



Serial: NPD-NRC-2008-058  
November 6, 2008

10CFR52.79

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

**SHEARON HARRIS NUCLEAR POWER PLANT, UNITS 2 AND 3  
DOCKET NOS. 52-022 AND 52-023  
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 025 RELATED TO  
QUALITY ASSURANCE PROGRAM DESCRIPTION**

Reference: Letter from Brian C. Anderson (NRC) to James Scarola (PEC), dated October 3, 2008, "Request for Additional Information Letter No. 025 Related to SRP Section 17.5 for the Shearon Harris Units 2 and 3 Combined License Application"

Ladies and Gentlemen:

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

A response to each NRC request is addressed in the enclosure. The enclosure also identifies changes that will be made in a future revision of the Shearon Harris Nuclear Power Plant Units 2 and 3 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 November 6, 2008.

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  
U.S. NRC Resident Inspector, SHNPP Unit 1  
Mr. Manny Comar, U.S. NRC Project Manager

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NRO

**Shearon Harris Nuclear Power Plant Units 2 and 3  
Response to NRC Request for Additional Information Letter No. 025 Related to  
SRP Section 17.5 for the Combined License Application, dated October 3, 2008**

<u>NRC.RAI #</u>	<u>Progress Energy RAI #</u>	<u>Progress Energy Response</u>
17.5-1	H-0075	Response enclosed – see following pages
17.5-2	H-0076	Response enclosed – see following pages
17.5-3	H-0077	Response enclosed – see following pages
17.5-4	H-0078	Response enclosed – see following pages

**NRC Letter Number:** HAR-RAI-LTR-025

**NRC Letter Date:** October 3, 2008

**NRC Review of Final Safety Analysis Report**

**NRC RAI #:** 17.5-1

**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 #: H-0075**

**PGN Response to NRC RAI:**

The organizational structure, roles, responsibilities and reporting relationships for the Progress Energy organizations that will implement the requirements of this QAPD including the management of QA and oversight functions for new nuclear plant activities controlled by this QAPD are currently under review and development by Progress Energy. As such, the specific details to be provided in the QAPD and to support answering this RAI cannot be provided at this time. Progress Energy will provide this information to the NRC in an update to the QAPD once the final determinations have been made by the company.

As stated in the text of 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 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 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. It is currently Progress Energy’s intent to enter into a single Engineering, Procurement, and Construction contract with this consortium of Westinghouse and Shaw Stone and Webster for Harris Units 2 and 3. It should be noted that at the time of this response, no contract for the Engineering, Procurement and Construction of Harris Units 2 and 3 has been executed. References to the consortium of Westinghouse and Shaw Stone and Webster does not imply any contractual relationship exists between these entities and Progress Energy until a contract is executed by authorized representatives of all

parties involved. 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 will be performed in accordance with Section 7 of the QAPD if the contract is executed after COL approval or via the existing Progress Energy QA Program if the contract is executed prior to COL approval.

Progress Energy notes that the wording "approved procedures" in Section 1.13 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 this 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 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:**

No COLA revisions have been identified associated with this response.

**Attachments / Enclosures:**

None.

**NRC Letter Number:** HAR-RAI-LTR-025

**NRC Letter Date:** October 3, 2008

**NRC Review of Final Safety Analysis Report**

**NRC RAI #:** 17.5-2

**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 identify the corresponding FSAR section. Otherwise, please clarify the purpose of this text and/or modify it accordingly.

**PGN RAI #:** H-0076

**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 will review and implement the appropriate standard and site specific text changes to Section 2 describing these programmatic controls within the QAPD following approval of NEI 06-14 revision 5 by the NRC.

**Associated HAR COL Application Revisions:**

No COLA revisions have been identified associated with this response.

**Attachments / Enclosures:**

None.

**NRC Letter Number:** HAR-RAI-LTR-025

**NRC Letter Date:** October 3, 2008

**NRC Review of Final Safety Analysis Report**

**NRC RAI #:** 17.5-3

**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 Harris 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 #:** H-0077

**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 include the site specific text contained within Section 2.3 of NEI 06-14A.

**Associated HAR COL Application Revisions:**

Section 2 Quality Assurance Program, of the Progress Energy New Nuclear Plant Quality Assurance Program Description submitted as part of the HAR COLA will be revised to include paragraph 2.3 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:** HAR-RAI-LTR-025

**NRC Letter Date:** October 3, 2008

**NRC Review of Final Safety Analysis Report**

**NRC RAI #:** 17.5-4

**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 #:** H-0078

**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 HAR COL Application Revisions:**

Section 2, Quality Assurance Program, of the Progress Energy New Nuclear Plant Quality Assurance Program Description submitted as part of the HAR COLA will be revised to include the following:

For the 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 engineering activities that are used to characterize the site or analyze that characterization.

**Attachments / Enclosures:**

None.