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October 6, 2010

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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
Responses to Request for Additional Information
Ltr# WLG2010.10-02

Reference: Letter from Sarah Lopas (NRC) to Bryan Dolan (Duke Energy), Follow-Up
Requests for Additional Information Regarding the Supplement to the
Environmental Report for the William States Lee III Nuclear Station, Units
1 and 2 Combined License Application, dated September 14, 2010
(ML102371173)

This letter provides the Duke Energy responses to the Nuclear Regulatory
Commission's requests for additional information (RAIs) listed below, as requested in
the referenced letter:

RAI 209, Ecology - Aquatic
RAI 213, Ecology - Terrestrial

RAI 220, Cultural Resources

The responses to the NRC information request described in the referenced letter are
addressed in separate enclosures, which also identify associated changes to the
Combined License Application for the Lee Nuclear Station, when appropriate.

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

1093
NRC

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October 6, 2010

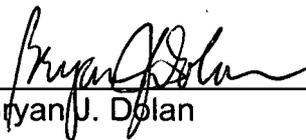
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Enclosures:

- 1) RAI 209, Ecology – Aquatic
RAI 213, Ecology – Terrestrial
- 2) RAI 220, Cultural Resources

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

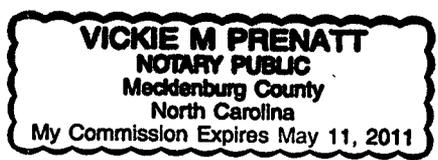
Subscribed and sworn to me on October 6, 2010



Notary Public

My commission expires: May 11, 2011

SEAL



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xc (w/o enclosures):

Loren Plisco, Deputy Regional Administrator, Region II
Robert Schaaf, Branch Chief, DSER

xc (w/ enclosures):

Sarah Lopas, Project Manager, DSER
Brian Hughes, Senior Project Manager, DNRL
Mickie Chamness, PNNL

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

RAI Letter Dated: September 14, 2010

**Reference NRC RAI Numbers: ER RAI 209 Ecology – Aquatic
 ER RAI 213 Ecology – Terrestrial**

NRC RAI:

RAI 209: Provide a list of the permitting agencies being consulted regarding potential mitigation related to the construction of Pond C and the Lee Nuclear Station. Describe the stage of discussions with each of these agencies. Also, provide a description of Duke's approach for determining potential mitigation projects that will be likely to satisfy agency requirements.

RAI 213: Provide information regarding conceptual mitigation planning for losses of wetlands, and losses of riparian and upland areas associated with streams and wetlands, in the Pond C area, as well as in other parts of the project (i.e., Lee site, railroad corridor, transmission line corridors). In the response, consider the mitigation sequence required under the Clean Water Act - avoidance, minimization, and compensatory mitigation. Where appropriate, consider compensatory mitigation at the watershed level, as emphasized in *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* (40 CFR Part 230). Include a list of the agencies being consulted about potential mitigation and describe the stage of discussions with each of these agencies.

Duke Energy Response:

The mitigation sequence of avoidance, minimization, and compensation is utilized to mitigate impacts to Waters of the U.S. from the Lee Nuclear Station project. Duke Energy explored options to avoid and then minimize impacts to Waters of the U.S. before compensatory mitigation was considered. Both offsite and onsite options were evaluated to avoid impacts to wetlands and streams to the greatest extent practicable. The offsite alternatives analysis provided in Subsection 9.3.2 of the ER-Supplement assisted Duke Energy in selecting the Lee Nuclear Site as the location with the least amount of impact to wetlands and streams. Since the Lee Nuclear Site had been previously developed as the Cherokee Nuclear Station, this option largely avoids impacts to Waters of the U.S. for the development of the plant itself. The selection of a supplemental cooling water reservoir site described in Subsection 9.4.2.2.5.5 of the Environmental Report Supplement was made through an analysis of the Lee Nuclear Station to choose the option that avoided impacts to wetlands and streams to the greatest extent practicable. Utilizing an existing rail corridor and other existing infrastructure also largely avoids impacts to Waters of the U.S. Further avoidance of impacts to Waters of the U.S. was accomplished through other aspects of the site design such as the routing of pipelines and construction roads through uplands to the greatest extent practicable, locating transmission structures in uplands, and utilizing designs that result in smaller footprints.

Designs are used to ensure that the effects of unavoidable impacts to Waters of the U.S. are minimized to the greatest extent practicable. Impacts to the aquatic environment are minimized

through the following measures discussed in Subsections 4.2 and 4.3 of the ER and ER-Supplement:

- Closed cycle cooling system technology to minimize withdrawal requirements and thermal discharge effects to the Broad River,
- Intake screens designed in compliance with Clean Water Act 316(b) requirements and fish return troughs at the river and Make-Up Pond A intakes,
- Implementation of strict sediment and erosion control measures,
- Cofferdams and pumps for work within flowing waterbodies,
- Construction of the river intake outside of the spawning season,
- Location of temporary construction roads and borrow areas within the footprint of Make-Up Pond C,
- Design of the Make-Up Pond C dam using the steepest slope allowable to minimize the footprint, and
- Implementation of best management practices (BMPs) to minimize the impact to streams during transmission line construction.

Unavoidable impacts to Waters of the U.S. are mitigated through compensatory mitigation. Duke Energy has consulted with the U.S. Army Corps of Engineers (USACE) Charleston District and the South Carolina Department of Natural Resources (SCDNR) to assist in developing a preliminary approach for compensatory mitigation. Discussions with the USACE have focused on the scope and scale of the project, methodology for compensatory mitigation credit calculation, types of mitigation, and expanding the mitigation project search area beyond the typical eight digit Hydrologic Unit Code (HUC). Duke Energy discussions with SCDNR involved a review of impacted habitats at Make-Up Pond C and SCDNR preferences for mitigation, including several tracts of land suggested by SCDNR. Additionally, Duke Energy has discussed the conceptual mitigation options presented in this response with these agencies, but has not developed specific mitigation plans. Duke Energy has also presented various aspects of the conceptual mitigation plans during inter-agency meetings that also included:

- South Carolina Department of Health and Environmental Control,
- South Carolina Historic Preservation Office,
- Environmental Protection Agency, and
- U.S. Nuclear Regulatory Commission.

Specific mitigation proposals are developed in conjunction with the Section 404 permit application.

Compensatory mitigation requirements for unavoidable impacts to Waters of the U.S. are determined by the USACE Charleston District during the Section 404 permitting process. The USACE Charleston District has published a Standard Operating Procedure (SOP) for Compensatory Mitigation (RD-SOP-02-01, issued in 2002). The SOP serves as a guideline for calculating project mitigation credit requirements, as well as mitigation credits to be generated by proposed mitigation actions. The SOP states that the methodologies may not be appropriate for some large, complex projects. Furthermore, the SOP includes a protocol for variance allowance in situations where the SOP may be unreasonable or otherwise not in the public

interest. Considering these inherent limitations of the SOP, Duke Energy is required to consult with the USACE Charleston District during the Section 404 permitting process using the SOP and other appropriate tools to determine appropriate mitigation requirements for the project.

Compensatory mitigation for unavoidable impacts are conducted in accordance with the USACE/Environmental Protection Agency (EPA) rule *Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* (40 CFR Part 230 and 33 CFR Part 332). This rule recommends using a watershed-based approach to determine potential compensatory mitigation. The rule also sets a general hierarchy of mitigation preference: 1) purchasing credits from mitigation banks, 2) contributing funds to an in-lieu fee program, and 3) establishing a permittee responsible mitigation project or projects. Because of the scale of the Lee Nuclear Station project, Duke Energy anticipates that a combination of mitigation bank credit purchases and a watershed-based, regionally significant permittee responsible mitigation project, or projects, will be used to provide compensatory mitigation for unavoidable impacts. Using a watershed-based mitigation approach provides substantial ecological benefit, such as preservation of relatively large tracts of land that include wetlands, riparian areas, and uplands.

The Lee Nuclear Station project, including ancillary facilities such as the offsite transmission lines, is located within the Upper and Lower Broad River watersheds (Hydrologic Unit Codes [HUC] 03050105 and 03050106) in the Santee Basin. The project is located within the Kings Mountain and Southern Outer Piedmont EPA Level IV Ecoregions. Significant portions of these watersheds and ecoregions extend into North Carolina; however, the USACE and SCDNR have strongly advised that compensatory mitigation should be accomplished within South Carolina. As part of a watershed-based approach to compensatory mitigation, Duke Energy has begun a search for mitigation bank credits and potential permittee responsible mitigation projects within the South Carolina portions of the Santee Basin in the aforementioned ecoregions. Three focus areas, based on proximity to the project, are being used in the mitigation search. The primary search area includes the Upper and Lower Broad River HUCs within the Kings Mountain and Southern Outer Piedmont ecoregions. The secondary search area includes the HUCs flowing into the Broad River: Tyger (03050107) and Enoree (03050108). The tertiary search area includes those adjacent HUCs within the Santee Basin: Saluda (03050109), Lower Catawba (03050103) and Wateree (03050104).

The mitigation search has identified four mitigation banks that could provide mitigation credit. There are also several additional banks proposed within the region that are in various stages of approval. Additionally, the USACE and SCDNR have provided general guidance on preferences for permittee responsible mitigation projects. SCDNR has suggested several tracts of land with mitigation potential and Duke Energy is considering those tracts in the mitigation planning process. Using agency guidance and recommendations, Duke Energy has begun using existing data to conduct limited desktop screenings within the primary search area to identify potential mitigation sites. Further detail on mitigation bank credit availability and potential permittee-responsible mitigation projects are developed during the Section 404 permitting process. Mitigation plans are developed in accordance with 33 CFR 332.4(c).

Enclosure No. 1
Duke Letter Dated: October 6, 2010

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Associated Revisions to the Lee Nuclear Station Combined License Application:

None

Attachments:

None

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

RAI Letter Dated: September 14, 2010

Reference NRC RAI Number: ER-RAI 220, Cultural Resources

NRC RAI:

Provide a written summary of the approach to consider sensitive areas, such as 38CK172, during transmission line construction and maintenance, including provisions for inclusion of sensitive areas on GIS maps used for design, construction, and maintenance, hand clearing of vegetation, and 50 ft protective buffers.

Duke Energy Response:

Cemeteries and other sensitive areas, such as 38CK172, identified during cultural resource surveys have been located with Global Positioning System (GPS) technology and are represented as a spatial layer on the Lee Nuclear Site Geographic Information System (GIS). This spatial data depicts sensitive areas on figures used during the design, construction, and maintenance phases of the project. Protective "hand-cut" buffers with a 50-foot radius are placed around sensitive areas located within 50 feet of a transmission line corridor and vegetation is cleared by hand. No towers/poles are placed within the protective buffers.

References:

None

Associated Revisions to the Lee Nuclear Station Combined License Application:

None

Attachments:

None.