

## LeeRAIsPEm Resource

---

**From:** McGovern, Denise  
**Sent:** Monday, November 02, 2009 12:50 PM  
**To:** LeeRAIsPEm Resource  
**Subject:** 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  
**Attachments:** LEE-RAI-LTR-083.doc

**Hearing Identifier:** Lee\_COL\_RAI  
**Email Number:** 101

**Mail Envelope Properties** (A41C2340DAB39B44AD0B9623285CB33304A76622F5)

**Subject:** 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

**Sent Date:** 11/2/2009 12:49:39 PM

**Received Date:** 11/2/2009 12:49:47 PM

**From:** McGovern, Denise

**Created By:** Denise.McGovern@nrc.gov

**Recipients:**

"LeeRAIsPEm Resource" <LeeRAIsPEm.Resource@nrc.gov>

Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1	11/2/2009 12:49:47 PM
LEE-RAI-LTR-083.doc	72814	

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

November 2, 2009

Mr. Peter S. Hastings, P.E.  
Licensing Manager, Nuclear Plant Development  
Duke Energy  
526 South Church Street  
Charlotte, NC 28201-1006

SUBJECT: 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

Dear Mr. Hastings:

By letter dated December 12, 2007, as supplemented by letters dated January 28, 2008, February 6, 2008 and February 8, 2008, Duke Energy submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advanced passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-0681 or you may contact Brian Hughes, the lead project manager for the William States Lee III combined license at 301-415-6582.

Sincerely,

**/RA/**

Denise L. McGovern, Project Manager  
AP1000 Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-018  
52-019

eRAI Tracking No. 3255

Enclosure:  
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-0681 or you may contact Brian Hughes, the lead project manager for the William States Lee III combined license at 301-415-6582.

Sincerely,

**/RA/**

Denise L. McGovern, Project Manager  
AP1000 Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-018  
52-019

eRAI Tracking No. 3255

Enclosure:  
Request for Additional Information

Distribution:

Public	RidsNroDnrlNwe2	DBarss
RidsNroDnrlNwe1	RidsRgn2MailCenter	SBrock
RidsNroLAKGoldstein	BHughes	NWright
RidsOgcMailCenter	BAnderson	DMcGovern
RidsAcrcAcnwMailCenter	KWilliams	

NRO-002

OFFICE	COLP/BC	NWE1/PM	OGC	NWE1/L-PM
NAME	KWilliams*	BAnderson*	SBrock*	BHughes*
DATE	07/23/09	07/24/09	08/17/09	11/02/09

\*Approval captured electronically in the electronic RAI system.

**OFFICIAL RECORD COPY**

**Request for Additional Information  
William States Lee III, Units 1 and 2  
Duke Energy Carolinas, LLC  
Docket No. 52-018 and 52-019  
SRP Section: 13.03 - Emergency Planning  
Application Section: Emergency Planning**

**QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)**

13.03-76

SRP Chapter 13.3, Requirements A and H; Acceptance Criterion 11  
Basis: Appendix 4 to NUREG-0654 Sections II.C, II.E, III.A, IV.B.4, IV.B.5

Additional information regarding the adequacy of numbers of school buses for a single-wave of evacuation was requested in RAI 13.03-28(A) and (B). The applicant responded on November 25, 2008 that there were an insufficient number of school buses in Cherokee County for a single wave of relocation. Evacuation of schools and transit-dependent individuals with the existing inventory of school buses available in Cherokee County would require additional trips resulting in an associated increase in the ETE. An analysis to quantify the effect of these multiple trips on the ETE has not been performed, pending the identification of additional resources or implementation of alternate methods (e.g., mutual aid agreements) that will allow for single wave evacuation.

Provide an analysis to quantify the effect of these multiple trips on the ETE.

Identify additional resources or implementation of alternate methods (e.g., mutual aid agreements) that will allow for single wave evacuation.

13.03-77

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 provided 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.

13.03-78

#### Emergency Classification System

Regulatory Basis: 10 CFR 50.47(b)(4) and Sections IV.B. and C. of Appendix E to 10 CFR Part 50.

Reference: NUREG-0654/FEMA-REP-1 Evaluation Criterion D.1

SRP ACCEPTANCE CRITERIA: Requirement 2; Acceptance Criterion 3

In RAI 13.03-57(B), the staff asked the applicant to discuss when the final version of the initial emergency action levels will be discussed with, and agreed upon with, state and local governmental authorities. In its response, the applicant did not discuss when the final version of the initial emergency action levels will be discussed with, and agreed upon with, State and local governmental authorities.

Confirm proposed EAL scheme is coordinated with State and local offsite response organizations.

13.03-79

#### Activation and Notification Processes

Basis: 10 CFR 50.47(b)(5); 10 CFR 50, Appendix E.IV.C; 10 CFR 50, Appendix E.IV.D.1; NUREG-0654/FEMA-REP-1; Evaluation Criterion E.2; Evaluation Criterion E.3; Evaluation Criterion E.4; Evaluation Criterion E.7

SRP ACCEPTANCE CRITERIA: Requirements A and B; Acceptance Criteria 1, 2 and 6

In RAI 13.03-58(B) the staff requested the applicant provide the details described in 10 CFR 50, Appendix E.IV.D.1. In response the applicant stated that Section II.E of NUREG-0654/FEMA-REP-1 does not suggest that the licensee specify the "officials" to be notified, but indicates that the licensee should specify "response organizations." While the staff does agree that NUREG-0654/FEMA-REP-1 does not suggest that the licensees specify the "officials" to be notified, 10 CFR 50, Appendix E.IV.D does state that "This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs."

Provide the local governments and position titles that will be notified by the Lee Nuclear Station when a radiological emergency occurs at the plant.

Describe the procedure for and physical means for making notifications to offsite agencies.

13.03-80

#### Evacuation Provisions and Actions

Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion J.1; Evaluation Criterion J.2; Evaluation Criterion J.3; Evaluation Criterion J.5; Evaluation Criterion J.6; Evaluation Criterion J.10.a

SRP ACCEPTANCE CRITERIA: Requirement A; Acceptance Criterion 1

In RAI 13.03-63(B), the staff requested the applicant identify locations for relocation centers and provided any applicable Letter of Agreement. In response, the applicant stated areas for relocation centers have not yet been identified but that a Letter of Agreement will be provided if the selected area is not under their control. The letter will be incorporated into the Lee Emergency Plan prior to initial fuel load. Because the information needs to be in the emergency plan, the staff has requested the specific

locations of decontamination facilities and offsite relocation centers be identified and any applicable Letters of Agreement be provided.

Identify the locations of the reception centers, shelter areas, relocation sites, and pre-identified monitoring sites and the inclusion of this information in the revisions to the Lee Emergency Plan.

13.03-81

Contamination Control and Dose Limits

Basis: NUREG-0654/FEMA-REP-1; Evaluation Criterion K.1.a; Evaluation Criterion K.2; Evaluation Criterion K.3.a; Evaluation Criterion K.3.b; Evaluation Criterion K.5.a; Evaluation Criterion K.5.b; Evaluation Criterion K.6; Evaluation Criterion K.6.b; Evaluation Criterion K.6.c; Evaluation Criterion K.7  
SRP ACCEPTANCE CRITERIA: Requirement A; Acceptance Criterion 1

Section K.6.a, "Contamination Control Measures," of the Lee Emergency Plan discusses access control in the event of an emergency by stating that requirement for site access control is established in the FSAR and Security Plan. State and local agencies will control access to the owner controlled area consistent with State and local plans. The Lee Emergency Plan does state that the Station Security Force will control entry to the protected area in the event of an emergency.

Technical Evaluation: The guidance in Evaluation Criterion [K.6] relates to the control of access to contaminated areas and not site access control.

Address the control of access to contaminated areas in the Lee Emergency Plan.

13.03-82

COL Information Items

Basis: 10 CFR 50.47 and Appendix E to 10 CFR Part 50

SRP ACCEPTANCE CRITERIA: Requirements A and B; Acceptance Criteria 1 and 2 A. COL Action Item

The applicant's response to RAI 13.03-73(B) refers to Section H.4, "Activation and Staffing of Emergency Response Facilities," of the Lee Emergency Plan which states that the emergency response facilities (ERFs) are staffed and activated in accordance with emergency plan implementing procedures (EPIPs).

Provide additional information in the Lee Emergency Plan on the timeliness of staffing the ERF and details defining when the ERF is activated and when it is operationally staffed.

13.03-83

[Basis: 10 CFR 52.79(a)(21), 10 CFR 50.47(b)(4), Section IV.B of Appendix E to 10 CFR Part 50] EALs are discussed in Section D, "Emergency Classification System," of COL application Part 5, "Emergency Plan.

The EALs described in Section D, "Emergency Classification System," address security threats, and events and hostile actions for each emergency class. However, the information provided did not address certain aspects of the EAL scheme. The applicant also did not provide the title of the

procedures necessary to accomplish actions necessary in response to a security event that reflect the specific site needs. The Lee Emergency Plan contains EALs to ensure that a site-specific, security event results in an emergency classification declaration of at least a notification of unusual event. The classification scheme reflects the strategy for escalation to a higher-level event classification.

In addition, in RAI 13.03-75 the applicant was requested to choose either Option 1 to provide an entire EAL scheme or Option 2 which would require EAL scheme based on either NEI 07-01, Rev 0 or NEI 99-01 Rev 5 and address the 4 critical elements and a submittal of a revised Section D. In the June 12, 2009 response, the applicant chose Option 2. However, the response did not adequately address Critical Elements #2, #3, and #4:

A) The references need be to a specific document such as “NEI-07-01, Revision 0.” Statements “the most current NRC endorsed version available” are not acceptable.

B) Where an existing proposed EAL scheme is addressed that will be removed in a subsequent Emergency Plan revision the words such as “reserved” or “to be determined” needs to be replaced with either “not used” or “Intentionally left blank.”

C) The proposed license condition also should reference the specific NEI document and not “the most current NRC endorsed version available.”

Address corrections to Critical Elements #2, #3, and #4.

Confirm that the final EAL scheme has been reviewed and agreed upon by State and local Emergency Management officials.

13.03-84

ITAAC

Regulatory Basis: 10 CFR 52.80(a)

SRP ACCEPTANCE CRITERIA: Requirement E; Acceptance Criterion 23

[RAI 13.03-74(D)] Table 3.8-1, “Inspections, Tests, Analyses, and Acceptance Criteria,” in Part 10, “Proposed Combined License Conditions (Including ITAAC,” of the COL Application provides four separate acceptance criteria for Planning Standard 8.0, “Exercises and Drills.” The applicant was asked to address the following questions pertaining to the full-participation exercise, and the applicable guidance provided in Regulatory Guide (RG) 1.206, Appendix B, Table C.II.1-B1, “Emergency Planning – Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC).”

EP-ITAAC are required by 10 CFR 52.80(a) and are discussed in Part 10, “ITAAC,” of the Lee COL application. Specifically, EP-ITAAC Acceptance Criterion 14.1.1 in Table C.II.1.B1 of Regulatory Guide (RG) 1.206 addresses the need for the COL applicant to identify exercise objectives and acceptance criteria. Simply listing broad exercise topics such as “Notification” or “Emergency Communications” does not address exercise objectives and associated acceptance criteria called for in EP-ITAAC Acceptance Criteria 14.1.1. A smaller set of EP-ITAAC are acceptable if the application contains information that fully addresses emergency preparedness requirements associated with any of the generic ITAAC contained in Table C.II.1-B1 from RG-1.206 which is not all inclusive, or exclusive of other ITAAC an applicant may propose.

An example of exercise objectives and associated acceptance criteria for a full participation exercise that has been found acceptable by the NRC staff can be found in Sections 13.3.5, "VEGP Unit 3 ITAAC," and 13.3.6, "VEGP Unit 4 ITAAC," of NUREG-1923, "Safety Evaluation Report for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant (VEGP) ESP Site," dated July 2009. See ADAMS ML092290650.

Revise Acceptance Criterion 8.1.2.1 in Table 3.8-1 (EP-ITAAC) of the COL application by providing exercise objectives and associated acceptance criteria, or explain why objectives and acceptance criteria are not required for each of the Planning Standards in the left hand column of the Table C.II.1.B1 of Regulatory Guide (RG) 1.206. If the above example is followed, the exercise objectives and associated acceptance criteria should be site-specific.

Propose an ITAAC related to exercise objectives and acceptance criteria for the full participation exercise.

13.03-85

ITAAC

Regulatory Basis: 10 CFR 52.80(a)

SRP ACCEPTANCE CRITERIA: Requirement E; Acceptance Criterion 23

[RAI 13.03-74(E)] EP Program Element 3.2 of Table 3.8.1 (EP-ITAAC) states that the means exists for communications from the control room, TSC, and EOF to NRC Headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center. The "Inspection, Tests, and Analysis" for the EP Program Element is a note that states that the ITAAC for these communications systems are addressed in Table 3.1-1, "Inspections, Tests, Analyses, and Acceptance Criteria," of Tier 1 of the AP1000 Design Control Document, Revision 16. However, ITAAC number 2 in Table 3.1-1 states that the TSC has voice communication equipment for communication with the control room, EOF, OSC, and NRC. The applicant was asked to provide additional details regarding the establishment of communications with the regional NRC EOC and ERDS between the onsite computer and the NRC Operations Center. In a letter dated December 23, 2008, the applicant responded that the AP1000 Plant Monitoring Systems design is not finalized as well as the exact protocol for transmitting data, but that the AP1000DCD, Tier 1 ITAAC represents a commitment to provide data to the NRC supporting oversight and assessment.

Describe in the Lee Emergency Plan the establishment of communications with the regional NRC EOC and ERDS between the onsite computer and the NRC Operations Center. (relates to Sections F and H)

13.03-86

ITAAC

Regulatory Basis: 10 CFR 52.80(a)

SRP ACCEPTANCE CRITERIA: Requirement E; Acceptance Criterion 23

[RAI 13.03-74(F)] Table C.II.1-B1, "Emergency Planning-Generic Inspection, Test, Analysis, and Acceptance Criteria," in Appendix C.II.1-B, "Development Guidance for Emergency Planning ITAAC," to RG 1.206 contains the generic EP-ITAAC table. The table lists 17 Planning Standards and the accompanying EP Program Elements, Inspection, Tests, Analysis, and Acceptance Criteria. The COL

Application EP-ITAAC does not address 9 of the generic ITAAC Planning Standards. The applicant was asked to discuss why ITAAC were not developed for the above Planning Standards, or propose an ITAAC. In a letter dated December 23, 2008, the applicant responded that the SECY-05-0197 allowed the use of a proposed generic emergency planning/emergency preparedness (EP) ITAAC as a model for inclusion in COL applications. The applicant further stated that additional EP ITAAC were included in the guidance offered in RG 1.206, but found the additional ITAAC was already adequately addressed in proposed EP ITAAC.

Propose an ITAAC that addresses an emergency plan implementing procedure or staffing roster that demonstrates staff exists to provide a 24-hour per day emergency response capability.

Propose an ITAAC that addresses an emergency plan implementing procedure or staffing roster that demonstrates that staff exists to provide minimum and augmented on-shift staffing levels.

13.03-87

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.