

LeeRAIsPEm Resource

From: Hughes, Brian
Sent: Wednesday, November 04, 2009 11:17 AM
To: LeeRAIsPEm Resource
Subject: LEE-RAI-LTR-085 RELATED TO SRP SECTION: 02.05.03 - SURFACE FAULTING FOR THE W.S.LEE UNIT 1 & 2 COLA
Attachments: LEE-RAI-LTR-085.doc

Hearing Identifier: Lee_COL_RAI
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Subject: LEE-RAI-LTR-085 RELATED TO SRP SECTION: 02.05.03 - SURFACE
FAULTING FOR THE W.S.LEE UNIT 1 & 2 COLA
Sent Date: 11/4/2009 11:16:50 AM
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From: Hughes, Brian

Created By: Brian.Hughes@nrc.gov

Recipients:
"LeeRAIsPEm Resource" <LeeRAIsPEm.Resource@nrc.gov>
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Expiration Date:
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P.Hastings

November 4, 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. 085 RELATED TO
SRP SECTION: 02.05.03 - SURFACE FAULTING 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.

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

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. 3590

Enclosure:
Request for Additional Information

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NRO-002

OFFICE	RGS2	RGS/BC	OGC	NWE1/L-PM
NAME	GStirewaltr*	CMunson*	MSpencer*	BHughes*
DATE	08/19/09	08/24/09	08/27/09	11/04/09

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 3590

11/4/2009

William States Lee III, Units 1 and 2
Duke Energy Carolinas, LLC
Docket No. 52-018 and 52-019
SRP Section: 02.05.03 - Surface Faulting
Application Section: 2.5.3

QUESTIONS for Geosciences and Geotechnical Engineering Branch 2 (RGS2)

02.05.03-11

The response to RAI 2.5.3-3 indicated that “none” in the following statement from FSAR Section 2.5.3.1 could not be substantiated, and this entire statement would be deleted from the FSAR text:

“None of the intrusive mafic bodies are offset by the minor brittle shears, suggesting that the minor brittle shears formed after the emplacement of the granodiorite pluton and during the intrusion of mafic bodies.”

The response also stated that removal of this text did not alter the interpretations relevant to conclusions drawn in FSAR Section 2.5.3.8 about the potential for surface tectonic deformation at the site. However, since the information in this statement originally included in FSAR Section 2.5.3.1 was seemingly used to bracket the age of the brittle shearing event between the time of intrusion of the pluton and the mafic bodies, the logic for suggesting that the shearing pre-dated, or was at least related to, intrusion of the mafic bodies is now less well supported in this proposed revision to the FSAR text. Chronology of the deformation history at the site is complex, with multiple movements indicated by radiometric age dates, and it is important to document that brittle fault movements occurred in response to deformation that was very much older than Quaternary. FSAR Section 2.5.1.2.5.4 and Attachment 2 of the response to RAI 2.5.1-46 does address timing of development of brittle shears, and provides the logic for interpreting these features as no younger than Mesozoic.

In order for the staff to fully understand the time frame being proposed for development of the brittle shears at the site location, please provide information, or cross-reference appropriate parts of the FSAR, to constrain the time of development of these structures and document that they are very much older than Quaternary.

02.05.03-12

The response to RAI 2.5.3-5 discussed age constraints on displacements along the Eastern Piedmont Fault System (EPFS) which occurs within the site region. However, the response did not provide an assessment of the interpretation of Nystrom (2006) that localized post-Miocene (i.e., possibly Quaternary) displacement may be indicated along this fault system as requested in the original RAI.

P.Hastings

In order for the staff to assess the potential for Quaternary displacement on the EPFS, please provide a discussion of the potential for localized Post-Miocene movement along segments of this fault system.

02.05.03-13

The response to RAI 2.5.3-8 discussed age constraints on Paleozoic faults occurring within the site vicinity, including the Brindle Creek thrust fault, as requested in original RAI 2.5.3-8. Attachment 3 of the response, which presented proposed modifications to FSAR Section 2.5.1.1.2.4.2, stated that timing of movement along the Gold Hill-Silver Hill shear zone is constrained based on correlations with the Deal Creek shear zone. As qualified in the responses to RAI 2.5.1-12 and RAI 2.5.1-14, however, the constraint for timing of displacement along the Gold Hill-Silver Hill shear zone is not provided by any correlation with the Deal Creek shear zone and this statement in Attachment 3 of the response to RAI 2.5.3-8 is incorrect.

In order for the staff to understand the basis for the constraint on timing of displacement along the Gold Hill-Silver Hill shear zone, please be certain that modifications proposed for FSAR Section 2.5.1.1.2.4.2 to explain the constraint are correct since these proposed modifications are incorrect as shown in Attachment 3 of the response to RAI 2.5.3-8.