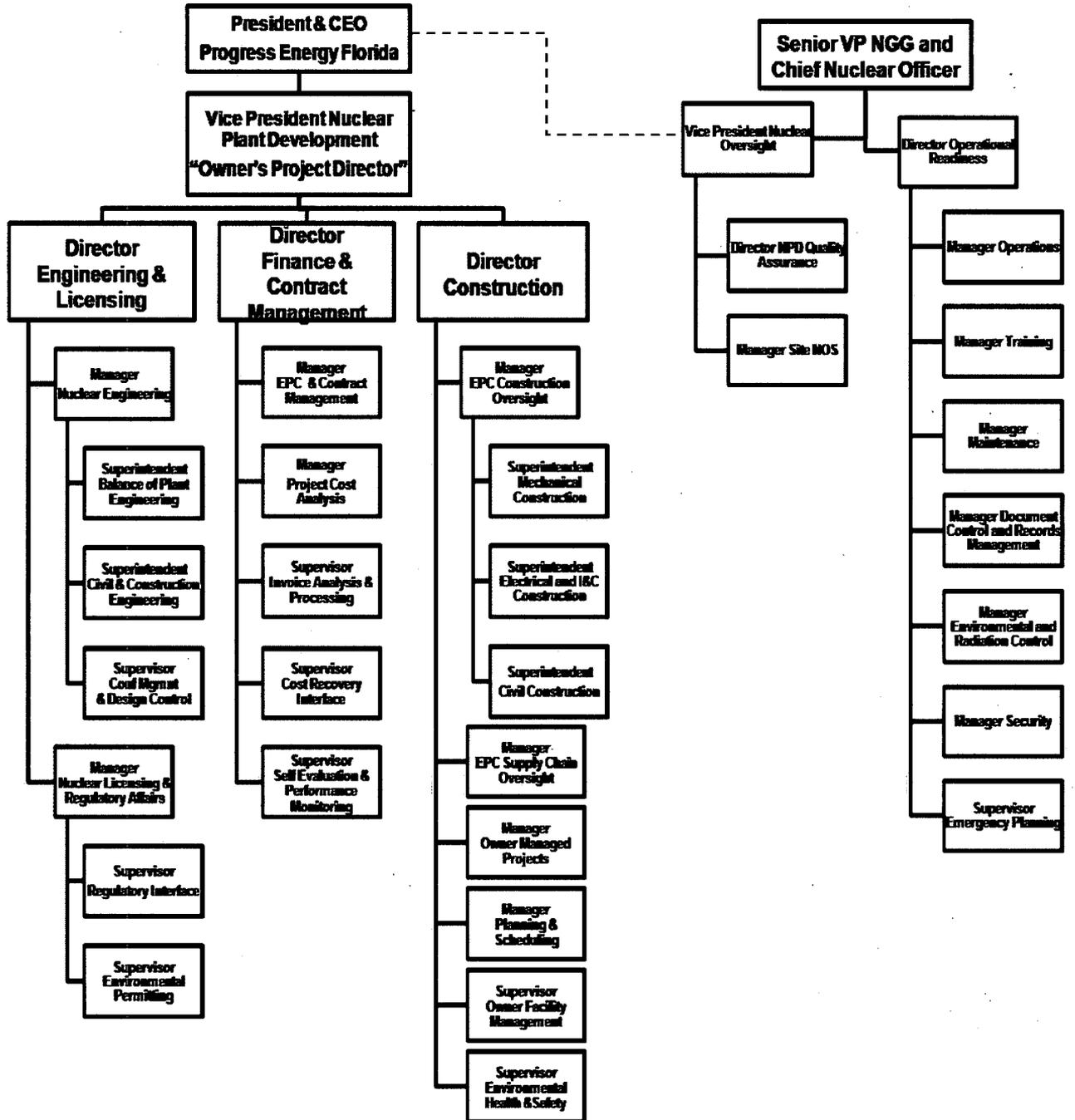
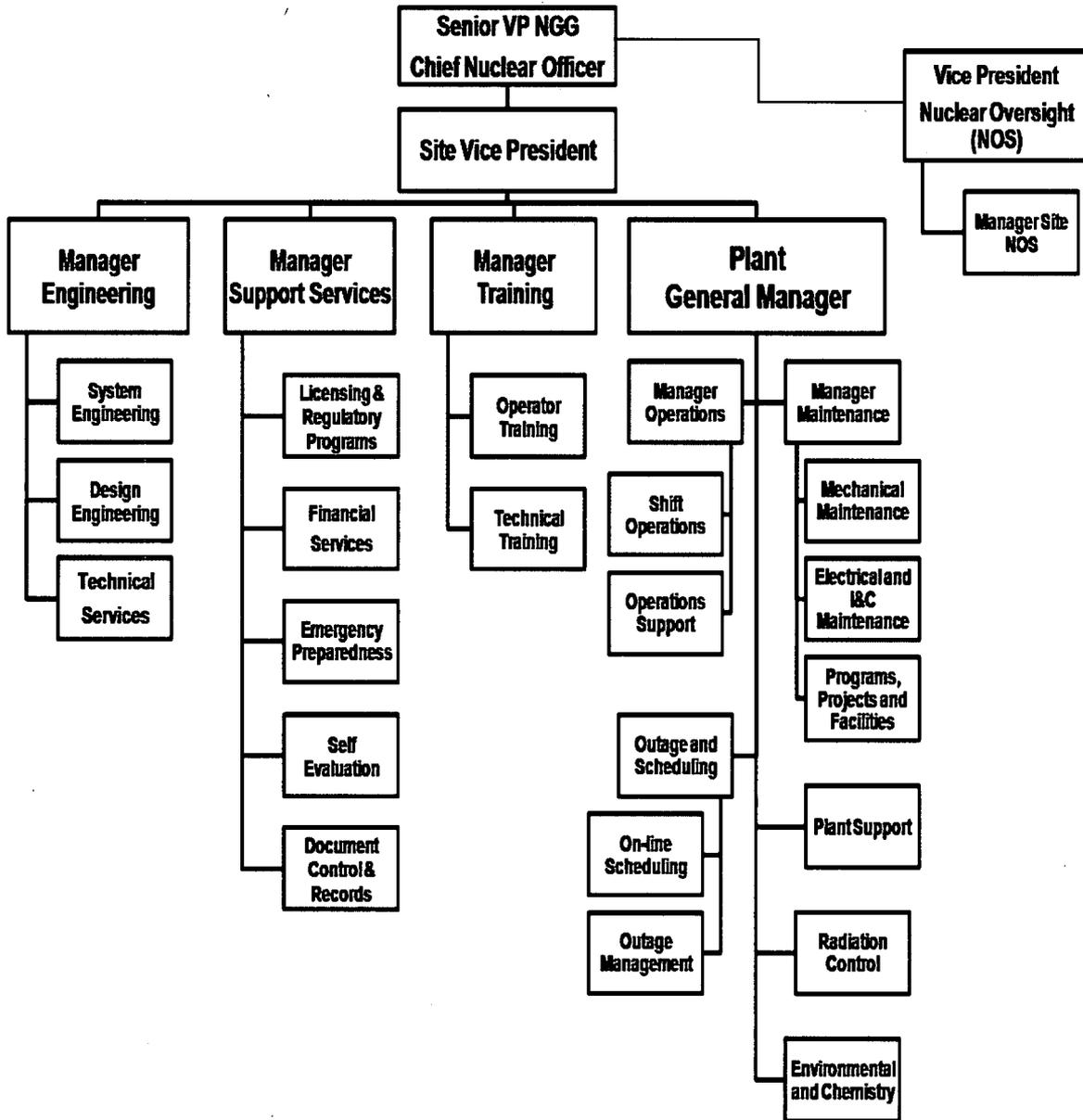


Figure II.1-4

Operations Phase Organization



The Levy Nuclear Power Plant Units 1 and 2 Final Safety Analysis Report Chapter 13, Section 13.1 is revised as follows:

Section 13.1 currently reads:

**CHAPTER 13
CONDUCT OF OPERATIONS**

13.1 ORGANIZATIONAL STRUCTURE OF APPLICANT

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

DCD Subsection 13.1.1, Combined License Information, is renumbered in this FSAR section to 13.1.4.

This section describes organizational positions of a nuclear power station and owner/applicant corporations and associated functions and responsibilities. The position titles used in the text are LNP 1 and 2 specific to show the LNP interface of the position.

Table 13.1-201, Generic Position/Site Specific Position Cross Reference, provides a cross-reference to identify the corresponding generic position titles.

Section 13.1 will be revised to read:

**CHAPTER 13
CONDUCT OF OPERATIONS**

13.1 ORGANIZATIONAL STRUCTURE OF APPLICANT

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

DCD Subsection 13.1.1, Combined License Information, is renumbered in this FSAR section to 13.1.4.

This section describes organizational positions of a nuclear power station and owner/applicant corporations and associated functions and responsibilities. The position titles used in the text are LNP 1 and 2 specific to show the LNP interface of the position. Changes to the organization described herein are reviewed under the provisions of 10CFR 50.54(a) to ensure that any

STD DEP
1.1-1

HAR COL
13.1-1

reduction in commitments in the QAPD (as accepted by the NRC) are submitted to and approved by the NRC, prior to implementation.

Table 13.1-201, Generic Position/Site Specific Position Cross Reference, provides a cross-reference to identify the corresponding generic position titles.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-3

Text of NRC RAI:

The Progress QAPD Section 2 states that the QAPD applies to those quality-related activities that involve the functions of safety-related activities of structures, systems, and components (SSCs) as described in the COL Final Safety Analysis Report. The staff notes that Appendix B to 10 CFR Part 50 requires, in part, that Part 52 applicants include in the FSAR a description of the quality assurance [program] applied to the design, and to be applied to the fabrication, construction, and testing of the SSCs of the facility and to the managerial and administrative controls to be used to assure safe operations. Please revise the language in this section to conform to this requirement. Also, the current language in this section seems to indicate that safety-related SSCs are described in the FSAR. Please indentify the corresponding FSAR section. Otherwise, please clarify the purpose of this text and/or modify it accordingly.

PGN RAI #: L-0064

PGN Response to NRC RAI:

Progress Energy in its effort to support the objectives of standardization and remain consistent with the industry and the NuStart reference plant activities developed and prepared the QAPD consistent with the NRC approved template NEI 06-14A rev 4 for the format and content of standard and site specific sections. This RAI addresses the content of a standard text section within NEI 06-14A rev 4. Progress Energy through its involvement with NEI is aware that NEI has submitted revision 5 to NEI 06-14 to the NRC for review and approval. During the NRC review and approval of this new revision, the NRC has requested this same information via an RAI from NEI as part of their review and approval process. NEI is the appropriate organization to address this question as the developers of the template and the content of the standard text section. Progress Energy participates as member of the NEI QA Task Force that developed NEI 06-14A, and is involved in the development of the responses to the NRC RAIs on NEI 06-14 rev 5. Progress Energy will apply the appropriate Quality Assurance programmatic controls consistent with the regulations to the design, the fabrication, construction, and testing of the SSCs of the facility and to the managerial and administrative controls to be used to assure safe operations. Progress Energy commits to reviewing and implementing the appropriate standard and site specific text changes to this section describing of these programmatic controls within the QAPD following approval of NEI 06-14 revision 5 by the NRC.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-4

Text of NRC RAI:

NEI 06-14A, Section 2.3, states that the COL application will be annotated to identify site-specific design basis activities. This section was omitted in the Levy County QAPD. The staff requests that Progress Energy identify the site-specific design basis activities consistent with the guidance in NEI 06-14A, or justify its omission.

PGN RAI #: L-0065

PGN Response to NRC RAI:

This section from NEI 06-14A was erroneously omitted during the preparation of the QAPD. The QAPD will be revised to be consistent with the NRC approved standard text contained within Section 2.3 of NEI 06-14A.

Associated LNP COL Application Revisions:

Section 2 Quality Assurance Program, of the Progress Energy New Nuclear Plant Quality Assurance Program Description submitted as part of the LNP COLA will be revised to include the omitted paragraph 2.3 consistent with the approved text in NEI 06-14A and the remaining sections of Part 2 will be renumbered accordingly:

2.3 Identification of 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. The development of the Progress Energy COL applications will involve site testing, data collection and calculations that may create or bound safety-related design basis data. Site testing and data collection of information pertaining to the physical characteristics of the site that have the potential to affect safety-related design will be considered safety related. In addition, calculation and other engineering data that bounds or characterizes the site will be classified as safety-related. Progress Energy or its subcontractor organizations maintain a Quality Assurance project planning document identifying the sections of the application that include safety-related design basis activities. These documents identify those sections of the application and supporting analysis that are treated with appropriate quality requirements.

Attachments / Enclosures:

None

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-5

Text of NRC RAI:

NEI 06-14A states in Section 2, Quality Assurance Program, "For the COL applications, this QAPD applies to those [Nuclear Development] and [CA] activities that can affect either directly or indirectly the safety-related site characteristics or analysis of those characteristics. In addition, this QAPD applies to engineering activities that are used to characterize the site or analyze that characterization." Section 2 of the Progress QAPD omitted this paragraph. Please provide justification for this omission or revise the QAPD to follow the guidance in NEI 06-14A.

PGN RAI #: L-0066

PGN Response to NRC RAI:

This paragraph from NEI 06-14A was erroneously omitted during the preparation of the QAPD. The QAPD will be revised to be consistent with the NRC approved standard text contained within Section 2 of NEI 06-14A.

Associated LNP COL Application Revisions:

Section 2 Quality Assurance Program, of the Progress Energy New Nuclear Plant Quality Assurance Program Description submitted as part of the LNP COLA will be revised to include the following omitted paragraph consistent with the approved text in NEI 06-14A:

For the ESP and or COL applications, this QAPD applies to those Nuclear Plant Development and Progress Energy activities that can affect either directly or indirectly the safety-related site characteristics or analysis of those characteristics. In addition, this QAPD applies to the engineering activities that are used to characterize the site or analyze that characterization.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-6

Text of NRC RAI:

Chapter 17.1, "Quality Assurance During the Design and Construction Phases," of the Levy County Final Safety Analysis Report (FSAR) states, in part, that the COL application development was conducted in accordance with the quality assurance requirements for the existing Progress Energy nuclear plants. However, Chapter 17.1 does not identify the QA program applied to design, procurement, and construction activities associated with the Levy County Units 1 & 2 COLA before the COL is issued. Please revise Chapter 17.1 accordingly.

Also, the NRC staff requests clarification on the expected scope of work related to Levy County COLA design and procurement activities from the time of docketing until the time the COL might be issued. In particular, please identify when and where these design and procurement activities will take place.

PGN RAI #: L-0067

PGN Response to NRC RAI:

Chapter 17 of the Levy Final Safety Analysis Report (FSAR) will be revised to state that the Quality Assurance Program Description contained in the current revision of Shearon Harris Nuclear Power Plant Unit 1 FSAR identifies the quality assurance program requirements that will be in effect until the QAPD described in Section 17.5 becomes effective. These program requirements were applied to the development of the COL application as well as the procurement of services needed to support COL application development. Chapter 17.1 of the Levy FSAR will be revised to clarify that the quality assurance program applied to the development of the AP1000 design is described in Section 17.3 of the DCD, which is incorporated by reference.

Design and construction of the proposed AP1000 units would be additional services procured by Progress Energy and performed in accordance with the supplier's quality assurance program that was evaluated and accepted by Progress Energy. Progress Energy would perform these procurement activities in accordance with the quality assurance requirements identified in the existing Shearon Harris Nuclear Power Plant Unit 1 FSAR if they occur prior to approval of the COL application, or in accordance with the requirements of the QAPD described in Section 17.5, if they occur after the QAPD becomes effective. Progress Energy does not intend nor will it engage in any safety related construction activities for Levy Units 1 and 2 prior to COL issuance or requesting and receiving NRC approval for an LWA for such activities.

At the time of this response, Progress Energy has entered in to an Engineering, Procurement and Construction contract with the Consortium of Westinghouse and Shaw Stone and Webster for Levy Nuclear Power Plant Units 1 and 2. This procurement activity was performed in accordance with the quality assurance requirements identified in the Shearon Harris Unit 1

FSAR as noted above. During the time period between COL docketing and COL issuance, the following activities are expected to be performed in support of this project: procurement of long lead components for Levy Units 1 and 2 by the EPC contractors; STANDARD plant design finalization by the Westinghouse and Shaw Stone and Webster; site specific design finalization by the EPC contractor; and limited non safety related site preparation activities allowed without a LWA or COLA performed by the applicant and subcontractors. Progress Energy maintains oversight of the contractor(s) providing these activities and services as part of its quality assurance program requirements. Progress Energy will continue to communicate with the NRC Region II Construction Inspection Office to keep them informed of upcoming quality related activities and schedules.

Associated HAR COL Application Revisions:

Levy Units 1 and 2 FSAR Chapter 17.1, currently reads:

17.1 QUALITY ASSURANCE DURING THE DESIGN AND CONSTRUCTION PHASES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

The COL application development through and including COL issuance was conducted in accordance with the quality assurance requirements for the existing Progress Energy nuclear plants. The application of these requirements to the COL development activities is defined in the Progress Energy Program Manual (NGGM-PM-0030), Quality Assurance Plan for New Nuclear Plant Development and Construction Activities.

COL application development and site characterization services were procured in accordance with the existing Progress Energy Quality Assurance Program requirements from three companies that formed the Joint Venture Team; Sargent & Lundy LLC; WorleyParsons Group, Inc.; and CH2M HILL Inc. Each company performed their assigned tasks in accordance with the requirements of their own Quality Assurance Program that had been reviewed and approved by Progress Energy for conduct of safety-related work. The process of collection, review, and analysis of specific data for site characterization was performed under the CH2M HILL Quality Assurance Program as described in the Nuclear Business Group Quality Manual, NBG-QA-02-00.

Progress Energy maintains oversight of the Joint Venture Team activities performed in support of the COL application development contract in accordance with its existing 10 CFR 50 Appendix B program as described in NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities. Progress Energy oversight of the COL development activities is provided through conducting Quality Assurance audits and surveillances of the Joint Venture Team activities and processes, and by direct participation in COL development activities, including providing site-specific applicant input and review of COL application content, signing the COL application as the applicant at submittal, and working directly with the Joint Venture Team to respond to NRC requests for additional information.

Upon approval of the COLA, the Progress Energy, Inc. Quality Assurance Program Description (QAPD) discussed in 17.5 will be utilized for activities related to the remaining portion of the design, construction, and operational phases for the new nuclear facilities.

Levy Units 1 and 2 FSAR Chapter 17.1 will be revised to read as follows:

17.1 QUALITY ASSURANCE DURING THE DESIGN AND CONSTRUCTION PHASES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

Progress Energy, Inc (Progress Energy). is responsible for the establishment and execution of quality assurance program requirements during the design, construction and operations phases of the Levy Nuclear Power Plant Units 1 and 2. Progress Energy may and has delegated to others as described below the work of establishing and executing the quality assurance program, or any parts thereof, but retains responsibility for the quality assurance program.

Effective during the COL application development through COL issuance, the Quality Assurance Program Description defined in the Shearon Harris Nuclear Power Plant Unit 1 FSAR (current revision)(Reference 201) identifies the quality assurance requirements that will be in effect until the Quality Assurance Program Description (QAPD) discussed in Section 17.5 becomes effective. Progress Energy will implement these quality assurance requirements through NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities (Reference 202). This plan defines the interface between the Nuclear Plant Development organization and the existing quality assurance program implementing processes and procedures.

Progress Energy procured the COL application development and site characterization services in accordance with the quality assurance requirements identified in the Shearon Harris Nuclear Power Plant Unit 1 FSAR (current revision)(Reference 201), as implemented through NGGM-PM-0030 (Reference 202) and existing procedures from three companies that formed the Joint Venture Team; Sargent & Lundy LLC; Worley Parsons Group, Inc.; and CH2M HILL Inc. Each company was contracted to perform their assigned tasks in accordance with the requirements of their own Quality Assurance Program (References 203, 204, and 205) that had been reviewed and approved by Progress Energy for the conduct of safety-related work. The process of collection, review, and analysis of specific data for site characterization was performed under the CH2M HILL Quality Assurance Program as described in the Nuclear Business Group Quality Manual, NBG-QA-02-00 (Reference 205).

Progress Energy maintains oversight of the Joint Venture Team activities performed in support of the COL application development contract in accordance with the quality assurance program requirements that satisfy 10 CFR 50 Appendix B defined in the Shearon Harris Nuclear Power Plant Unit 1 FSAR(current revision)(Reference 201) and implemented through NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities (Reference 202). Progress Energy oversight of the COL development activities is provided through conducting Quality Assurance audits and surveillances of the Joint Venture Team activities and processes, and by direct participation in COL development activities, including providing site-specific applicant input and review of COL application content, signing the COL application as the applicant at submittal, and working directly with the Joint Venture Team to respond to NRC requests for additional information.

The quality assurance program applied to the development of the AP1000 design is described in Section 17.3 of the DCD which is incorporated by reference.

The design and construction of the proposed AP1000 units would be a service procured by Progress Energy. This service would be performed in accordance with the supplier's quality assurance program that was evaluated and accepted by Progress Energy. Progress Energy would maintain oversight of these design and construction activities in accordance with the quality assurance program requirements of the Shearon Harris Nuclear Power Plant Unit 1 FSAR(current revision)(Reference 201) or the QAPD described in Section 17.5, depending on when these activities were performed.

Thirty days following the issuance of the LNP 1 and 2 COL, or prior to the initiation of quality related activities following COL issuance, whichever is later, Progress Energy will implement the Progress Energy Quality Assurance Program Description Topical Report NGGM-PM-0033 discussed in Section 17.5 and provided in Part 11 of the COLA. The applicable portions of the QAPD will be utilized for activities related to the design, construction and operational phases for the new nuclear units. As stated in FSAR Table 13.4-201, full implementation of the operations phase requirements will begin no later than 30 days prior to fuel load.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-7

Text of NRC RAI:

Chapter 17.1 of the Levy County FSAR states, in part, that the Quality Assurance Program Description (QAPD) discussed in Section 17.5 of the FSAR will become effective at COL issuance. Table 13.4-201, Operational Programs Required by NRC Regulations, states that the QA program – Operation, which is discussed in FSAR Section 17.5, will be implemented 30 days prior to the scheduled date for the initial loading of fuel. Since the QAPD discussed in Section 17.5 of the FSAR applies to the design, construction, and operations of Levy County Units 1 & 2, provide clarification as to when the QAPD discussed in FSAR Section 17.5 will be actually implemented.

PGN RAI #: L-0068

PGN Response to NRC RAI:

Progress Energy will revise the Levy Units 1 and 2, FSAR Section 17.1, to identify that thirty days following the issuance of the LNP 1 and 2 COL, or prior to the initiation of quality related activities following COL issuance, whichever is later, Progress Energy will implement the Quality Assurance Program Description (QAPD) discussed in FSAR Section 17.5. This QAPD will establish the QA program requirements for the remaining portion of the design construction, and operational phases for the new nuclear reactors. The QAPD discussed in FSAR Section 17.5, is the QAPD provided in Part 11 of the Levy application.

The operational programs described in Table 13.4-201, Item 16, Quality Assurance Program – Operation identified the implementing milestone of 30 days prior to the scheduled date for the initial loading of fuel. This implementation milestone recognizes that portions of the QAPD are specific to the operations activities such as QAPD Part II Sections: 2.6, 3.4 and 6.1. Implementation of the QAPD will begin at COL issuance or prior to the initiation of quality related activities following COL issuance, whichever is later for the applicable portions of the program, however, as indicated in Table 13.4-201, full implementation of the Operation related requirements is not expected to be implemented until 30 days prior to fuel load.

Associated LNP COL Application Revisions:

The following new paragraph will be added as last paragraph of Levy Nuclear Power Plant Units 2 and 3 Final Safety Analysis Report Chapter 17, Section 17.1 during the first revision:

Thirty days following the issuance of the LNP 1 and 2 COL, or prior to the initiation of quality related activities following COL issuance, whichever is later, Progress Energy will implement the Progress Energy, Inc. Quality Assurance Program Description Topical Report NGGM-PM-0033 discussed in Section 17.5 and provided in Part 11 of the COLA. The applicable portions of the QAPD will be utilized for activities related to the design, construction and operational phases for the new nuclear units. As stated in FSAR Table 13.4-201, full implementation of the operations phase requirements will begin no later than 30 days prior to fuel load.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-8

Text of NRC RAI:

Pursuant to 10 CFR 52.79(a)(41), COL applicants must provide an evaluation of the facility against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. Where differences exist, the applicant's evaluation must discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. Regulatory Guide (RG) 1.206, Section C.I.17.5.3, states that COL applicants may use an existing QAPD that the NRC has approved for current use for either or both phases of its QAPD submittal, provided that the applicant identifies and justifies alternatives to, or differences from, the SRP in effect 6 months prior to the docket date of the application. Section 17.1 of the Levy County FSAR states that the existing Progress Energy 10 CFR Part 50, Appendix B Quality Assurance Program (NGGM-PM-0030) is used to provide oversight of the activities performed in support of the COL application development. Table 1.9-202, Conformance with SRP Acceptance Criteria, states that the FSAR Position is acceptable with regards to SRP 17.1. Pursuant to 10 CFR 52.79(a) (41), please provide the evaluation of the existing Progress Energy QA program against the acceptance criteria in SRP 17.1.

PGN RAI #: L-0069

PGN Response to NRC RAI:

As clarified in the response to RAI 17.5-6, the Levy Nuclear Power Plants Units 1 and 2 Final Safety Analysis Report Chapter 17.1 identifies that Progress Energy is implementing the Quality Assurance Program Description defined in the Shearon Harris Nuclear Power Plant Unit 1 Final Safety Analysis Report for Progress Energy activities until implementation of the QAPD discussed in Chapter 17.5. This Quality Assurance Program Description was reviewed and determined to meet the requirements of 10 CFR 50 Appendix B by the NRC as documented in a letter dated April 3, 1995, Acceptance of the Changes to the Carolina Power and Light Company Performance Based Nuclear Assessment Program for Brunswick Steam Electric Plant, Shearon Harris Nuclear Power Plant, and H.B. Robinson Steam Electric Plant. The NRC Safety Evaluation Report for License Amendment 57, for Shearon Harris Nuclear Power Plant Unit 1 Docket Number 50-400, dated April 21, 1995, concluded that the changes made to the quality assurance program were acceptable and met the appropriate acceptance criteria of Section 13.4 and 17.3 of NUREG-0800.

Progress Energy is implementing these quality assurance program requirements for New Nuclear Plant Development activities through NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities, which is a document that describes how Progress Energy is implementing these existing quality assurance program requirements for Nuclear Plant Development Activities. This document defines the organizational responsibilities and identifies the appropriate existing programs and procedures that implement these quality assurance requirements for Nuclear Plant Development activities.

An evaluation of the existing quality assurance program defined in the Shearon Harris Nuclear Power Plant Unit 1 Final Safety Analysis Report against the acceptance criteria of SRP 17.1 identified that differences existed between the program and the acceptance criteria of SRP 17.1. These differences were associated with the fact that the existing program is an operational program developed and implemented to meet the acceptance criteria of SRP 17.3. Under this program, the line organizations have the primary responsibility for quality and safety, and the Nuclear Oversight organization performs periodic independent assessments to evaluate the performance and effectiveness of the programs, processes, personnel and the line organizations ability to self assess and correct problems. This assessment process utilized by the Nuclear Oversight organization to satisfy the acceptance criteria of SRP 17.3 has been reviewed and approved by the NRC as noted above and found to meet the requirements of 10 CFR 50 Appendix B and the acceptance criteria of SRP 17.3. Based on this review and evaluation, the existing quality assurance program description satisfies the acceptance criteria of SRP 17.3 in lieu of full conformance to the acceptance criteria of SRP 17.1, which has been determined to be acceptable by the NRC for satisfying the requirements of 10 CFR 50 Appendix B.

The QAPD described and evaluated in Table 1.9-202, Conformance with SRP Acceptance Criteria, is the QAPD described in Part 11 of the COL and it has been determined to be acceptable with regards to SRP 17.1.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-9

Text of NRC RAI:

Part 1, Section 1.1 of the QAPD in Attachment 11, lists the activities affecting quality to which the QAPD applies. Although this list is not all-inclusive, siting is listed as an activity affecting quality to which the QAPD applies. Since the FSAR states that this QAPD would not become effective until COL issuance, the staff requests additional information to clarify how siting activities would be subject to the provisions in the QAPD.

PGN RAI #: L-0070

PGN Response to NRC RAI:

The siting activity was included in the listing of activities to which the QAPD applies based on the development of the QAPD to serve as topical report for all future Progress Energy new nuclear plant development activities. Additionally, this wording is consistent with the wording of Section 1.1 of NEI 06-14A, which was approved by the NRC via an SER issued April 25, 2007. Upon approval of the QAPD Topical Report submitted as part 11 of the COLA, this QAPD would be applied to future new nuclear plant development activities by Progress Energy which could include siting. Levy FSAR Section 17.1 identifies that the COL application development and site characterization services were procured in accordance with the existing Progress Energy Quality Assurance Program Requirements, and not the QAPD described in section 17.5.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-10

Text of NRC RAI:

Section 17.5 of the Levy County FSAR states that the QAPD is maintained as a separate document. Part II, Section 1 of the Levy County QAPD states, in part, that the organization charts for the various departments/organizations are contained in Chapter 13 of the respective station's FSARs and will describe organizational positions, relations and specific roles and responsibilities. Please clarify how the organizational charts provided in Chapter 13 of the Levy County FSAR describe the specific functions and responsibilities as well as how these organizational charts are consistent with the organization described in the QAPD. Also, please revise the organizational description in the QAPD to include the necessary organization charts for the construction/pre-operations organization and the operations organization consistent with their role as outlined in the QAPD.

PGN RAI #: L-0071

PGN Response to NRC RAI:

Progress Energy will revise the QAPD identified in Section 17.5 of the Levy FSAR and revise Chapter 13 to address these concerns. See response to RAI 17.5-2 for details of the changes.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-11

Text of NRC RAI:

Appendix 1AA of the Levy County FSAR lists Progress Energy's conformance with NRC Regulatory Guides (RGs) and provides any exceptions to conformance with those RGs. For those RGs that describe quality assurance-related requirements, Appendix 1AA appears to address the conformance of the QAPD provided in Part 11 of the COL application. However, since Progress Energy is relying on its existing quality assurance program for activities prior to COL issuance, please clarify how Appendix 1AA also addresses the existing Progress Energy quality assurance program's conformance to the applicable RGs, or justify an alternative approach.

PGN RAI #: L-0072

PGN Response to NRC RAI:

Appendix 1AA of the Levy Nuclear Power Plant Units 1 and 2 FSAR addresses Progress Energy's conformance with NRC Regulatory Guides and provides any exceptions to conformance with those Regulatory Guides for the QAPD provided in Part 11 of COL application. As described in the response to RAI 17.5-6, Chapter 17.1 of the Levy Nuclear Power Plant Units 1 and 2 FSAR, will be revised to clarify that the Quality Assurance Program Description defined in the Shearon Harris Nuclear Power Plant Unit 1 FSAR identifies the quality assurance requirements that will be in effect until the QAPD provided in Part 11 of the COL application is implemented. Included in this Quality Assurance Program Description for Shearon Harris Unit 1 FSAR(Reference 201) is Chapter 1.8 which describes the conformance with NRC Regulatory Guides and any NRC approved exceptions or alternatives taken. Progress Energy's Nuclear Plant Development activities performed prior to implementation of the QAPD provided in Part 11 of the COL application are performed in accordance with these existing quality assurance program requirements. Progress Energy developed NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities to identify the appropriate programs and procedures that implement the commitments contained with the Shearon Harris Unit 1 FSAR. Inclusion by reference of the existing Shearon Harris Unit 1 FSAR quality assurance program description provides an alternative approach to identifying conformance with the NRC Regulatory Guides that have been accepted by the NRC for use as part of the quality assurance program description.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-12

Text of NRC RAI:

Chapter 17.1 of the Levy County FSAR refers to (1) the Progress Energy Program Manual (NGGM-PM-0030) Quality Assurance Plan for New Nuclear Plant Development and Construction Activities and, (2) the CH2M HILL Quality Assurance Program Nuclear Business Group Quality Manual (NBG-QA-02-00). However, these documents are not listed in Section 17.8, "References." Please add all documents discussed in Section 17.1 of the Levy County COLA to the references in Section 17.8.

PGN RAI #: L-0073

PGN Response to NRC RAI:

Progress Energy will revise the LNP Unit 1 and 2 FSAR Sections 17.1 and 17.8 to properly identify the documents discussed / referenced in each section. Section 17.1 will be revised as identified in response to RAI 17.5-6, and it will include new references to be added to Section 17.8.

Associated LNP COL Application Revisions:

See Progress Energy response to RAI 17.5-6 for revision to Section 17.1 of the Levy FSAR.

Section 17.8 will be revised as follows to address the changes made in Section 17.1 and properly document the identified references:

REFERENCES

Section 17.6 of the referenced DCD is incorporated by reference with the following departures and/or supplements.

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201. Shearon Harris Nuclear Power Plant Unit 1 Final Safety Analysis Report (current revision), Docket Number 50-400.
 202. Progress Energy Program Manual NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities.
 203. Sargent & Lundy (S&L) LLC, Nuclear Quality Assurance Program, Topical Report SL-TR-1A.
 204. WorleyParsons Resources & Energy, Nuclear Quality Manual, NQM-01.
 205. CH2M HILL Quality Assurance Program, Nuclear Business Group Quality Manual NBG-QA-02-00.

206. U.S. Nuclear Regulatory Commission, "Final Safety Evaluation Report for Technical Report NEI 06-14A "Quality Assurance Program Description," Rev. 4, ML072200084, July 2007.
 207. Nuclear Energy Institute, "Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52," NEI 07-02A, Revision 0.
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Attachments / Enclosures:

None.

NRC Letter Number: LEVY-RAI-LTR-010

NRC Letter Date: February 27, 2009

NRC Review of Final Safety Analysis Report

NRC RAI #: 17.5-13

Text of NRC RAI:

Regulatory Guide 1.28 (RG 1.28), Revision 3, "Quality Assurance Program Requirements (Design and Construction) describes a method acceptable to the NRC staff for complying with the provisions of Appendix B to 10 CFR Part 50 with regard to establishing and implementing the requisite program for the design and construction of nuclear power plants. Please identify by specific title and revision (and add to the references section), the existing Progress Energy Quality Assurance Program described in Section 17.1 of the COL application and describe how the existing Progress Energy Quality Assurance Program described in section 17.1 of the COL application satisfies the provisions in RG 1.28, or justify an alternative approach.

PGN RAI #: L-0074

PGN Response to NRC RAI:

As described in the response to RAI 17.5-6, Levy Nuclear Power Plant Units 1 and 2 FSAR Section 17.1, is being revised to clarify that the quality assurance program description contained within the Shearon Harris Nuclear Power Plant Unit 1 FSAR is being utilized for Nuclear Plant Development activities until implementation of the QAPD described in Chapter 17.5. This quality assurance program description is identified as reference 201 in the change.

The quality assurance program description contained within the Shearon Harris Nuclear Power Plant Unit 1 FSAR identifies that the requirements of Regulatory Guide 1.33, as committed to in the Shearon Harris Nuclear Power Plant Unit 1 FSAR position on Regulatory Guide 1.33 are complied with for activities performed. The Shearon Harris Nuclear Power Plant Unit 1 FSAR quality assurance program description identifies how Regulatory Guide 1.33, endorsing ANSI N18.7-1976; and the other Regulatory Guides endorsing the applicable ANSI N45.2 series standards identified in Regulatory Guide 1.28 are met. Progress Energy committed to implement the applicable ANSI N45.2 series standards and their regulatory guides within section 1.8 of the Shearon Harris Nuclear Power Plant Unit 1 FSAR. Progress Energy implements these commitments and requirements through the development of various corporate and site programs and procedures. This program has been reviewed by the NRC and determined to satisfy the requirements of 10 CFR 50 Appendix B and SRP 17.3.

Progress Energy developed NGGM-PM-0030, Quality Assurance Plan for New Nuclear Plant Development and Construction Activities, to define how the commitments and requirements in the Shearon Harris Nuclear Power Plant Unit 1 FSAR quality assurance program description are applied and implemented for Nuclear Plant Development activities until the QAPD contained in Part 11 of the application is approved and implemented. This document identifies the organizational roles and responsibilities and the appropriate programs and procedures to be used to satisfy the quality assurance requirements for NPD activities.

The QAPD described in the Levy FSAR Chapter 17.5 and contained in Part 11 of the application is the QAPD that will be applied to the remaining activities associated with the design and construction of the Levy Nuclear Power Plant Units 1 and 2.

Associated LNP COL Application Revisions:

None.

Attachments / Enclosures:

None.