## LeeRAIsPEm Resource

**From:** Brian Hughes
**Sent:** Sunday, October 05, 2008 10:01 AM
**To:** LeeRAIsPEm Resource
**Subject:** LEE-RAI-LTR-034.doc
**Attachments:** LEE-RAI-LTR-034.doc

**Hearing Identifier:** Lee_COL_RAI
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October 5, 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. 034 RELATED TO SRP SECTION 02.04.13 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. 721, 722

Enclosure:
Request for Additional Information

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*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 721

William States Lee III, Units 1 and 2
Duke Energy Carolinas, LLC
Docket No. 52-018 and 52-019
SRP Section: 02.04.13 - Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters
Application Section: FSAR section 2.4.13

QUESTIONS

02.04.13-2

SRP 2.4.13, under SRP Acceptance Criteria #5 references Branch Technical Position BTP 11-6 which provides guidance in assessing potential release of radioactive liquids at the nearest potable water supply, located in an unrestricted area, for direct human consumption or indirectly through animals, crops, and food processing. BTP 11-6 further states the evaluation of the release considers the use of water for direct human consumption or indirectly through animals (livestock watering), crops (agricultural irrigation), and food processing (water as an ingredient).

The results of the analysis for Lee FSAR 2.4.13 responding to WLS COL 2.4-5 were presented in Table 2.4.13-204, "Radionuclide Concentration At Nearest Drinking Water Source In An Unrestricted Area Due To Effluent Holdup Tank Failure." Tritium was the only nuclide listed on the Table. The cutoff for inclusion in the table was a concentration above 1.0E-5 microcuries/ml.

The analysis does not include a discussion of pathways other than drinking water. The analysis should discuss these other pathways, especially the pathways such as fish and crop irrigation that may result in concentration of the source term. The cutoff concentration for inclusion in Table 2.4.13-204 should evaluated to determine if it is appropriate considering the potential concentration of the source term via other uptake pathways. There are likely several radionuclides that were cut off the list at just below the 1.0E-5 microcuries/ml value. Either discuss other pathways, or justify why they need not be included.

Request for Additional Information No. 722

9/19/2008

William States Lee III, Units 1 and 2
Duke Energy Carolinas, LLC
Docket No. 52-018 and 52-019
SRP Section: 02.04.13 - Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters
Application Section: FSAR section 2.4.13

QUESTIONS

02.04.13-1

BTP 11-6, B.4. “Specifications on Tank Waste Radioactivity Concentration Levels,” specifies an evaluation of the proposed technical specification limiting the radioactivity content of the tank to ensure that the technical specification is consistent with the safety evaluation. No technical specification limits were proposed on the radioactivity content of the effluent holdup tanks. The applicant should provide the technical specification limits in the FSAR or justify why no limits are needed.

The complete analysis for pathways other than drinking water, as discussed in FSAR section 2.4.13-1, should be evaluated to determine if the results of the concentration limits in pathways such as fish and irrigation (which may concentrate the activities in uptake) would be less than 10 CFR Part 20, Appendix B, Table 2, Column 2. The applicant should analyze these additional pathways in the FSAR or justify why they were excluded.