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November 4, 2009

10 CFR 52.79

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. 068 RELATED TO  
SOLID WASTE MANAGEMENT SYSTEM**

Reference: Letter from Donald Habib (NRC) to James Scarola (PEC), dated October 1, 2009,  
"Request for Additional Information Letter No. 068 Related to SRP Section 11.04  
for the 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 the 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 (727) 820-4481.

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

Executed on November 4, 2009.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Elnitsky', written over a horizontal line.

John Elnitsky  
Vice President  
Nuclear Plant Development

Enclosure

cc : U.S. NRC Region II, Regional Administrator  
U.S. NRC Resident Inspector, SHNPP Unit 1  
Mr. Brian Hughes, U.S. NRC Project Manager

**Shearon Harris Nuclear Power Plant Units 2 and 3  
Response to NRC Request for Additional Information Letter No. 068 Related to  
SRP Section 11.04 for the Combined License Application, dated October 1, 2009**

<u>NRC RAI #</u>	<u>Progress Energy RAI #</u>	<u>Progress Energy Response</u>
11.04-1	H-0496	Response enclosed – see following pages
11.04-2	H-0497	Response enclosed – see following pages

**NRC Letter No.:** HAR-RAI-LTR-068

**NRC Letter Date:** October 1, 2009

**NRC Review of Final Safety Analysis Report**

**NRC RAI NUMBER:** 11.04-1

**Text of NRC RAI:**

In Standard COL 11.4-1, the applicant states that "no additional onsite radwaste storage is required beyond that described in the DCD." Please explain why this statement is included or remove it.

**PGN RAI ID #:** H-0496

**PGN Response to NRC RAI:**

The referenced statement is provided to address the portion of the COL information item in DCD Subsection 11.4.6 that states "In the event additional onsite storage facilities are a part of Combined License plans, this program will include a discussion of conformance to Generic Letter GL-81-038" and the statement in Regulatory Guide 1.206 page C.III.1-137 "In the event that additional onsite storage facilities are part of COL plans, include a discussion of conformance to GL-81-038. Supplemental guidance is provided in SECY-94-198." The statement is intended to confirm that additional onsite storage facilities are not expected to be needed for HAR 2&3. Accordingly, the statement establishes that no discussion of permanent on-site storage facilities is necessary in the COL.

The statement in Standard COL 11.4-1 also clarifies that although the AP1000 design has provisions for the temporary storage of radwaste prior to shipment for disposal, such waste is normally promptly disposed of offsite at licensed processing and disposal facilities. In the event that an offsite facility is not available to accept Class B and C waste, at least two years of storage is available within the facilities described in the DCD, considering routine operations and anticipated operational occurrences. In the event that an offsite facility is not available to accept Class B and C waste, a waste minimization plan will also be implemented. This plan will consider strategies to reduce generation of Class B and C waste, including reducing the in-service run length of resin beds, as well as resin selection, short-loading, and point-of-generation segregation techniques. Implementation of these techniques could substantially extend the capacity of the Class B and C storage within the facilities identified in the DCD. If additional storage capacity for Class B and C waste is required, further temporary storage would be developed in accordance with NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A; therefore, the design does not provide for the permanent onsite storage of radwaste.

As discussed above, HAR 2&3 plans to ship all processed or temporarily stored radwaste offsite for disposal; therefore, there is no anticipated need for additional onsite radwaste storage beyond the temporary storage described in the DCD. The referenced statement reflects the underlying analyses of radioactive sources and dose assessments, and assesses the radiological impact of normal operation with conservative, bounding analyses. Progress Energy understands that HAR 2 & 3 will be licensed to operate within that licensing basis, which means that the accumulation of low-level radioactive waste in excess of the dose assessments is hypothetical at this time. To the extent that additional storage could be needed sometime in

the future, the existing regulatory framework as described in NRC Regulatory Issue Summary 2008-32, Interim Low-Level Radioactive Waste Storage at Reactor Sites would allow Progress Energy to conduct written safety analyses under 10 C.F.R. § 50.59. If the additional storage does not satisfy 10 C.F.R. § 50.59, a license amendment would be required.

**Associated HAR COL Application Revisions:**

The following change will be made to the HAR FSAR in a future revision:

COLA Part 2, FSAR Chapter 11, Subsection 11.4.6 will be revised to add two new paragraphs at the end of STD COL 11.4-1:

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Add the following at the end of STD COL 11.4-1:

All packaged and stored radwaste will be shipped to offsite disposal/storage facilities and temporary storage of radwaste is only provided until routine offsite shipping can be performed. Accordingly, there is no expected need for permanent on-site storage facilities at HAR 2 & 3.

If additional storage capacity for Class B and C waste is required, further temporary storage would be developed in accordance with NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A. To the extent that additional storage could be needed sometime in the future, the existing regulatory framework would allow Progress Energy to conduct written safety analyses under 10 C.F.R. § 50.59. If the additional storage does not satisfy 10 C.F.R. § 50.59, a license amendment would be required.

**Attachments/Enclosures:**

None.

**NRC Letter No.:** HAR-RAI-LTR-068

**NRC Letter Date:** October 1, 2009

**NRC Review of Final Safety Analysis Report**

**NRC RAI NUMBER:** 11.04-2

**Text of NRC RAI:**

In Section 11.4 of NUREG-1793, the staff states that if a need for onsite storage of low-level waste has been identified beyond that provided in AP1000 Standard Design because of unavailability of offsite storage, the applicant should submit the details of any proposed onsite storage facility to the NRC. Please provide any arrangements for offsite storage for low-level wastes or submit plans for onsite storage.

**PGN RAI ID #:** H-0497

**PGN Response to NRC RAI:**

Progress Energy currently employs agreements with offsite facilities for the disposal of radwaste from its operating nuclear plants. It is expected that these same or additional offsite facilities (current or future) would be utilized for radwaste from HAR Units 2&3. Currently, facilities are available in Texas and Utah for the disposal / storage of radwaste from HAR 2&3. HAR Units 2&3 are not scheduled to load fuel and begin operation for several years. Because the Low-Level Radioactive Waste Policy Amendments Act of 1985 requires that disposal capacity be available for all types of LLRW generated by Atomic Energy Act licensees, Progress Energy has confidence that disposal facilities will be available that would accept the Class A, B, and C waste generated by these plants when needed.

In the event that off-site shipping is disrupted or facilities are not available to accept radwaste after HAR Units 2&3 become operational, as described in DCD Section 11.4.2.1 paragraph ten, temporary storage capability on-site is available for greater than two years at the expected rate of radwaste generation and greater than one year at the maximum rate of radwaste generation. During this period, the implementation of additional waste minimization strategies could extend the duration of temporary radwaste storage capability. The waste minimization strategy would include techniques to reduce generation of Class B and C waste such as reducing the in-service run length of resin beds, as well as resin selection, short loading, and point-of-generation segregation methods. If additional temporary radwaste storage is eventually needed, then on-site facilities could be constructed utilizing the design guidance provided in NUREG-0800, Standard Review Plan Chapter 11 Radioactive Waste Management Appendix 11.4-A, Design Guidance for Temporary Storage of Low-Level Radioactive Waste.

HAR Units 2&3 plans to ship all packaged and stored radwaste to offsite disposal or storage facilities. In the event disposal capacity is disrupted, Progress Energy would only temporarily store radwaste and would use off-site storage, if necessary, until routine disposal could be resumed.

**Associated HAR COL Application Revisions:**

The following changes will be made to the HAR FSAR in a future revision:

COLA Part 2, FSAR Chapter 11, Subsection 11.4.2.4 will be revised to add a new subsection with the LMA of STD COL 11.4-2 to read:

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Add the following after DCD Subsection 11.4.2.4.2:

**11.4.2.4.3 Temporary Storage of Low-Level Radioactive Waste**

In the event that off-site shipping is disrupted or facilities are not available to accept radwaste when HAR Units 2&3 become operational, as described in DCD Section 11.4.2.1 paragraph ten, temporary storage capability on-site is available for greater than two years at the expected rate of radwaste generation and greater than one year at the maximum rate of radwaste generation. During this period, the implementation of additional waste minimization strategies could extend the duration of temporary radwaste storage capability.

If additional temporary radwaste storage is eventually required, then on-site facilities could be constructed utilizing the design guidance provided in NUREG-0800, Standard Review Plan Chapter 11 Radioactive Waste Management Appendix 11.4-A, Design Guidance for Temporary Storage of Low-Level Radioactive Waste.

**Attachments/Enclosures:**

None.