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October 1, 2009

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
(RAI Nos. 538)
Ltr # WLG2009.09-12

References: Letter from Tanya Simms (NRC) to Peter Hastings (Duke Energy),
*Request for Additional Information Letter No. 004 Related to SRP Section
07.05 for the William States Lee III Units 1 and 2 Combined License
Application*, dated August 14, 2008.

Letter from Bryan J. Dolan (Duke Energy) to NRC Document Control
Desk, *Response to Request for Additional Information (RAI Nos. 538)*,
Ltr# WLG2009.03-18, dated April 2, 2009 (ML090960298).

Letter from Bryan J. Dolan (Duke Energy) to NRC Document Control
Desk, *Response to Request for Additional Information (RAI Nos. 538)*,
Ltr# WLG2009.07-06, dated July 22, 2009 (ML092050070).

This letter provides a Duke Energy supplemental response to the Nuclear Regulatory
Commission's requests for additional information (RAIs) included in the referenced
letter. This response supplements the responses to RAI 07.05-001 transmitted by the
Duke Energy letters referenced above.

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

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Enclosure:

- 1) Duke Energy Supplemental Response to Request for Additional Information
Letter 004, RAI 07.05-001

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
Bryan J. Dolan

Subscribed and sworn to me on October 1, 2009

K. N. Slays
Notary Public

My commission expires: April 19, 2010



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xc (w/o enclosure):

Loren Plisco, Deputy Regional Administrator, Region II
Stephanie Coffin, Branch Chief, DNRL

xc (w/enclosure):

Brian Hughes, Senior Project Manager, DNRL
Tanya Simms, Project Manager, DNRL

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

RAI Letter No. 004

NRC Technical Review Branch: Instrumentation, Controls and Electrical Engineering

Reference NRC RAI Number(s): 07.05-001

NRC RAI:

Tables 7.5-1 and 7.5-8 of the AP1000 Design Control Document (DCD), Revision 16, Post-Accident Monitoring System, contain variables to monitor the meteorological parameters and environs radiation and radioactivity. These variables are defined as site specific. Define these variables in compliance with Regulatory Guide 1.97, Revision 3, as committed to in the combined license application, or justify an alternative approach.

Table 7.5-1 (Sheet 12 of 12) of the AP1000 DCD, Revision 16, identifies meteorological parameters as site specific. Additionally, Table 7.5-8 of the AP1000 DCD identifies "meteorology" and "boundary environs radiation and radioactivity" as site specific variables. However, the staff has not found where the combined license application addresses the parameters/variables. Explain where these variables are found.

Duke Energy Response:

Duke Energy is providing additional clarification of the RAI 07.05-001 responses provided as enclosures to References 1 and 2. The clarification is being provided as requested by NRC staff in a teleconference on September 1, 2009 to further address compliance with Regulatory Guide 1.97, Revision 3 requirements for monitoring meteorological variables and Lee Delta-T measurements (i.e., vertical temperature gradient between 60m and 10m levels).

The meteorological monitoring system for Lee Nuclear Station (Lee) meets the requirements of Regulatory Guide 1.23, Revision 1, and Regulatory Guide 1.97, Revision 4. The meteorological variables available to the control room are also consistent with the earlier Regulatory Guide 1.97, Revision 3, and will include wind speed, wind direction, and an estimation of atmospheric stability class. Stability class is estimated from the vertical temperature gradient between the 60m and 10m levels on the meteorological tower. As noted in footnote (f) of revised FSAR Table 2.3-281 transmitted as an enclosure to Reference 1, Delta-T is calculated by the datalogger. The datalogger Delta-T reading is verified to be within ± 0.05 degrees when the temperature sensors are placed in a drywell isothermal environment during calibration. A stated range of -4°C to $+8^{\circ}\text{C}$ is referenced based on procedural tolerances and ranges used at Duke Energy's operating nuclear stations. This range is adequate for Delta-T in determining the stability class per Table 1 of Regulatory Guide 1.23, Revision 1, with Delta-T criteria covering an overall range of $(dT \leq -1.9^{\circ}\text{C})$ to $(dT \geq +4.0^{\circ}\text{C})$ per a 100m separation. For the Lee 60m meteorological tower, with a 50m separation between the upper and lower temperature measurement levels, this equates to Delta-T criteria for estimating stability class within the overall range of $(dT \leq -0.95^{\circ}\text{C})$ to $(dT \geq +2.0^{\circ}\text{C})$.

Note that this supplemental response does not affect FSAR markups transmitted as part of the enclosures to References 1 and 2.

Reference:

1. Letter from Bryan J. Dolan (Duke Energy) to NRC Document Control Desk, *Response to Request for Additional Information (RAI Nos. 538)*, Ltr# WLG2009.03-18, dated April 2, 2009 (ML090960298).
2. Letter from Bryan J. Dolan (Duke Energy) to NRC Document Control Desk, *Response to Request for Additional Information (RAI Nos. 538)*, Ltr# WLG2009.07-06, dated July 22, 2009 (ML092050070).

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

None

Attachments:

None