

April 12, 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
1104121 RELATED TO ESRP SECTION 9.3, ALTERNATIVE SITES, 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. 5589

Enclosure:
As stated

cc: w/enclosure see next page

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NRO-002

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NAME	MMasnik*	AKugler*	PMoulding*	AKugler*
DATE	03/15/2011	03/15/2011	03/15/2011	04/12/2011

* Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 5589

4/12/2011

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

QUESTIONS for Environmental Technical Support Branch (RENV)

EIS 9.3-3

Provide GIS layers identifying facility layout, access roads, borrow sites and other site alterations that would be needed for locating the proposed units at each alternative site. Identify land use and land cover types that would be impacted. Highlight plant features that would remain at current elevation and those that would be filled to a higher elevation (most important for Glades and St. Lucie sites). Provide current elevations for all sites and projected elevations if currently in floodplains.

Provide additional information regarding the flooding potential for the plant for those locations within the 100-yr floodplain (Glades and St. Lucie). At the alternative site audit, FPL staff stated that the Glades alternative site is at 15 ft elevation and would require an additional 15 ft (based on local industrial sites); for St. Lucie, FPL staff stated that it would require raising the elevation to approximately Turkey Point's estimated height (~20-21 ft).

EIS 9.3-4

Provide figures for each alternative site showing detail in closer proximity than the 50 mile figures provided in the ER. For the purpose of evaluation of the alternative sites and comparison among all sites, provide site specific figures identifying assumed boundaries and relevant environmental features (e.g. wetlands, floodplains, topography, water bodies, etc).

EIS 9.3-5

The ER (p 9.3-88) states that "*The 1130-acre St. Lucie site is an FPL-owned nuclear power generation station...*" Address why this site was not screened out during the initial screening steps when judged against the 2,500-to-3,000 acre minimum screening criterion.

EIS 9.3-6

Provide revised estimates of the acreages of impacts at all sites for each resource area (e.g. wetlands, land use, terrestrial, floodplains, etc). The ER identifies only 491 acres of site impacts, but that acreage apparently does not include an onsite make-up water reservoir, floodplain

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impact mitigation areas, etc. and does not include site-specific estimates of the acreages of wetlands that might be impacted (e.g. wetland acreages in ER Rev. 2 reflect 5,000 acreage inventory used for screening).

EIS 9.3-7

ER Rev. 2 p 9.3-17 seems to imply that because they are designated for power plant activities, the St. Lucie and Martin sites would not require acquisition of additional land even though the sites are less than 3,000 acres. Identify how many acres are available at the St. Lucie and Martin sites.

EIS 9.3-8

The proposed plant location for the Martin site is now covered by a soon to be operating solar power facility. Provide FPL's position on the viability of this site for a new nuclear plant. Would FPL consider demolition of the new solar facility? Is there sufficient land at the Martin site that is not committed to solar or other uses for the proposed new nuclear units? If so, provide information and a figure to show the plant footprint at the new location. In addition, describe the affected environment at the new location and the impacts to the various resource areas of building and operating two nuclear units there.

EIS 9.3-9

Provide an estimate of the fill that would be necessary to elevate the Glades and St. Lucie sites from the 100 year floodplain (ER p 9.3-17), and identify viable sources/location(s) for such fill, as well as the mode of transport and number of truck or train loads. Additionally, identify the estimated acreage and conceptual location of floodplain mitigation that would be required to meet Corps of Engineers' requirements; based on discussions with the Corps, the staff notes that all filled floodplain would likely require 1:1 mitigation (see 40 CFR 230.93(f)(1), 70 FR 19692). Explain whether the fill requirements would result in impacts at the source of the fill and traffic impacts hauling fill to the site and whether it would likely increase the workforce temporarily. Discuss the extent to which all of these actions would increase the impacted acreages at these sites beyond that currently estimated in the ER Rev. 2.

EIS 9.3-10

Provide additional details on how water for construction and operations of the proposed units would be obtained at Glades, Okeechobee 2, and Martin sites. Information should include:

- 1) Identification of construction and cooling water sources; for groundwater sources, provide the name of the aquifer from which water would be withdrawn (e.g., Upper Floridan)
- 2) The basis for a reasonable expectation (as discussed in Regulatory Guide 4.7) that water withdrawals would be allowed (for example, an indication of whether the regulators/owners of such waters have confirmed that water will be available)
- 3) Description of proposed intake (e.g. surface or subsurface, use of traveling screens, etc),
- 4) Potential impact to adjacent water bodies or wetlands related to operation of the intakes, building of pipelines and other support facilities.

In particular, the description of the intake structures that would be used at each location is requested to assess potential impacts on waterbodies to be used for cooling water. For the St. Lucie alternative site, provide the total estimated water flow through the existing intake with the addition of two new units.

EIS 9.3-11

ER Rev. 2 states "...Lake Okeechobee offers a potential water supply of more than 360 cfs..." and also states that 100 cfs of operational need is a small fraction of Lake Okeechobee's 48,300 cfs recharge (ER p 9.3-22 Glades Site). The C-43 Channel is also mentioned as a possible surface water source for the Glades site. For the Martin and Okeechobee sites, it is implied that the 100 cfs could come from "...Lake Okeechobee [, which] offers a potential water supply of more than 360 cfs..." (ER Rev 0 pa 9.3-48 and 9.3-71 respectively), implying that the 100 cfs could come from the Lake. For the Okeechobee site, the ER also lists the Kissimmee River as a possible source, while for the Martin site the ER lists the C-44 Channel as a possible source. While flows in these water bodies are greater than the amount needed by the proposed plant, provide data (with supporting references) regarding how much of these flows are actually available for use by any new units at these sites. ESRP 9.3 states that "...consumptive water use should not cause significant adverse effects on other users." Describe whether the availability of supplies of cooling water affect the viability of these sites as licensable reactor sites for the purpose of the alternative site evaluation.

EIS 9.3-12

For all alternative sites the ER Rev. 2 makes reference to discharge to an undefined "suitable surface water body" for blowdown discharge (e.g., ER p 9.3-22). Identify the "suitable water body" that could be used for each site's blowdown discharge and the impacts to these affected water bodies based on the conceptual discharge location and design. ESRP 9.3 states "...Discharges of effluents into waterways should be in accordance with Federal, State, regional, local, and affected Native American tribal regulations and would not adversely impact efforts to meet water-quality objectives." Multiple options are identified for discharges and blowdown; identify whether any are considered as preferred and characterize the potential impacts of the disposal options. For the St. Lucie alternative site, provide an estimate of the volume of water that will be discharged to the Atlantic Ocean through the existing discharge structure that reflects the addition of two new units.

EIS 9.3-13

Characterize the existing environment and impacts that would result from the proposed widening of 6 miles of State Road 70 near the Okeechobee 2 site and identify the affected area on a figure.

EIS 9.3-14

Characterize the existing environment and impacts that would result from the proposed widening of State Road 710 near the Martin site and identify the affected area on a figure.

EIS 9.3-15

Identify on a figure where the barge access is on the St. Lucie site (Siting Report p. B-23) and address its utility for the new reactor construction. Explain whether the barge location identified during the audit would be viable for the new site without bridging the cooling water canal; alternatively, if a new barge dock would be necessary, describe the potential impacts.

EIS 9.3-16

Characterize the existing environment and impacts that would result from the proposed widening of 18.8 miles of State Road A1A near the St. Lucie site and identify the affected area on a figure.

EIS 9.3-17

Provide information to support the ER statement that the existing utilities can support the St. Lucie potable water demand (ER p 9.3-93) without modifications to existing facilities and/or affecting other current users.