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June 12, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
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
Supplemental Response to Request for Additional Information (RAI)
Letter No. 83, RAI Nos. 13.03-77 and 13.03-87
Ltr# WLG2012.06-01

References:

1. Letter from Denise McGovern (NRC) to Peter Hastings (Duke Energy), Request for Additional Information Letter No. 083 Related to SRP Section 13.3 For the William States Lee III Units 1 and 2 Combined License Application, dated November 2, 2009 (ML093060265)

2. Letter from Bryan Dolan (Duke Energy) to Document Control Desk (NRC), Response to Request for Additional Information (RAI No. 3255) Ltr# WLG2009.12-06, dated December 11, 2009 (ML093490764)

This letter provides supplemental responses for RAI Nos. 13.03-77 and 13.03-87 included in Duke Energy's response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) included in the referenced letters.

The supplemental information provided with this response is addressed in the enclosures which also identify associated changes that will be made in a future revision of the Combined Operating License Application (COLA) for Lee Nuclear Station.

If you have any questions or need any additional information, please contact James R. Thornton, Nuclear Plant Development Licensing Manager (Acting), at (704) 382-2612.

Sincerely,

Christopher M. Fallon

Christopher M. Fallon
Vice President
Nuclear Development (Acting)

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NRO

Enclosures

1) Lee Nuclear Station Supplemental Response to Request for Additional Information Letter No. 83, RAI 13.03-77
2) Lee Nuclear Station Supplemental Response to Request for Additional Information Letter No. 83, RAI 13.03-87

xc (w/out enclosures):
Frederick Brown, Deputy Regional Administrator, Region II

xc (w/ enclosures):
Brian Hughes, Senior Project Manager, DNRL

AFFIDAVIT OF CRISTOPHER M. FALLON

Christopher M. Fallon, being duly sworn, states that he is the Vice President, Nuclear Development (Acting), 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 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.

Christopher M. Fallon

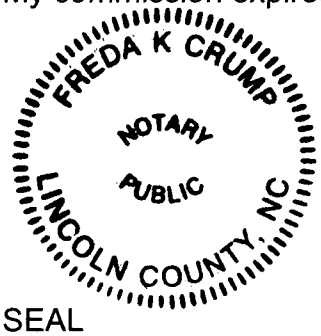
Christopher M. Fallon, Vice President
Nuclear Development (Acting)

Subscribed and sworn to me on June 12, 2012

Freda K. Crump

Notary Public

My commission expires: August 17, 2016



SEAL

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

RAI Letter No. 083

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

Reference NRC RAI Number(s): 13.03-77

NRC RAI:

Basis: 10 CFR 50, Appendix E.IV.A.2.b; NUREG-0654/FEMA-REP-1, Evaluation Criterion B.1, Evaluation Criterion B.3, Evaluation Criterion B.5, Evaluation Criterion B.7, Evaluation Criterion B.8, Evaluation Criterion B.9

SRP ACCEPTANCE CRITERIA: Requirements A and B; Acceptance Criteria 1 and 18

In RAI 13.03-55(P)(1) the staff requested the applicant provide clarification for how the on-shift/per unit personnel numbers would be assigned with collateral duty assignments. Specifically, the applicant was asked to include the repair and corrective action and radiation protection functions. Identify the total number of personnel that are assigned collateral duties. In response letters dated December 17 and December 23, 2008, the applicant stated that the number of individuals who do have collateral emergency response duties has not yet been determined and details regarding staffing of certain functions (fire-fighting and first aid) are not currently known. The applicant further stated that this information will be developed on a schedule to support execution of the emergency exercise required by 10 CFR 50, Appendix E, Section IV.F.2.

Clarify how the on-shift/per unit personnel numbers will be assigned with collateral duty assignments. Specifically, include the repair and corrective action and radiation protection functions.

Identify the total number of personnel that are assigned collateral duties.

Duke Energy Response:

This response supplements the previous Duke Energy response (Ref. 1) with additional clarification as to the role of the on-shift Radiation Protection (RP) qualified individuals. The Lee Nuclear Station Emergency Plan Table II-2, "Plant Staff Emergency Functions," which addresses the on-shift minimum staffing required to implement the Emergency Plan, is revised to change "Note 3" to read as follows:

3. This coverage is initially provided by personnel assigned other functions and is assumed by the additional personnel when they arrive on-site.

    - A Radiation Protection (RP) qualified individual assigned other duties is required to be on-shift with qualifications to perform off-site dose projections until relieved by staff augmentation of the dose assessor position.

The new bullet in Note 3 clarifies the requirement for at least one qualified RP individual

on-shift to be qualified to perform off-site dose projections until relieved by staff augmentation of the dose assessor position.

Associated Revision to the Lee Nuclear Station Emergency Plan:

Revise the Lee Nuclear Station Emergency Plan, (Rev. 3), Table II-2 as shown in Attachment 1.

Attachment:

1) Markup of the Lee Nuclear Station Emergency Plan, (Rev 3), Table II-2.

Reference:

1) Letter from Bryan Dolan (Duke Energy) to Document Control Desk (NRC), Response to Request for Additional Information (RAI No. 3255) Ltr# WLG2009.12-06, dated December 11, 2009 (ML093490764)

Attachment 1

Lee Nuclear Station Supplemental Response to

Request for Additional Information (RAI)

RAI 13.03-77

Markup of the Lee Nuclear Station Emergency Plan, (Rev 3), Table II-2

COLA Part 5, Emergency Plan, (Rev. 3), Table II-2 will be revised as follows:

Table II-2 – Plant Staff Emergency Functions

Major Functional Area	Major Tasks	Position, Title, or Expertise	On Shift Min	Targeted Capability for Additions
				75 minutes
Plant Operations and Assessment of Operational Aspects		Operations Shift Manager (SRO)	1[1]	
		Unit Supervisor (SRO)	1[1,2]	
		Control Room Operator (RO)	2[1,2]	
		Non-Licensed Operator	2[1,2]	
Emergency Direction and Control (Emergency Coordinator)	Direction and Control of On-Site Emergency Activities	Operations Shift Manager	1	1
Notification and Communication	Notify licensee, State, local, and Federal personnel and maintain communication	Communicator	1[3]	3
Radiological Accident Assessment and Support of Operational Accident Assessment	EOF Director	Senior Manager		1
	Dose Assessment	Senior RP		1
	Off-site surveys	Field Monitoring Team[4]		4
	On-site (outside plant) surveys			2
	In-plant surveys		1	2
	Chemistry/Radiochemistry	Chemistry Technician	1	1
Plant System Engineering, Repair and Corrective Actions	Technical Support	Shift Technical Advisor[5]	1	
		Core/Thermal Hydraulics		1
		Electrical		1
		Mechanical		1
	Repair and Corrective Actions	Mechanical Maintenance		1
		Instrument and Electrical Maintenance		1
		Radwaste Operator		1

Major Functional Area	Major Tasks	Position, Title, or Expertise	On Shift Min	Targeted Capability for Additions
				75 minutes
Protective Actions (In-Plant)	Radiation Protection a. Access Control b. HP Coverage for repair, corrective actions, search and rescue, first aid, and firefighting c. Personnel monitoring d. Dosimetry	RP Technicians	2[3]	4
Firefighting	Firefighting	Fire Brigade Members	Per FSAR 9.5.1	Local Support
Rescue Operations and First Aid			2[3]	Local Support
Site Access Control and Personnel Accountability	Security communications, personnel accountability	Security Personnel	Staffing levels for the on-shift, initial additions and supplemental additions are provided in the Security Plan.	

1. The On-Shift staffing is cited as individuals per unit, with the exception of the Operations Shift Manager, Shift Technical Advisor, Communicator, in-plant technician, and Chemistry Technician, who are responsible for both units consistent with FSAR 13.1. With the unit in cold shutdown condition, the minimum shift crew is as defined in 10 CFR 50.54(m)(2)(i) and the Technical Specifications.
2. For each unaffected unit in operation, maintain at least one Unit Supervisor, one Control Room Operator, and one Non-Licensed Operator.
3. This coverage is initially provided by personnel assigned other functions and is assumed by the additional personnel when they arrive on-site.
   - A Radiation Protection (RP) qualified individual assigned other duties is required to be on-shift with the qualification to perform off-site dose projections until relieved by staff augmentation of the dose assessor position.

4. Field Monitoring Team consists of one (1) RP Technician and one (1) vehicle driver. Target capability is two teams of two individuals per team.
5. One Shift Technical Advisor (STA) is assigned per shift during plant operation in modes other than cold shutdown or refueling. A shift manager or another SRO on shift, who meets the qualifications for the combined Senior Reactor Operator/Shift Technical Advisor (SRO/STA) position, as specified for option 1 of Generic Letter 86-04, the commission's policy statement on engineering expertise on shift, may also serve as the STA. If this option is used for a shift, then the separate STA position may be eliminated for that shift.

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

RAI Letter No. 083

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

Reference NRC RAI Number(s): 13.03-87

NRC RAI:

Corporate EOF and Near Site Facility

Regulatory Basis: NUREG 0696, NUREG 0737, Supplement 1

SRP ACCEPTANCE CRITERIA: Requirement E; Acceptance Criterion 5

The Lee Emergency Plan indicates that the EOF to be used will be the Corporate EOF located in Charlotte, NC. The estimated distance from the proposed Lee Technical Support Center (TSC) and the EOF is approximately 40 miles. NUREG 0696 and Supplement 1 to NUREG 0737 require Commission approval if the EOF is beyond 25 Miles from the TSC. In its letter to Duke Energy dated November 2, 2005 authorizing the inclusion of the Oconee EOF into the corporate, the Commission required that, "The licensee must provide a functional working space of approximately 75 square feet per person for up to 10 people, including the NRC, State, and FEMA representatives, at the former EOF or equivalent "near Site" facility. In addition, the licensee must maintain telecommunications and habitability (i.e., standard office lighting, furniture, heating and ventilating systems, and electrical power outlets) at this facility to support 10 people.

Discuss whether a "near site" facility will be provided and whether the proposed "near site" facility will meet the Commission's requirements.

Duke Energy Response:

This response supplements the previous Duke Energy response (Ref. 1) with additional information based on recent rule changes. The recent rule change published in November of 2011 added the following new requirement as 10 CFR 50 Appendix E.IV.E.8.b:

> For a nuclear power reactor licensee's emergency operations facility required by paragraph 8.a of this section, either a facility located between 10 miles and 25 miles of the nuclear power reactor site(s), or a primary facility located less than 10 miles from the nuclear power reactor site(s) and a backup facility located between 10 miles and 25 miles of the nuclear power reactor site(s). An emergency operations facility may serve more than one nuclear power reactor site. A licensee desiring to locate an emergency operations facility more than 25 miles from a nuclear power reactor site shall request prior Commission approval by submitting an application for an amendment to its license. For an emergency operations facility located more than 25 miles from a nuclear power reactor site, provisions must be made for locating NRC and offsite responders closer to the nuclear power reactor site so that NRC and offsite responders can interact face-to-face with emergency response personnel entering and leaving the nuclear power reactor site. Provisions for locating NRC and offsite

responders closer to a nuclear power reactor site that is more than 25 miles from the emergency operations facility must include the following:

(1) Space for members of an NRC site team and Federal, State, and local responders;

(2) Additional space for conducting briefings with emergency response personnel;

(3) Communication with other licensee and offsite emergency response facilities;

(4) Access to plant data and radiological information; and

(5) Access to copying equipment and office supplies;

The distance criteria for the EOF location was previously addressed as guidance in NUREG-0737, Supplement 1 (January 1983) and specifying that if the facility was to be positioned beyond 20 miles, specific NRC approval was required. The distance was later changed to allow up to 25 miles in SRM SECY 96-170 (September 18, 1996.)

In SECY 10-0078, NRC staff sought Commission approval of a process to review and approve proposed centralized Emergency Operations Facilities as part of the applicant combined operating license submittals. The Commission approved the staff's proposal in SRM SECY 10-0078 on September 7, 2010. Accordingly, the Lee Nuclear Station submitted its associated Emergency Plan with Attachment A-9 requesting "exclusion" from the 25 mile criteria and proposing use of the existing centralized EOF located in the Charlotte General Office.

Implementation of the new rule has now codified the distance requirement and seems to negate the SECY guidance since regulation now clearly specifies a distance requirement and additional criteria that must be addressed rather than guidance.

Thus, Duke Energy is proposing additional changes to the Lee Nuclear Station Emergency Plan (Rev. 3), Appendix 9 as follows:

- In the "Communications" subsection the reference to providing modems from the phone system was deleted due to changes in technology.
- In the "Local Recovery Center" subsection the following paragraph was added in accordance with the new rule changes discussed above:

  Space is also provided for accommodating NRC and offsite responders at the Duke Energy In-Processing Facility (named the Kings Mountain Generation Support Facility) located approximately 15.5 miles (straight line distance) from the Lee Facility. The space is sufficient for members of an NRC site team and Federal, State, and local responders; includes an area for briefing emergency response personnel, communication capability with other licensee and offsite response facilities, access to plant data and radiological information and access to copying equipment and supplies.

- In the "Conclusion" subsection the EOF distance from the Lee site is noted to be greater than 25 miles since this value now is a criterion in the new rule.

Associated Revision to the Lee Nuclear Station Emergency Plan:

Revise Appendix 9 of the Lee Nuclear Station Emergency Plan (Rev 3) as shown in Attachment 1.

Attachments:

1) Markup of Affected Portions of the Lee Nuclear Station Emergency Plan (Rev 3), Appendix 9.

References:

1) Letter from Bryan Dolan (Duke Energy) to Document Control Desk (NRC), Response to Request for Additional Information (RAI No. 3255) Ltr# WLG2009.12-06, dated December 11, 2009 (ML093490764)

Attachment 1

Lee Nuclear Station Supplemental Response to

Request for Additional Information (RAI)

RAI 13.03-87

Markup of Affected Portions of the Lee Nuclear Station Emergency Plan, (Rev 3), Appendix 9

COLA Part 5, Emergency Plan, (Rev 3), Appendix 9 will be revised as follows:

Communications

The communications systems available in the EOF are:

- Duke telephone system
- Selective Signaling System (for State/county notifications)
- Decision Line (for discussion/coordination of protective action recommendations)
- Commercial telephones from the Charlotte switch network
- Radio System to communicate with the Field Monitoring Teams
- NRC Emergency Telecommunications System phones
- South Carolina Local Government Radio
- North Carolina State Radio
- Facsimile transmission capability

The emergency communications systems at the EOF are designed to provide for the reliable, timely flow of information between all parties having an emergency response role. The single facility results in commonality of communications and interface with off-site officials and liaisons. The Selective Signaling System continues to be the primary means of communicating changes in event classification and protective action recommendations to the States and counties. The Selective Signaling System, as well as the Decision Line, operate on a combination of the Duke Telecommunications network and leased circuits.

Existing commercial telephone service will serve as the designated backup means of communications in the event of a Selective Signaling System or Decision Line failure. Duke Energy has telecommunications capabilities that can provide access to long distance networks without having to go through a local telephone company switch. Long distance calls from the EOF are routed through Duke's corporate Private Branch Exchange (PBX) in Charlotte directly to either a primary or backup long distance carrier. Telephones are provided for the respective Federal and State representatives, including lines for faxes ~~and modems~~. Also, telephones for the NRC Emergency Telecommunications System, the Emergency Notification System (ENS) and Health Physics Network (HPN), are available. Fax machines are available in the EOF to support the transmission of information between the Emergency Response Facilities and with State, local, and Federal authorities.

A control station with a remote connection to the EOF allows the EOF to communicate with the Lee Nuclear Station Field Monitoring Teams. Additional radio communications

capability for communications with counties within the Lee Nuclear Station plume exposure pathway EPZ will include SC Local Government Radio for Cherokee and York Counties, and NC Satellite Radio for Cleveland County.

Instrumentation, Data System Equipment, and Power Supplies

Various plant parameters are available to the EOF staff via a connection through Duke's Wide Area Network (WAN). Data available at the EOF provide a snapshot of system-specific parameters from each unit. Data from the Satellite Display System (SDS) can be displayed on projection screens in the EOF Director's Area and on large screen monitors in other areas in the facility. These data are sufficient to perform accident assessment and evaluate the potential on- site and off-site environmental consequences of an emergency at the Lee Nuclear Station. Detailed discussion on specific plant parameters are described elsewhere in the Emergency Plan. The computers in the Dose Assessment Area are capable of running the dose projection computer program (RADDOSE V) and accessing SDS data.

The EOF draws its primary power from commercial power. There is electrical generator backup power to the EOF, as well as the wiring closet that supports both the voice and data communications in the EOF. A loss of commercial power should not impact any of the voice or data communications equipment located in the EOF. All common Duke telecommunications infrastructure that supports EOF functions, including, but not limited to, fiber optic transmission equipment, telephone switching equipment and data network routers, is configured to operate from at least one and usually multiple backup power sources in the event of a loss of commercial power. These backup sources include generator, DC battery and UPS systems.

Technical Data and Data Systems

As discussed in the previous section, a variety of plant parameters are provided over the Duke WAN to the EOF.

Reports Availability and Management

Hard copies of key reference materials are maintained in the Nuclear General Office facilities in Charlotte, and are brought to the EOF upon activation. In addition, station design documentation, plant drawings, FSAR, procedures, etc. are available via Local Area Network connection from the Nuclear Electronic Document Library.

The following information will be available for the Lee Nuclear Station at the EOF:

- Plant technical specifications,
- Plant operating procedures,
- Emergency operating procedures,

- Final Safety Analysis Report,
- Up-to-date records related to licensee, State, and local emergency response plans,
- Off-site population distribution data,
- Evacuation plans

Local Recovery Center

A Local Recovery Center (LRC) is located in the Lee Nuclear Station Training Building. The LRC can be operational within two hours of being notified that the NRC and offsite agencies are departing for the site. At least 750 square feet of functional working space is designated for use by up to 10 people, including the NRC, State, and FEMA representatives. In addition, Duke provides telecommunications, standard office lighting, furniture, heating and ventilating systems, and electrical power outlets.

Space is also provided for accommodating NRC and offsite responders at the Duke Energy In-Processing Facility (named the Kings Mountain Generation Support Facility) located approximately 15.5 miles (straight line distance) from the Lee Facility. The space is sufficient for members of an NRC site team and Federal, State, and local responders; includes an area for briefing emergency response personnel, communication capability with other licensee and offsite response facilities, access to plant data and radiological information and access to copying equipment and supplies.

Conclusion

The EOF meets all functional and design criteria provided in NUREG-0696 for an Emergency Operations Facility with the exception that it is located more than ~~20~~25 miles from the Lee Nuclear Site. This document describes Duke's approach to assuring that these functional and design criteria are met and maintained. The consolidation of Duke corporate emergency response functions into a centralized facility will facilitate a timely and effective response to a radiological emergency at the Lee Nuclear Station.