

TurkeyPointRAIsPEm Resource

From: Comar, Manny
Sent: Friday, May 13, 2011 4:38 PM
To: TurkeyPointRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 21 RELATED TO SRP SECTION 02.02.03 FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE APPLICATION
Attachments: PTN-RAI-LTR-021.doc

Hearing Identifier: TurkeyPoint_COL_eRAIs
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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 21 RELATED TO SRP SECTION 02.02.03 FOR THE TURKEY POINT UNITS 6 AND 7 COMBINED LICENSE APPLICATION

Sent Date: 5/13/2011 4:38:23 PM

Received Date: 5/13/2011 4:39:11 PM

From: Comar, Manny

Created By: Manny.Comar@nrc.gov

Recipients:

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

Tracking Status: None

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Options

Priority: Standard

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Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

May 13, 2011

Mano K. Nazar
Senior Vice President and Chief Nuclear Officer
Florida Power & Light Company
Mail Stop NNP/JB
700 Universe Blvd
Juno Beach, FL 33408-0420

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 021 RELATED
TO SRP SECTION 2.04.12 AND 2.4.13 GROUNDWATER FOR THE TURKEY
POINT NUCLEAR PLANT UNITS 6 AND 7 COMBINED LICENSE
APPLICATION

Dear Mr. Nazar:

By letter dated June 30, 2009, as supplemented by letters dated August 7, 2009, September 3, 2010 and December 21, 2010, Florida Power and Light 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 45 days of the date of this letter. If you are unable to provide a response within 45 days, please state when you will be able to provide the response. In the event the response submitted is incomplete, please indicate in the response when the complete response will be provided. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes. Your response should also indicate whether any of the information provided is to be withheld as exempt from public disclosure pursuant to 10 CFR 2.390.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3863 or manny.comar@nrc.gov.

Sincerely,

/RA/

Manny Comar, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-040
52-041

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-3863 or manny.comar@nrc.gov.

Sincerely,

/RA/

Manny Comar, Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-040
52-041
eRAI Tracking No. 5643

Enclosure:
Request for Additional Information

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NRO-002

OFFICE	RHEB/BC	NWE1/PM	OGC	NWE1/L-PM
NAME	RRaione*	MComar*	PMoulding*	MComar*
DATE	3/22/11	3/29/11	4/5/11	5/12/11

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information No. 5643

4/28/2011

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: 02.04.12 - Groundwater
Application Section: FSAR 2.4.12

QUESTIONS from Hydrologic Engineering Branch (RHEB)

02.04.12-5

The applicant estimated dewatering rates in the power block areas using a calibrated groundwater model. The hydraulic conductivity used in the model for the Freshwater Limestone is 0.0004 cm/s (FSAR Rev. 2 App. Table 2CC-205) which is substantially smaller than the geometric mean of 0.17 cm/s (FSAR Rev. 2 App. 2CC 2.7.1). Also, the thickness of this less-permeable formation appears to be significantly thicker under the excavation areas than elsewhere (FSAR Rev. 2 Figure 2CC-225). The applicant's construction dewatering rate of 9000 gpm per unit could be increased significantly depending on how the absent, fractured, or very thin nature of the Freshwater Limestone is considered. In order to meet the regulatory requirements of 10 CFR 100.20(c) and the guidance of RG 1.206, the staff requests the following information with markups for FSAR updates as applicable:

- (1) Estimates of construction dewatering rates to demonstrate a more realistic set of values consistent with the site characteristics.
- (2) Description of the bases for construction-stage subsurface hydrostatic loading analyses and the dewatering methods to be employed in achieving these loading limitations.
- (3) Discussion of the bases for subsurface hydrostatic loadings important to the integrity of safety related structures during the construction stage as guided by RG 21.206, C.I.2.4.12.5 (1)).

02.04.12-6

In order to meet the regulatory requirements of 10 CFR 100.20(c) and 10 CFR 20 App. B, provide information related to the analysis of the following accidental release of liquid radioactive effluents into surface and groundwaters. Assuming that one of the plausible conservative effluent release scenarios is that the wall of the Auxiliary Building is breached and the effluent is released through the gaps in the wall to the groundwater and then to the cooling canal or to the Biscayne Bay directly, explain whether this scenario could result in concentrations that exceed the effluent concentration limits (ECLs) provided in 10 CFR Part 20 (especially for Ba-137 and Cs-134).

In relation to the Biscayne Bay pathway, Turkey Point FSAR Rev. 1 states that "cooling canals are a groundwater sink and there is no net outflow to the Biscayne Bay." However, FSAR Rev. 1 Figures 2.4.12-222 through 226 show many higher groundwater levels at the Lower Biscayne Aquifer than the sea level, suggesting a positive hydraulic

gradient towards Biscayne Bay occasionally. Therefore, revise the analysis provided in FSAR Section 2.4.13 to incorporate the pathway through the breached wall to the canal system or Biscayne Bay directly or provide adequate justification for not considering this pathway as plausible.