LeeRAIsPEm Resource

From: Hughes, Brian
Sent: Wednesday, August 25, 2010 2:00 PM
To: LeeRAIsPEm Resource
Subject: LEE-RAI-LTR-091 RELATED TO SRP 02.04.12 GROUND WATER FOR THE W.S. LEE UNITS 1 AND 2 COLA
Attachments: LEE-RAI-LTR-091.doc

Hearing Identifier: Lee_COL_RAI
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Subject: LEE-RAI-LTR-091 RELATED TO SRP 02.04.12 GROUND WATER FOR THE W.S. LEE UNITS 1 AND 2 COLA
Sent Date: 8/25/2010 1:59:58 PM
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From: Hughes, Brian

Created By: Brian.Hughes@nrc.gov

Recipients:
"LeeRAIsPEm Resource" <LeeRAIsPEm.Resource@nrc.gov>
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August 25, 2010

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. 091 RELATED TO SRP SECTION: 02.04.12 GROUND WATER 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.

PHastings

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

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. 4870

Enclosure:
Request for Additional Information

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NRO-002

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NAME	NTiruneh*	RRaione*	SPrice	BHughes*
DATE	07/7/10	07/07/10	N/A	08/25/10

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

PHastings

Request for Additional Information No. 4870

8/25/2010

William States Lee III, Units 1 and 2
Duke Energy Carolinas, LLC
Docket No. 52-018 and 52-019
SRP Section: 02.04.12 - Groundwater
Application Section: FSAR Section 2.4.12

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.12-19
Additional information regarding maximum post-construction groundwater elevations in the area near the SSCs is required to meet the requirements of 10 CFR 52.79(a) (1) (iii), 10 CFR 100.20(c), 10 CFR 100.21(d), and GDC 2. The key area of interest is bounded approximately by the 588-ft contour just north and south of Units 1 and 2, as shown in COLA Rev. 2, FSAR Fig. 2.4.2 202, and is bounded east and west by the cooling towers.
Within this area, the staff needs an estimate of the maximum post-construction groundwater level that is based on anticipated post-construction surface and subsurface conditions. Although the limited pre-construction information that is available will be of use in estimating groundwater levels, the estimation process must also explicitly consider anticipated post-construction conditions.
To facilitate the staff's review of these estimated groundwater elevations, the estimated elevations should be supported by new information used in preparing the estimates, or by references to information that has already been presented elsewhere, or else by an explanation of why such information is not relevant to the estimate. Types of information that the staff believes will likely be relevant includes:
1) A conceptual description of the post-construction groundwater flow system,
2) Figures or GIS coverage showing the major surface features that may affect recharge within the key area, such as areas of different kinds of soil, vegetation, graveled surfaces, buildings, and paved areas, including percentages and locations,
3) Estimates of post-construction recharge rates for the major surface features identified, taking into account changes in topography, soil, and vegetation,
4) Comparisons of estimated post-construction recharge rates with estimated pre-construction recharge rates,
5) An explanation of the fate of precipitation that falls on buildings,
6) A site grading plan of the key area with sufficiently-detailed elevation contours to show planned drainage features (e.g., swales; sub basins; drains).
7) Properties and geometry of subsurface materials, including artificial fills,
8) The role of non-groundwater hydrologic features in controlling groundwater levels, such as surface water bodies that are connected with groundwater, subsurface drains, or artificial surface features that act as discharge locations for groundwater,
9) Descriptions of subsurface features, such as building foundations, that may alter or block groundwater flow,
10) An explanation of how post-construction recharge conditions will affect post-construction groundwater levels.