LeeRAIsPEm Resource

From: Brian Hughes
Sent: Wednesday, October 22, 2008 1:27 PM
To: LeeRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 043 RELATED TO SRP SECTION 02.02.03 - EVALUATION OF POTENTIAL ACCIDENTS APPLICATION FOR THE WILLIAM STATES LEE III UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Attachments: LEE-RAI-LTR-043.doc

Brian Hughes
Project Manager
NRO/DNRL/NWE1
US NRC
301-415-6582

Hearing Identifier: Lee_COL_RAI
Email Number: 51

Mail Envelope Properties (D841D501B2C4D244B75AB897F70C149481B295F30F)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 043 RELATED TO SRP SECTION 02.02.03 - EVALUATION OF POTENTIAL ACCIDENTS APPLICATION FOR THE WILLIAM STATES LEE III UNITS 1 AND 2 COMBINED LICENSE APPLICATION
Sent Date: 10/22/2008 1:26:30 PM
Received Date: 10/22/2008 1:26:32 PM
From: Brian Hughes

Created By: Brian.Hughes@nrc.gov

Recipients:
"LeeRAIsPEm Resource" <LeeRAIsPEm.Resource@nrc.gov>
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MESSAGE	96	10/22/2008 1:26:32 PM
LEE-RAI-LTR-043.doc	58362	

Options
Priority: Standard
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Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

October 22, 2008

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. 043 RELATED TO SRP SECTION 02.02.03 - EVALUATION OF POTENTIAL ACCIDENTS APPLICATION 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 advance 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 301-415-6582.

Sincerely,

/**RA**/

Brian Hughes, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-018
52-019

Enclosure:
Request for Additional Information

CC: see next page

P.Hastings

If you have any questions or comments concerning this matter, you may contact me at 301-415-6582.

Sincerely,

/**RA**/

Brian Hughes, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-018
52-019

eRAI Tracking No. 837

Enclosure:
Request for Additional Information

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NRO-002

OFFICE	RSAC/BC	RSAC	OGC	NWE1/L-PM
NAME	CCox	STammara	MSpencer*	BHughes*
DATE	10/10/08	10/10/08	08/05/08	10/22/08

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information No. 837
10/22/2008

William States Lee III, Units 1 and 2
Duke Energy Carolinas, LLC
Docket No. 52-018 and 52-019
SRP Section: 02.02.03 - Evaluation of Potential Accidents
Application Section: FSAR 2.2.3

QUESTIONS for Siting and Accident Consequence Branch (RSAC)

02.02.03-1

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. The NRC Staff has the following questions regarding FSAR Section 2.2.3: What are the assumptions on leak rate and other values in determining the safe standoff distance of 2.83 miles for the Colonial pipeline presented in Section 2.2.3.1.1.2? Please provide a detailed description of the analysis that was performed, with assumed values.

02.02.03-2

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. The NRC Staff has the following questions regarding FSAR Section 2.2.3: Concerning the discussion of Herbie Famous Fireworks in section 2.2.3.1.1.3, what are the bases for the “conservative calculation,” and what is the total estimated TNT equivalent used in determining the standoff distance of 0.48 miles for not exceeding peak overpressure of 1 psi?

02.02.03-3

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. The NRC Staff has the following question regarding FSAR Section 2.2.3: What are the bases for determining the confined/unconfined vapor amounts (TNT equivalent) calculated for storage tanks (Section 2.2.3.1.1.3) in determining the standoff distances due to explosion? Provide details.

02.02.03-4

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. FSAR Section 2.2.3 uses meteorological data for dispersion modeling that appears inconsistent with what the NRC staff would expect. It is general practice to use a conservative wind speed of 1 m/sec and F stability which represent 5% met conditions, in using ALOHA modeling. Provide rationale for use of 1.8 mph and D stability in the analysis (Section 2.2.3.1.2).

02.02.03-5

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. The NRC Staff has the following questions regarding FSAR Section 2.2.3: Section 2.2.3.1.2 states that “large tanker truck volumes are assumed along with a 48.4 sq.ft rupture size”. What is the total volume/amount considered in the analysis? It is also stated in addition to gasoline and propane “other less popular commodities are analyzed.” What are these chemicals and their amounts? How are they analyzed to arrive at the conclusion that “the overpressure at the Lee Nuclear Station resulting from the delayed ignition of a vapor cloud is negligible?” Provide assumptions, general methodology, chemical quantities and other inputs used in the analyses.

02.02.03-6

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. FSAR Section 2.2.3: Table 2.2-203 states the Broad River Energy Center's hazardous chemicals (toxic). The OSHA permissable limits for toxic chemicals are identified in Table 2.2-204. Provide the bases for not addressing these chemicals in Section 2.2.3.1.3.2.1.

02.02.03-7

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.21. The NRC Staff has the following questions regarding FSAR Section 2.2.3: What is the basis for the chlorine amount of 20,000 kg? What are the calculated concentrations of chlorine at the intake of the control room and inside the control room? Clarify the apparently conflicting statement made for the concentration of chlorine in FSAR Section 2.2.3.1.3.3 and FSAR Section 6.4.4.2.