

April 6, 2011

Mr. 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: ENVIRONMENTAL REQUEST FOR ADDITIONAL INFORMATION LETTER
1104071 RELATED TO ESRP SECTION 9.3.1, ALTERNATIVE SITE
SELECTION PROCESS, FOR THE COMBINED LICENSE APPLICATION
REVIEW FOR TURKEY POINT, UNITS 6 AND 7

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 Company (FPL) submitted its application to the U.S. Nuclear Regulatory Commission (NRC) for combined licenses (COLs) for two AP1000 advanced passive pressurized water reactors in accordance with the requirements contained in 10 CFR Part 52, "Licenses, Certifications and Approvals for Nuclear Power Plants." The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion regarding the environmental impacts of the proposed action.

The NRC staff has identified that additional information is needed to continue portions of the environmental 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.

M. Nazar

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If you have any questions or comments concerning this matter, you may contact me at 301-415-2828 or via e-mail at Andrew.kugler@nrc.gov.

Sincerely,

/ RA /

Andrew Kugler, Sr. Project Manager
Environmental Projects Branch 2
Division of Site and Environmental Reviews
Office of New Reactors

Docket Nos. 52-040, 52-041

Enclosure:
As stated

cc: w/enclosure see next page

M. Nazar

- 2 -

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Sincerely,

/ RA /

Andrew Kugler, Sr. Project Manager
Environmental Projects Branch 2
Division of Site and Environmental Reviews
Office of New Reactors

Docket Nos. 52-040, 52-041
eRAI Tracking No. 5588

Enclosure:
As stated

cc: w/enclosure see next page

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NRO-002

OFFICE	NRO/DSER/RENV /RWET	NRO/DSER/RAP2/ PM	OGC	NRO/DSER/RAP2/ PM
NAME	MMasnik*	AKugler*	PMoulding*	AKugler*
DATE	03/15/2011	03/15/2011	03/15/2011	04/06/2011

* Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 5588

4/6/2011

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: EIS 9.3.1 - Alternative Site Selection Process
Application Section: ER 9.3

QUESTIONS for Environmental Technical Support Branch (RENV)

EIS 9.3.1-2

Clarify how the scoring for County Population, Distance to Population Centers, and Proximity to Densely Populated Areas (Page C-36) within the October 2006 Site Selection Study Report (Siting Report) was derived and how the Proximity to Densely Populated Areas was scaled. The Siting Report does not explicitly and quantitatively define these terms nor clarify whether terminology within the report matches that used in the ER. For example, the ER (p9.3-5) defines that a population density of 300 people per square mile was an exclusionary criteria. The Siting Report on page C-33, suggests, but does not explicitly state, that the EPRI criteria of 500 PPSM was used.

EIS 9.3.1-3

Clarify the EPRI section citations on Table 9.3-4 and Table 9.3-5 (ER Rev 2 pages 9.3-125 &126). Although text states that the factors match the EPRI Siting Guide, the cross-referencing is unclear because the referenced section numbers from the EPRI Siting Guide appear to be incomplete. So, for example, in the EPRI Siting Guide, Geology/Seismology is Section 3.1.1.1. But in ER Table 9.3-4, it is listed as Section 1.1.1.

EIS 9.3.1-4

Clarify the definition of "Population center" used in Criterion P3, Table 9.3-2, (ER Rev 2, page 9.3-122) as it appears that the 10 CFR Part 100 definition was not used.

EIS 9.3.1-5

Provide the document - "Site Requirements Document to Support Combined Construction and Operation License Application". This report explains the region-to-candidate area screening called for by the ESRP guidance.

EIS 9.3.1-6

Identify the extent to which the provisions of NRC Regulatory Guide 4.7 and 10 CFR Part 100 were incorporated into FPL's site screening methodology (ESRP 9.3). Provide a formal hard copy of the geographical information system (GIS) information submitted to the reading room by the applicant.

Enclosure

EIS 9.3.1-7

ER Section 9.3.2 indicates that FPL's consultant performed an independent evaluation of the region to ensure that no reasonable candidate areas were excluded (ER Rev 2, p 9.3-5). First, provide a hard copy of the related GIS information that was made available by FPL in the reading room. Second, provide the details of the alternative site screening processes summarized in ER Rev 2 Section 9.3.2 used by FPL's consultant and provide documentation that characterizes this screening and provides the results in the form of statistical tables and/or the "graphical representations" referred to in the ER. Finally, explain how exclusionary criteria were used in the screening process to identify candidate areas and compare these results to the areas/sites that were identified by FPL in the Siting Report (e.g., did the Siting Report consider sites in areas that fell outside the candidate areas identified by the consultant?).

EIS 9.3.1-8

Describe the process used to consider cultural resources in the alternative site analysis for both the Siting Report and the screening performed by FPL's consultant.

EIS 9.3.1-9

Provide documentation of the basis for dismissing from further consideration the sites/areas independently identified by FPL's consultant (ER Rev 2. P 9.3-5).

EIS 9.3.1-10

Define the process by which FPL "canvassed" (ER Rev. 2 p. 9.3-5) its employees to identify the initial 23 sites submitted to the detailed screening process. Provide a more detailed description of the process by which the 23 sites were identified by FPL.

EIS 9.3.1-11

The ER's (Rev. 2) Purpose and Need, and Need for Power describe power need across FPL's Service Territory. However, the staff notes that a screening criterion was used that measures distance from the Miami load center. Provide the rationale for this criterion.

ESRP 9.3 directs the staff to determine "... if the selected ROI will permit such siting and that potentially desirable candidate areas have not been excluded on the basis of an arbitrarily defined ROI." Explain how the Purpose and Need defined in Section 1.1.1 (ER p 1.1-2) supports a conclusion that the need for power is for the target load center in ER Section 9.3.2.1 (the region including Broward and Miami-Dade Counties) (ER p 9.3-6) exclusively. Additionally, ER Figure 9.3-2 clearly shows other load centers (ER p 9.3-141) outside this region. Explain how this is consistent with the Purpose and Need statement. Provide the rationale supporting the use of proximity to the "target load center". Explain whether the Need for Power case was presented to the FPSC for FPL's Service Territory or just the "target load center." The staff notes that the Need for Power of ER Section 8.0 asserts a need within FPL Service Territory, not the "target load center".

EIS 9.3.1-12

Provide the basis for the 3,000 acres used in the screening process as the Desired Owner Buffer Area when only 491 acres would be disturbed (ER p 9.3-17 & Siting Report p 13). Some sites included in screening and proposed as alternatives do not have 3,000 acres (e.g. St Lucie). Additionally, estimate the total acreage impacted along with the characterization of that affected environment in order to assess total impacts across all resource areas and thus compare alternatives.

EIS 9.3.1-13

Provide the basis for the 5,000 acres used in wetland screening when only 491 acres would be disturbed (ER p 9.3-18) and the criterion for Desired Owner Buffer Area was 3,000 acres.

EIS 9.3.1-14

Provide the results of the application of the region-to-area screening process mentioned in the ER Rev. 2 and the Siting Report. Specifically discuss how the St. Lucie site met the exclusionary criteria of 300 ppsm. The guidance in ESRP 9.3 anticipates a region-to- candidate area screening step. Per the Siting Report (p C-33), *“All sites meet population density exclusion criteria since population density was a criterion in the regional screening process.”* Address how this exclusionary population criterion was defined and when it was applied, as such criterion is not identified in ER Population Criterion P3 and no “regional screening” is indicated in the ER. Explain whether the regional screening process mentioned in the Siting Report is the GIS based process referenced in the ER at p 9.3-6 using 300 ppsm as exclusionary among other criteria. If so, explain how St Lucie at 336.3 ppsm (Siting Report p C-35) meets this exclusionary criterion (or Turkey Point at 1,157.9). Additionally, the ER states (ER p 9.3-101) that *“The land area within 20 miles of the St. Lucie site is 553.1 square miles, and based on 2000 census data, the population of this area was 326,647. This yields a population density of 590.57 people per square mile.”* Explain why the St. Lucie site was not eliminated in the regional screening.

EIS 9.3.1-15

Clarify the basis for calculating the wetland acreages used for each site in screening since several sites (e.g. St. Lucie, Martin, and Turkey Point) do not appear to have the required 5,000 acres of land area around the site without counting surface water. ESRP 9.3 directs the staff to determine whether the screening methodology was applied consistently to all potential sites.

EIS 9.3.1-16

In its screening of potential sites, did FPL identify any sites other than Turkey Point that were close enough to Miami to allow the use of reuse water as a cooling water supply? More generally, explain whether using reuse water as a cooling water supply at a location other than Turkey Point was considered in the development of the Siting Report.