



Bryan J. Dolan  
VP, Nuclear Plant Development

Duke Energy  
EC09D/ 526 South Church Street  
Charlotte, NC 28201-1006

Mailing Address:  
P.O. Box 1006 – EC09D  
Charlotte, NC 28201-1006

704-382-0605

[bjdolan@duke-energy.com](mailto:bjdolan@duke-energy.com)

November 25, 2008

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Duke Energy Carolinas, LLC  
William States Lee III Nuclear Station - Docket Nos. 52-018 and 52-019  
AP1000 Combined License Application for the  
William States Lee III Nuclear Station Units 1 and 2  
Response to Request for Additional Information  
Ltr# WLG2008.11-28

Reference: Letter from J.M. Muir (NRC) to B.J. Dolan (Duke Energy), *Request for Additional Information Regarding the Environmental Review of the Combined License Application for William States Lee Nuclear Station Units 1 and 2*, dated August 21, 2008

This letter provides the Duke Energy response to the Nuclear Regulatory Commission's (NRC) requests for the following additional information (RAI) items listed in the reference letter:

RAI 68, Terrestrial Ecology  
RAI 80, Terrestrial Ecology

Responses to these NRC requests are addressed in the enclosures which also identify any associated changes that will be made in a future revision of the William States Lee III Nuclear Station application.

If you have any questions or need any additional information, please contact Peter S. Hastings at 980-373-7820.

Bryan J. Dolan  
Vice President  
Nuclear Plant Development

Document Control Desk  
November 25, 2008  
Page 2 of 4

Enclosures:


1. Response to RAI 68, Terrestrial Ecology
2. Response to RAI 80, Terrestrial Ecology

AFFIDAVIT OF BRYAN J. DOLAN

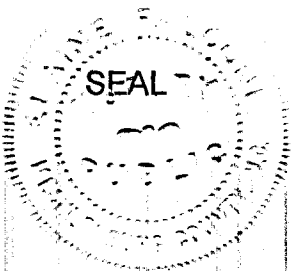
Bryan J. Dolan, being duly sworn, states that he is Vice President, Nuclear Plant Development, Duke Energy Carolinas, LLC, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this supplement to the combined license application for the William States Lee III Nuclear Station and that all the matter and facts set forth herein are true and correct to the best of his knowledge.

  
Bryan J. Dolan

Subscribed and sworn to me on November 25, 2008

  
Notary Public

My commission expires: Feb. 27, 2011



Document Control Desk  
November 25, 2008  
Page 4 of 4

xc (wo/enclosures):

Michael Johnson, Director, Office of New Reactors  
Gary Holahan, Deputy Director, Office of New Reactors  
David Matthews, Director, Division of New Reactor Licensing  
Scott Flanders, Director, Division of Site and Environmental Reviews  
Glenn Tracy, Director, Division of Construction Inspection and Operational Programs  
Luis Reyes, Regional Administrator, Region II  
Loren Plisco, Deputy Regional Administrator, Region II  
Thomas Bergman, Deputy Division Director, DNRL  
Stephanie Coffin, Branch Chief, DNRL  
Gregory Hatchett, Branch Chief, DSER

xc (w/enclosures):

Linda Tello, Project Manager, DSER  
Brian Hughes, Senior Project Manager, DNRL

**Lee Nuclear Station Response to Request for Additional Information (RAI)**

**RAI Letter Dated:** August 21, 2008

**Reference NRC RAI Number:** ER RAI 68

**NRC RAI:**

What is the final routing of the rail spur? What associated consultation has been conducted with state and federal agencies? Provide the locations(s) where any spoils from the railroad grade would be deposited.

**Duke Energy Response:**

The original railway line, detailed in ER Figure 1.1-2, was built in conjunction with the Cherokee Nuclear Station. Subsection 2.2.2 details the existing right-of-way (ROW) and track layout. When the Cherokee Nuclear Station construction project was cancelled in 1983, the track and ballast were removed from the ROW. The ROW has since reverted to private ownership but remains intact. Current owners have converted much of the ROW into a road. Duke Energy is reacquiring the ROW from current owners and plans to place new ballast and track along the existing ROW to reactivate the rail line for construction of the Lee Nuclear Station. However, Duke Energy plans a short detour from this original route at the location of the Reddy Ice Plant on the southeast edge of East Gaffney. This ice plant occupies part of the original rail bed. The detour involves approximately 1300 feet (ft.) of track (new ER Figure 2.4-4, Attachment 68-1) with a 50 ft. ROW. Within the realignment corridor, the western third is forested, and the eastern two-thirds extend across paved or maintained yard areas for the ice plant. Approximately 0.5 acres (ac.) of previously undisturbed forest are expected to be affected by the ROW.

The U.S. Fish and Wildlife Service (USFWS) and South Carolina Department of Natural Resources (SCDNR) were contacted about the possible presence of any state or federally-listed species (threatened, endangered, or species of concern) that may be present in Cherokee County. Both agencies responded (Attachment 68-2) that there were no records of any listed species in the area of the plant or the railroad spur, but noted the historic distribution of the dwarf-flowered heartleaf (*Hexastylis naniflora*) included Cherokee County. Reconnaissance in June 2008 confirmed that no threatened or endangered species were present.

Within the existing rail corridor, all trees and shrubs had been cleared for the original construction. Vegetation along the existing corridor consisted mainly of grasses and forbs, with apparent ongoing disturbance by off-road vehicles and pickup trucks.

Because the final rail spur will be aligned along the existing ROW and the existing ROW has been maintained for off-road access to the surrounding area, impacts to the faunal community are not expected. Field reconnaissance in June 2008 indicated little habitat would be disturbed along the rerouted section of railroad at the ice plant. Contact with SCDNR (ER Table 2.4-5) indicated the possible presence of some species of concern in the county but occurrence of these species along the rerouted section is unlikely given the absence of preferred habitat along the proposed rail realignment.

Reconnaissance from June 2008 revealed no hydric soils or wetland obligate vegetation along the ROW. Several mapped and unmapped stream channels were noted within the ROW, but no wetland indicators were identified.

Most of the ROW is still cleared from previous activity, and all activity associated with reconstruction of the railway spur is expected to be contained within those areas already impacted. Best management practices associated with railway construction are expected to be implemented throughout the project. Therefore, no impact to natural areas surrounding the existing ROW is expected. Construction of the

Duke Letter Dated: November 25, 2008

realigned segment will create spoils, but the impact on natural areas will be limited to the short segment of the realigned track that is not already located in a paved or managed area. This impact is expected to be approximately 0.5 ac. Duke Energy anticipates requiring more "fill" material along the ROW than is going to be generated by "cutting." It is anticipated that almost no spoil material will be left over after construction of the new railway spur and the realigned segment.

Duke Energy is currently in the process of finalizing the reduction and review of data acquired from the field work performed in June 2008, prior to submittal to appropriate State and Federal resource agencies. Upon receipt of review comments from those agencies, Duke will forward the NRC copies of such agency comments.

**Associated Revisions to the Lee Nuclear Station Combined License Application:**

1. ER Subsection 2.4.1 will be revised by adding a new paragraph 7 as follows:

When the Cherokee Nuclear Station construction project was cancelled in 1983, the track and ballast for the railroad spur were removed from the right-of-way (ROW). The ROW reverted to private ownership but remains intact. Current owners have converted much of the ROW into a road. Duke Energy is reacquiring the ROW from current owners and plans to place new ballast and track along the existing ROW to reactivate the rail line for construction of the Lee Nuclear Station. However, Duke Energy plans a short detour from this original route at the location of the Reddy Ice Plant on the southeast edge of East Gaffney. This ice plant occupies part of the original rail bed. The detour involves approximately 1300 feet (ft.) of track (Figure 2.4-4) with a 50 ft. ROW. Within the realignment corridor, the western third is forested, and the eastern two-thirds extend across paved or maintained yard areas for the ice plant, creating a total of approximately 0.5 acres (ac.) of disturbance. Duke Energy anticipates requiring more "fill" material along the ROW than is going to be generated by "cutting." It is anticipated that almost no spoil material will be left over after construction of the new railway spur and the realigned segment.

2. ER Subsection 2.4.1.3.1, paragraph 2, will be revised as follows:

By letter dated April 3, 2006, Duke Energy initiated informal consultation pursuant to Section 7 of the ESA. That letter requested information on any species under the jurisdiction of USFWS that might occur in the vicinity of the Lee Nuclear Site. By letter dated May 23, 2006, USFWS responded with information regarding the list of threatened and endangered species potentially found in the area. Subsequent communication of the results of the initial field investigation yielded a further USFWS response by letter dated Aug 22, 2007 concurring with the finding that no federally threatened or endangered species were likely to be found in the project area.

3. ER Subsection 2.4.1.3.1, paragraphs 5 and 6, will be revised as follows:

By letter dated April 3, 2006, Duke Energy initiated informal consultation with SCDNR (refer to Appendix B for copies of all correspondence mentioned in this subsection). That letter requested information on any species under the jurisdiction of SCDNR that might occur in the vicinity of the Lee Nuclear Site. By letter dated April 14, 2006, SCDNR responded. SCDNR's response lists one plant, the dwarf-flowered heartleaf (*Hexastylis naniflora*), with the potential to occur in Cherokee County. It is threatened at both the state and federal levels. Other state-level designations used in this subsection are regional concern (RC), and state concern (SC).

There are no other federally or state listed endangered or threatened species thought to occur within the county. However, consulting SCDNR species lists for Cherokee and York counties (References 20 and 21) revealed additional species of concern with the remote potential to occur in the project area (Table 2.4-5). Most are plants, but the list also includes one mammal (the southeastern myotis bat); two frogs

(northern cricket frog and pickerel frog); one fish (Carolina darter); and one mussel (paper pondshell).  
Reconnaissance in June 2008 confirmed no listed species were present along the ROW.

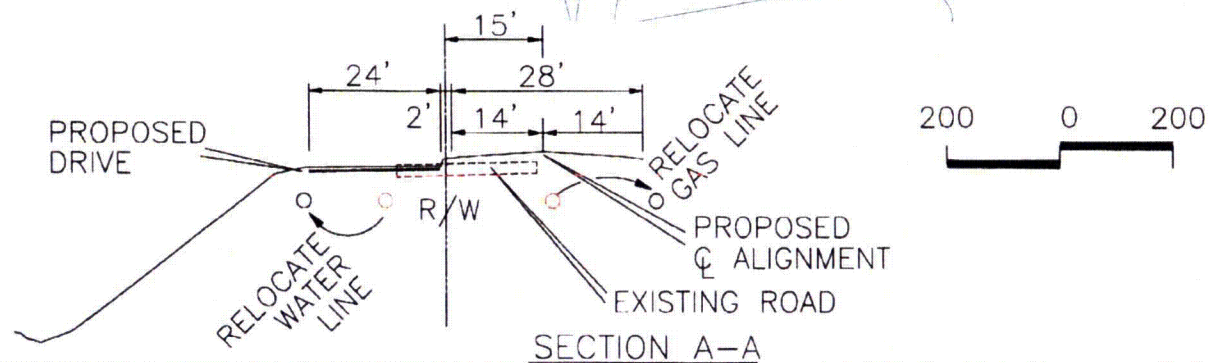
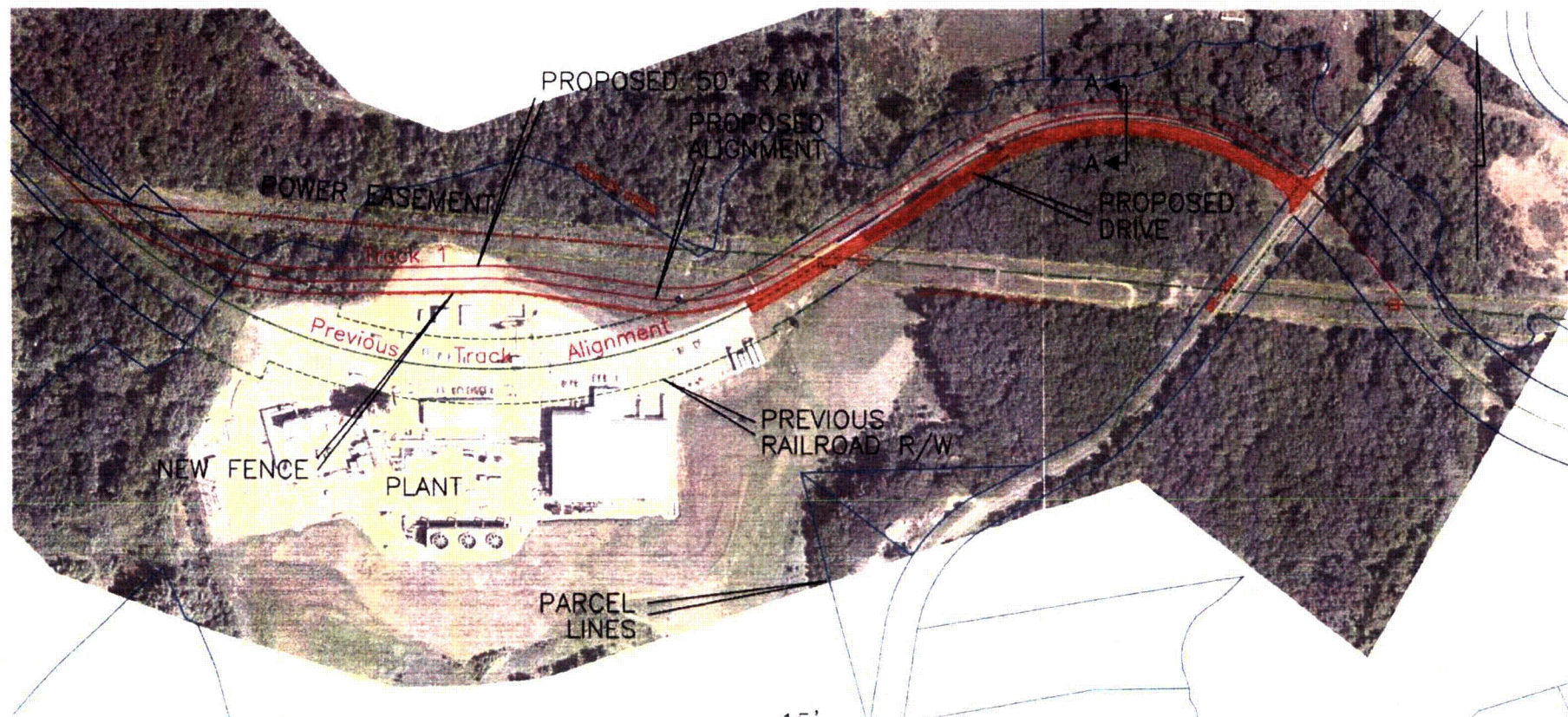
4. ER Section 2.4 will be revised by adding new Figure 2.4-4 as shown in Attachment 68-1.

**Associated Attachments:**

Attachment 68-1 ER Figure 2.4-4. Plant Railroad Spur Detour.

Attachment 68-2 U.S. Department of the Interior, Fish and Wildlife Service, letter to T. Bowling, Duke Energy, concurring that no federally threatened or endangered species on the proposed site would be impacted by construction or operation of the Lee Nuclear Station, August, 22, 2007.









# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407



Lee Nuclear Station  
Environmental Report  
RAI No. 68  
Attachment 68-2

August 22, 2007

Mr. Theodore Bowling  
Duke Energy  
EC09D / P.O. Box 1006  
Charlotte, NC 28201-1006

Re: Duke Energy, Cherokee Project  
Cherokee, South Carolina  
FWS Log No: 2006-I-0530

Dear Mr. Bowling:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter requesting concurrence on your threatened and endangered species determination. The proposed project would involve construction and operation of a nuclear power generation facility in Cherokee County, South Carolina. The following comments are provided in accordance with section 7 of the Endangered Species Act (Act), as amended (16 U.S.C. 1531-1543).

Based on species occurrence records contained in the Heritage Trust database and Service files, and the information provided in your consultation request, we concur with your conclusion that there are no federally threatened or endangered species on the proposed site that would be impacted by the construction or operation of the Lee Nuclear Station. In view of this, the Service believes that the requirements of Section 7 of the Act have been fulfilled relative to the proposed action, and no further consultation is necessary at this time. However, obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals that the proposed project may affect listed species in a manner or to an extent not previously considered, (2) the proposed project is subsequently modified to include activities which were not considered during this consultation; or (3) new species are listed or critical habitat designated that might be affected by the proposed project.

Your letter indicates an Environmental Report to evaluate the potential impacts to trust resources from project construction and operation is forthcoming. The Service looks forward to review and comment of the environmental analysis pursuant to the National Environmental Policy Act (42 U.S.C. § 4321 et seq.). Until the issuance of the Environmental Report, we reserve the opportunity to submit comments regarding potential impacts to migratory fishes and aquatic

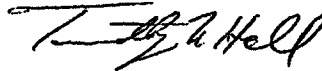
**TAKE PRIDE  
IN AMERICA** 

resources, in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e).

Your interest in ensuring the protection of endangered species is appreciated. If you have further questions or require additional information, please contact Lora Zimmerman of this office at (843) 727-4707 ext. 226. In future correspondence concerning this project, please reference FWS Log No. 2006-I-0530.

Lee Nuclear Station  
Environmental Report  
RAI No. 68  
Attachment 68-2

Sincerely,



Timothy N. Hall  
Field Supervisor

TNH/LLZ

**Lee Nuclear Station Response to Request for Additional Information (RAI)**

**RAI Letter Dated:** August 21, 2008

**Reference NRC RAI Number:** ER RAI 80

**NRC RAI:**

Provide the surface elevation for Make-up pond A needed for cool safe shutdown.

**Duke Energy Response:**

The AP1000 does not require any external water source for safety related features. Consequently, Make-up Pond A is not required to be used for cool safe shutdown. Make-up Pond A does not perform any safety-related functions and does not have any associated safety equipment. The Duke Energy Response to FSAR 02.04.11-002 describes the utilization of Make-up Pond A and indicates that Duke Energy has no plans to draw down Pond A to support power operations.

Reference: October 27, 2008 Duke Energy Ltr# WLG2008.10-14 to NRC/RHEB; RAI Letter No. 17.

**Associated Revisions to the Lee Nuclear Station Combined License Application:**

None

**Associated Attachment:**

Attachment 80-1: October 27, 2008 Duke Energy Ltr# WLG2008.10-14 to NRC/RHEB; RAI Letter No. 17.

**ATTACHMENT 80-1 TO ER RAI 80**

**October 27, 2008 Duke Energy Ltr# WLG2008.10-14 to NRC/RHEB; RAI Letter 17**



Bryan J. Dolan  
VP, Nuclear Plant Development

Duke Energy  
EC09D/ 526 South Church Street  
Charlotte, NC 28201-1006

Mailing Address:  
P.O. Box 1006 - EC09D  
Charlotte, NC 28201-1006

704-382-0605

[bjdolan@duke-energy.com](mailto:bjdolan@duke-energy.com)

October 27, 2008

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Subject: Duke Energy Carolinas, LLC.  
William States Lee III Nuclear Station - Docket Nos. 52-018 and 52-019  
AP1000 Combined License Application for the  
William States Lee III Nuclear Station Units 1 and 2  
Partial Response to Request for Additional Information  
(RAI Nos. 820, 821, 822, 823, 824, and 825)  
Ltr# WLG2008.10-14

Reference: Letter from Brian Hughes (NRC) to Peter Hastings (Duke Energy),  
*Request for Additional Information Letter No. 012 {sic}[017] Related To  
SRP Section 2.3.4 {sic}[2.4] for the William States Lee III Units 1 And 2  
Combined License Application, dated September 22, 2008*

This letter provides the Duke Energy partial response to the Nuclear Regulatory Commission's requests for additional information (RAIs) included in the referenced letter.

Responses to the NRC information requests described in the referenced letter are addressed in separate enclosures, which also identify associated changes, when appropriate, that will be made in a future revision of the Final Safety Analysis Report for the Lee Nuclear Station. Responses to RAIs 826 and 828 will be addressed under a separate cover letter.

If you have any questions or need any additional information, please contact Peter S. Hastings, Nuclear Plant Development Licensing Manager, at 980-373-7820.

Bryan J. Dolan  
Vice President  
Nuclear Plant Development

**Lee Nuclear Station Response to Request for Additional Information (RAI)**

**RAI Letter No. 017**

**NRC Technical Review Branch: Hydrologic Engineering Branch (RHEB)**

**Reference NRC RAI Number(s): RAI 02.04.11-002**

**NRC RAI:**

FSAR Section 2.4.11.5 states: "Make-Up Pond B has sufficient capacity to support full power operations for approximately 35 days. Make-Up Pond A has sufficient capacity to support full power operations for an additional 11 days. Make-Up Pond A has sufficient capacity to conduct a normal plant shutdown." Describe "normal plant shutdown." Describe the extent to which any safety-related water is needed during normal plant shutdown.

**Duke Energy Response:**

A normal plant shutdown is a non-emergency shutdown and does not require any safety-related water. The water usage for normal shutdown of both units is approximately 106 ac.-ft. The water usage to maintain shutdown conditions of both units for 90 days after normal shutdown is approximately an additional 143 ac.-ft. The 1200 ac.-ft. of useable storage in Make-Up Pond A is a sufficient capacity to conduct a normal plant shutdown and maintain the plant in shutdown conditions for a length of time that is significantly longer than any recorded period of low flow. Duke Energy has no plans to draw down Make-Up Pond A to support power operations.

Duke Energy has modified the text of FSAR Subsection 2.4.11.5 to provide the non-safety related water requirements for a normal plant shutdown. A revision of FSAR Subsection 2.4.11.5 text is provided as Attachment 1. Attachment 1 will be incorporated into a future revision of the Final Safety Analysis Report.

**Associated Revision to the Lee Nuclear Station Final Safety Analysis Report:**

**FSAR Subsection 2.4.11.5**

**Attachments:**

- 1) Revised FSAR Subsection 2.4.11.5

**Lee Nuclear Station Response to Request for Additional Information (RAI)**

**Attachment 1 to RAI 02.04.11-002**

**Revision to FSAR Subsection 2.4.11.5**



COLA Part 2, FSAR, Chapter 2, Subsection 2.4.11.5, the seventh paragraph will be revised as follows:

2.4.11.5 Plant Requirements

Make-Up Pond B has sufficient capacity to support full power operations for approximately 35 days. ~~Make-Up Pond A has sufficient capacity to support full power operations for an additional 11 days. There are no safety-related water requirements for normal plant shutdown associated with the AP1000. Make-Up Pond A has sufficient capacity to conduct a normal plant shutdown~~ nominally provides for 1200 ac.-ft. of usable water storage which corresponds to a reserve capacity that is approximately 11 days of power operations. Make-Up Pond A has sufficient capacity to conduct a normal plant shutdown and to maintain shutdown conditions for both units. Make-Up Pond A can be replenished with water from the Broad River and from Make-Up Pond B.