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February 25, 2015

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

10 CFR 52.79

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
Supplemental Response to Request for Additional Information (RAI) Letter 123,
Related to SRP Section 13.03 Emergency Planning (RAI-7686)
Ltr#: WLG2015.02-01

Reference: 1. Letter from Brian Hughes (NRC) to Robert Kitchen (Duke Energy), Request
for Additional Information Letter No. 123, Related to SRP Section 13.03
Emergency Planning for the William States Lee III Units 1 and 2 Combined
License Application (RAI-7686), dated October 3, 2014 (ML14279A219)
2. Letter from Christopher M. Fallon (DEC) to Nuclear Regulatory Commission
(NRC) dated November 6, 2014, Response to Request for Additional
Information (RAI) Letter 123, Related to SRP Section 13.03 Emergency
Planning (RAI-7686) Ltr#: WLG2014.10-03 (ML14314A035)


This letter provides Duke Energy's supplemental response to the Nuclear Regulatory Commission's request for additional information (RAI), RAI-7686 included in the referenced letter. This supplement provides additional information in response to question 13.03-98.

The response to the NRC information request described in the referenced letter is addressed in a separate enclosure, which also identifies associated changes, when appropriate, to be made in a future revision of the COLA.

If you have any questions or need any additional information, please contact Robert H. Kitchen, Nuclear Development Licensing Director, at (704) 382-4046.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 25, 2015.

Sincerely,


Christopher M. Fallon
Vice President
Nuclear Development

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NRO

U.S. Nuclear Regulatory Commission
February 25, 2015
Page 2 of 3

Enclosure:

Supplemental Information to Lee Nuclear Station Units 1 and 2 Response to Request for
Additional Information (RAI) Letter 123, RAI 13.03-98 (eRAI 7686)

U.S. Nuclear Regulatory Commission
February 25, 2015
Page 3 of 3

xc (w/out enclosures):

Frederick Brown, Deputy Regional Administrator, Region II
Brian Hughes, Senior Project Manager, DNRL

Supplemental Information
to
Lee Nuclear Station Units 1 and 2 Response to Request for Additional Information
(RAI) Letter 123,
RAI 13.03-98 (eRAI 7686)

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

RAI Letter No. 123

NRC Technical Review Branch: Licensing and Inspection Branch (NSIR/DPR/LIB (EP))

Reference NRC RAI Number(s): 13.03-98 (eRAI 7686)

NRC RAI:

In Section 8, "Transit Dependent and Special Facility Evacuation Time Estimates," the applicant describes the resources required to evacuate schools, transit dependent residents, and special facilities. The analysis shows that 3 waves of buses are needed to evacuate the schools. The ETE Report shows that 42 bus runs are needed to evacuate the transit dependent residents. Section 8.4, "Evacuation Time Estimates for Transit Dependent People," explains that wheelchair vans are scarce, and that regular buses can be used to transport wheelchair patients. Given the scarcity of resources combined with the school and transit dependent resource needs, the ETE Report is not clear regarding availability of transportation resources for special facilities. Explain whether the total resources identified in Table 8-4, "Special Facility Transit Demand," include use of regular buses for evacuation of wheelchair bound individuals from special facilities. Discuss any impact to the ETE due to time to acquire regular buses and time for buses to complete other activities prior to supporting special facility evacuations.

Duke Energy Response:

In Duke Energy's Response to Request for Additional Information (RAI) Letter 123, Related to SRP Section 13.03 Emergency Planning (RAI-7686), dated November 6, 2014, the following information was provided:

With regard to explaining the total resources for evacuation of wheelchair bound individuals from special facilities, Table 8-4 of the ETE Report, "Special Facility Transit Demand," does not include the use of regular buses for the evacuation of wheelchair bound individuals. The number of bus runs per facility is based upon the transport of approximately 30 ambulatory patients (plus accompanying staff) per run as discussed in Section 8.3.

The RAI requested information on the impact to the ETE due the time to acquire regular buses and time for buses to complete other activities prior to supporting special facility evacuations. Section 8.4 discusses the ETE associated with first- and second-wave bus evacuations from medical facilities and provides examples. Priority is given to the evacuation of schools followed by the evacuation of special facilities. The availability of buses to complete school evacuations directly impacts the evacuation and resulting ETE of special facilities. If multiple waves are required for school evacuations, the special facility evacuations will be delayed.

Duke Energy's response to RAI 13.03-76 (December 11, 2009) discussed the limitations imposed by the number of available school buses in Cherokee County and the impact on the ETE. The response stated that, using only the 60 buses available in Cherokee County, evacuation of the schools and transit-dependent population would require

multiple waves and require approximately 8 hours in good weather and approximately 9 hours and 15 minutes in rainy conditions.¹

The ETE report clearly identified the shortfall in available Cherokee County resources and noted that additional bus resources are available in neighboring counties. Use of these resources would significantly reduce actual evacuation time and are accessible by Cherokee County through the South Carolina Mutual Aid Agreement.

Section 25-1-450 of the South Carolina Code of Laws requires that State, county, and municipal governments cooperate in developing and maintaining a plan for mutual assistance. The South Carolina Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery implements Title 6, Chapter 11, Article 13 of the South Carolina Code of Laws (Section 6-11-1810), which provides that "any municipality, fire district, fire protection agency, or other emergency service entity may provide mutual aid assistance, upon request, from any other municipality, fire district, fire protection agency, or other emergency service delivery system in South Carolina at the time of a significant incident such as fire, earthquake, hurricane, flood, tornado, hazardous material event, or other such disaster." As a signatory to the South Carolina Mutual Aid Agreement, Cherokee County can request additional buses to support evacuation of schools and transit-dependent individuals. Exercising the South Carolina Mutual Aid Agreement would allow for a single wave evacuation using additional buses provided from the adjoining counties.

[Note: The response to RAI 13.03-76 included copies of the South Carolina Mutual Aid Agreement and its signatories as Attachments 1 and 2 respectively.]

The following additional information supplements Duke Energy's previous response to this RAI:

In our response, Duke Energy noted that the times needed to evacuate schools and the transit-dependent population are 8 hours in good weather and 9 hours 15 minutes in rain. These times were previously cited in a response to RAI 13.03-76 in December 2009 which acknowledged that Cherokee County had an insufficient number of buses to allow a simultaneous single-wave evacuation of both schools and the transit-dependent population. The underlying assumption in these times is that three waves of school evacuations precede a single evacuation wave of the transit-dependent population. School evacuations take priority.

The evacuation times of 8 hours (good weather) and 9 hours 15 minutes (rain) were determined by combining the average "ETE to R.C." [Reception Center] for third wave school evacuation time estimate (from Tables 8.5E and 8.5F) and average transit dependent single wave ETE times (from Tables 8-7A and 8-7B). In each case, the estimated evacuation time is based on the assumption that only the 60 buses of Cherokee County are available to evacuate schools and the transit-dependent population. Under that assumption, the total evacuation time for schools and the transit-dependent population was determined in each weather scenario by adding the average evacuation times for both groups as shown in Table 1 below:

¹ Duke Energy's response to RAI 13.03-76 referred to "evacuation of the schools and transient population" in a discussion of a multiple-wave scenario. The reference to the "transient" population was a typographical error. "Transit-dependent" is the correct modifier.

Table 1

Evacuation Population	Evacuation Time (Hr:Min)	
	Good Weather	Rain
Schools	5:30 (Table 8-5E)	6:15 (Table 8-5F)
Transit-Dependent	2:30 (Table 8-7A)	2:55 (Table 8-7B)
Total	8:00	9:10*

*Rounded to 9:15

Referring to Table 8-5E, the school evacuation time in good weather is taken as the average time (5:30) for the last of the three waves of evacuees to arrive at the reception center. Table 8-7A gives an average time for a single-wave evacuation of the transit-dependent population from the Emergency Planning Zone to be 2:30. The estimated total evacuation time of both populations is the sum of these two values (8:00). Total evacuation time in rainy conditions is calculated similarly using Tables 8-5F and 8-7B to yield an estimated evacuation time of 9:15 (with rounding).

The evacuation times above are based on the assumption that only the 60 buses provided by Cherokee County are available for school and transit-dependent population evacuation. This assumption resulted in Cherokee County recognizing the need to draw upon additional transportation resources available through the existing South Carolina Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery that ensures sufficient transportation resources are available for timely evacuation of school children and transit-dependent people. Rather than Cherokee County relying solely on its own bus fleet for the multiple-wave evacuation of school and transit-dependent populations, additional transportation resources from nearby counties would allow these evacuations to occur simultaneously, significantly reducing the overall evacuation time for these special population groups.

To clarify the times discussed above for the evacuation of schools and the transit-dependent population, Supplement 1 to Revision 2 of the Lee Nuclear Station Evacuation Time Estimate has been developed and provided in Attachment 1. This supplement will be included in Part 5 of the WLS COLA in a future COLA update.

ETE Section	Supplemental Information
Section 8.4, Page 8-5	At the end of the last paragraph, the following footnote is added: If a three-wave evacuation of Cherokee County schools is required, the total time for evacuation of schools and the transit-dependent population is estimated to be between 8 hours and 9 hours 15 minutes. Additional resources are available through the South Carolina Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery to provide a more rapid evacuation.

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

None

Associated Revision to the Lee Nuclear Station Emergency Plan:

None

Attachments:

Supplement to Lee Nuclear Station Evacuation Time Estimate, Rev. 2

Attachment 1

**Lee Nuclear Station Units 1 and 2 Response to Request for Additional Information
(RAI) Letter 123,
RAI 13.03-98 (eRAI 7686)**

Supplement 1 to Lee Nuclear Station Evacuation Time Estimate, Rev. 2

Supplement 1
Lee Nuclear Station Evacuation Time Estimate, Rev. 2

The following clarification is provided to supplement the discussion in Section 8.4 of Revision 2 to the Lee Nuclear Station Evacuation Time Estimate:

ETE Section	Supplemental Information
Section 8.4, Page 8-5	At the end of the last paragraph, the following footnote is added: If a three-wave evacuation of Cherokee County schools is required, the total time for evacuation of schools and the transit-dependent population is estimated to be between 8 hours and 9 hours 15 minutes. Additional resources are available through the South Carolina Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery to provide a more rapid evacuation.