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October 27, 2008

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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
Response to Request for Additional Information
(RAI Nos. 907, 908 and 925)
Ltr # WLG2008.10-16

Reference: Letter from Ravindra Joshi (NRC) to Peter Hastings (Duke Energy),
*Request For Additional Information Letter No. 019 Related To SRP
Section 6.4 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 RAI Numbers 06.04-3 and 06.04-8 are provided in this letter. A response to RAI Numbers 06.04-1, 06.04-2, 06.04-4, 06.04-05, 06.04-6 and 06.04-7 will be provided in a future submittal on or about November 14, 2008.

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.

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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Enclosures:

- 1) Duke Energy Response to Request for Additional Information Letter 019, RAI
06.04-003
- 2) Duke Energy Response to Request for Additional Information Letter 019, RAI
06.04-008

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 27, 2008



Notary Public

My commission expires: October 31, 2008



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xc (w/o 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, Site and Environmental Reviews
Glenn Tracy, Director, Division of Construction Inspection and Operational Programs
Charles Ader, Director, Division of Safety Systems and Risk Assessment
Michael Mayfield, Director, Division of Engineering
Luis Reyes, Regional Administrator, Region II
Loren Plisco, Deputy Regional Administrator, Region II
Thomas Bergman, Deputy Division Director, DNRL
Stephanie Coffin, Branch Chief, DNRL

xc (w/enclosures)

Brian Hughes, Senior Project Manager, DNRL
Ravindra Joshi, Project Manager, DNRL

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

RAI Letter No. 019

**NRC Technical Review Branch: Containment & Ventilation Branch 1 (SPCV) and
Siting & Accident Consequences Branch (RSAC)**

Reference NRC RAI Number(s): 06.04-003

NRC RAI:

In Section 2.2.3.1.3.3, of the Lee COL FSAR, it states "...under ideal conditions a pressurized liquid chlorine tractor trailer burst type accident..." State/define what is meant by "ideal conditions."

Duke Energy Response:

The "ideal conditions" are the "worst-case scenario conditions." The "worst-case scenario conditions" are defined in the text as Pasquill Stability Category G and wind speed of 2.5 m/s directly toward the site.

Attachment 1 will be incorporated into a future revision of the FSAR.

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

FSAR Subsection 2.2.3.1.3.3

Attachment:

Revised FSAR Subsection 2.2.3.1.3.3

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

Attachment 1 to RAI 06.04-003

Markup of FSAR Subsection 2.2.3.1.3.3

COLA Part 2, FSAR Chapter 2, Subsection 2.2.3.1.3.3 will be revised as follows:

"The results of the HABIT EXTRAN analysis indicate that, under worst-case conditions for the site, under ideal conditions a pressurized liquid chlorine tractor-trailer burst type accident would not elevate control room HVAC intake concentrations beyond IDLH values. The habitability analysis discussed in Section 6.4.4.2 concluded that the concentrations in the control room would be even lower than the intake."

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

RAI Letter No. 019

**NRC Technical Review Branch: Containment & Ventilation Branch 1 (SPCV) and
Siting & Accident Consequences Branch (RSAC)**

Reference NRC RAI Number(s): 06.04-008

NRC RAI:

FSAR Table 2.3-285, provides control room atmospheric dispersion factors for a release point called "steam vent." This term for a release point was not used in the AP1000 DCD, Rev. 16, Table 15A-6, which is the comparable table in the AP1000 DCD for use in design basis radiological consequences analyses. Describe which AP1000 DCD Table 15A-6 design reference release point is equivalent to the Lee FSAR Table 2.3-285 release point termed "Steam Vent," and which associated design basis accident analyses use those control room atmospheric dispersion factors.

Duke Energy Response:

The heading for the "Steam Vent" columns in Table 2.0-202 (Sheet 1 of 3) and Table 2.3-285 along with the "Steam Vent" release point in Table 2.3-284 will be revised to match the corresponding DCD Table 15A-6 identified release point of "Steam Line Break Releases." The steam line break release points and associated design basis accident analyses are as described in DCD Chapter 15, Subsection 15.1.5.

Attachments 1, 2 and 3 will be incorporated into a future revision of the FSAR.

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

The heading for the "Steam Vent" columns in Table 2.0-202 (Sheet 1 of 3) and Table 2.3-285 along with the "Steam Vent" release point in Table 2.3-284 will be revised to indicate "Steam Line Break Releases."

Attachments:

1. Attachment 1, Mark-up of FSAR Table 2.0-202 (Sheet 1 of 3)
2. Attachment 2, Mark-up of FSAR Table 2.3-285
3. Attachment 3, Mark-up of FSAR Table 2.3-284

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

Attachment 1 to RAI 06.04-008

Mark-up of FSAR Table 2.0-202 (Sheet 1 of 3)

TABLE 2.0-202 (Sheet 1 of 3)
 COMPARISON OF CONTROL ROOM ATMOSPHERIC DISPERSION FACTORS FOR ACCIDENT
 ANALYSIS FOR AP1000 DCD AND LEE NUCLEAR STATION UNITS 1 & 2
 (REFERENCE TABLE 2.3-285)

	χ/Q (s/m ³) at HVAC Intake for the Identified Release Points ^(a)			χ/Q (s/m ³) at Control Room Door for the Identified Release Points ^(b)		
	Plant Vent or PCS Air Diffuser ^(c)	Plant Vent	PCS Air Diffuser	Plant Vent or PCS Air Diffuser ^(c)	Plant Vent	PCS Air Diffuser
	DCD	FSAR	FSAR	DCD	FSAR	FSAR
0 – 2 hours	3.0E-03	2.0E-03	1.7E-03	1.0E-03	4.3E-04	4.8E-04
2 – 8 hours	2.5E-03	1.5E-03	1.4E-03	7.5E-04	3.4E-04	3.7E-04
8 – 24 hours	1.0E-03	5.9E-04	5.9E-04	3.5E-04	1.4E-04	1.6E-04
1 – 4 days	8.0E-04	4.5E-04	4.5E-04	2.8E-04	1.1E-04	1.2E-04
4 – 30 days	6.0E-04	3.2E-04	2.8E-04	2.5E-04	7.3E-05	7.8E-05

	χ/Q (s/m ³) at HVAC Intake for the Identified Release Points ^(a)			χ/Q (s/m ³) at Control Room Door for the Identified Release Points ^(b)		
	Steam Line Break Releases	<u>Steam Vent Line Break Releases</u>	Condenser Air Removal Stack	Steam Line Break Releases	<u>Steam Vent Line Break Releases</u>	Condenser Air Removal Stack
	DCD	FSAR	FSAR	DCD	FSAR	FSAR
0 – 2 hours	2.4E-02	1.2E-02	1.6E-03	4.0E-03	8.4E-04	3.3E-03
2 – 8 hours	2.0E-02	6.5E-03	1.3E-03	3.2E-03	6.0E-04	2.7E-03
8 – 24 hours	7.5E-03	2.9E-03	5.3E-04	1.2E-03	2.8E-04	1.0E-03
1 – 4 days	5.5E-03	2.1E-03	3.9E-04	1.0E-03	1.9E-04	8.0E-04
4 – 30 days	5.0E-03	1.5E-03	3.0E-04	8.0E-04	1.1E-04	4.5E-04

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

Attachment 2 to RAI 06.04-008

Mark-up of FSAR Table 2.3-285

TABLE 2.3-285 (Sheet 1 of 2)
 CONTROL ROOM ATMOSPHERIC DISPERSION FACTORS (χ/Q) FOR ACCIDENT DOSE
 ANALYSIS (S/M^3)

Control Room χ/Q at HVAC Intake

Time Interval	Control Room χ/Q at HVAC Intake			
	Plant Vent	PCS Air Diffuser	Fuel Bldg. Blowout Panel	Fuel Bldg. Rail Bay Door
0 – 2 hours	2.0E-03	1.7E-03	1.6E-03	1.2E-03
2 – 8 hours	1.5E-03	1.4E-03	1.2E-03	9.0E-04
8 – 24 hours	5.9E-04	5.9E-04	4.2E-04	3.5E-04
1 – 4 days	4.5E-04	4.5E-04	4.1E-04	3.0E-04
4 – 30 days	3.2E-04	2.8E-04	3.1E-04	2.3E-04

Time Interval	Steam Vent	PORV & Safety Valves	Condenser Air Removal Stack	Containment Shell
	Steam Line Break Releases			
0 – 2 hours	1.2E-02	1.1E-02	1.6E-03	2.7E-03
2 – 8 hours	6.5E-03	5.3E-03	1.3E-03	1.8E-03
8 – 24 hours	2.9E-03	2.3E-03	5.3E-04	7.0E-04
1 – 4 days	2.1E-03	1.7E-03	3.9E-04	6.2E-04
4 – 30 days	1.5E-03	1.3E-03	3.0E-04	4.3E-04

TABLE 2.3-285 (Sheet 2 of 2)
 CONTROL ROOM ATMOSPHERIC DISPERSION FACTORS (χ/Q) FOR ACCIDENT DOSE
 ANALYSIS (S/M^3)

Time Interval	Control Room χ/Q at Annex Building Access Door			
	Plant Vent	PCS Air Diffuser	Fuel Bldg. Blowout Panel	Fuel Bldg. Rail Bay Door
0 – 2 hours	4.3E-04	4.8E-04	3.6E-04	3.4E-04
2 – 8 hours	3.4E-04	3.7E-04	2.5E-04	2.4E-04
8 – 24 hours	1.4E-04	1.6E-04	1.1E-04	1.0E-04
1 – 4 days	1.1E-04	1.2E-04	8.6E-05	8.5E-05
4 – 30 days	7.3E-05	7.8E-05	6.6E-05	6.6E-05
Time Interval	Control Room χ/Q at Annex Building Access Door			
	Steam Vent Steam Line Break Releases	PORV & Safety Valves	Condenser Air Removal Stack	Containment Shell
0 – 2 hours	8.4E-04	8.6E-04	3.3E-03	4.9E-04
2 – 8 hours	6.0E-04	6.3E-04	2.7E-03	3.9E-04
8 – 24 hours	2.8E-04	2.9E-04	1.0E-03	1.6E-04
1 – 4 days	1.9E-04	1.9E-04	8.0E-04	1.2E-04
4 – 30 days	1.1E-04	1.1E-04	4.5E-04	8.5E-05

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

Attachment 3 to RAI 06.04-008

Mark-up of FSAR Table 2.3-284

WLS COL 2.3-4

TABLE 2.3-284
LEE NUCLEAR STATION CONTROL ROOM HVAC INTAKE
DISTANCES AND DIRECTIONS

Release Point	Distance (m)	Direction to Source (degrees)
Plant Vent	39.6	2°
PCS Air Diffuser	32.3	33°
Fuel Building Blowout Panel	50.0	345°
Fuel Building Rail Bay Door	52.4	345°
Steam Vent Steam Line Break Releases	18.3	75°
PORV/Safety Valves	19.8	85°
Condenser Air Removal Stack	63.0	115.5°
Containment Shell	11.0	24°

Notes:

1. Distances based on DCD Figure 15A-1 (see Figure 15A-1 for release locations).
2. Directions are relative to True North at the Lee Nuclear Station site.