

December 8, 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  
1112081 RELATED TO ESRP SECTION 4.2, WATER-RELATED IMPACTS,  
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 COL application, 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 301-415-1878 or via e-mail at [Alicia.williamson@nrc.gov](mailto:Alicia.williamson@nrc.gov).

Sincerely,

**/ RA /**

Alicia Williamson, Project Manager  
Environmental Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-040, 52-041

Enclosure:  
As stated

cc: w/enclosure see next page

M. Nazar

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**/ RA /**

Alicia Williamson, Project Manager  
Environmental Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-040, 52-041  
eRAI Tracking No. 5765

Enclosure:  
As stated

cc: w/enclosure see next page

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**ADAMS Accession Number: ML113420010**

**NRO-002**

<b>OFFICE</b>	NRO/RENV/ RWET	NRO/DSER/RAP2/ PM	OGC	NRO/DNRL/EPB1/ PM
<b>NAME</b>	MHaque*	AKugler*	PMoulding*	AKugler for AWilliamson *
<b>DATE</b>	05/04/2011	05/04/2011	05/04/2011	12/08/2011

\* Approval captured electronically in the electronic RAI system.

**OFFICAL RECORDS COPY**

Request for Additional Information No. 5765

12/8/2011

Turkey Point Units 6 and 7  
Florida P and L  
Docket No. 52-040 and 52-041  
SRP Section: EIS 4.2 - Water-Related Impacts  
Application Section: Part 3, Environmental Report, Section 4.2

QUESTIONS for Environmental Technical Support Branch (RENV)

EIS 4.2-1

Provide a discussion of how storm water drainage patterns on the Turkey Point property will be modified from the current conditions during and following construction, and how they may alter freshwater flows into Biscayne Bay and into groundwater.

EIS 4.2-2

Provide the locations for all effluent discharge points, including runoff, effluents associated with blowdown, and other ancillary flows. Provide data in GIS format for effluent locations and flow directions and magnitudes. In addition, provide water quality information (TDS, nitrogen, phosphorus, dissolved oxygen, carbon, inorganics/metals, and organic contaminants for all flows with expected variability in the concentrations) for all effluents.

EIS 4.2-3

Discuss the possibility for, and consequences of, the cooling canals' capacity being exceeded at any time, including the effect of dewatering. Also discuss the change in head on the subsurface plume of hypersaline waters from the IWF caused by dewatering.

EIS 4.2-4

Characterize the typical sedimentation rates and transport patterns along the shoreline of the Turkey Point Peninsula. Explain how sedimentation patterns will change locally due to coastal construction, including, but not limited to, dredging needed for the barge-turning basin and the emplacement of pipelines along the coast. In addition, provide an aerial photo prior to the original plant's construction (preferably early 1960's) which includes the Turkey Point Peninsula and coastal Biscayne Bay near the plant, including the barge turning area.

EIS 4.2-5

Provide all data being gathered for surface and ground waters associated with the Units 3 and 4 uprate monitoring program, including, but not limited to, water quality (salinity, temperature, TDS, dissolved oxygen, organics, heavy metals, nitrogen, phosphorus, carbon, tritium), velocity, and exchange measurements. The provided data should include some measures of its temporal variability and including any other sources of waste water to the cooling canals. This information is requested for the cumulative impacts analysis.

ENCLOSURE

#### EIS 4.2-6

Describe the range of volumes of groundwater expected to be removed or the range of expected flow rates and durations, and describe the affected aquifers, for all anticipated dewatering activities associated with installation of pipelines, radial collector wells, transmission towers, roads, the reclaimed water treatment facility, and other buildings and facilities other than the power block excavations. Also describe specific techniques that will be used to control withdrawal rates and protect the quality of surface and groundwater.

#### EIS 4.2-7

Describe the effects, if any, that groundwater pumping and discharge associated with excavation dewatering will have on the hypersaline groundwater plume from the existing cooling canals.

#### EIS 4.2-8

The construction of the proposed Units 6 and 7 will significantly alter both the surface and subsurface permeabilities of the site. Structures and paved areas will provide impervious surfaces that will preclude recharge. Unpaved areas may see either reduced or enhanced recharge. Deeply embedded structures, fill material, grouting, etc will alter the subsurface permeabilities. Provide an explanation of the changes in subsurface flow (spatial distribution of flows in terms of velocities.) beneath the site from the current condition to the post construction condition. Identify land covers expressed in terms of recharge properties over the entire site. Describe any potential changes in the subsurface movement of the hypersaline waters beneath the cooling canals

#### EIS 4.2-9

Provide "Hydrologic Associates 2009: Summary of Hydrologic, Geologic, and Salinity for FPL Owned Fill Source Water Mgmt Project Area (June 2009)."

#### EIS 4.2-10

Borrow areas are mentioned in Section 4.2.1 Hydrologic Alterations, which are created from excavation activities to provide fill material for building Units 6 and 7. One of those borrow areas includes a "water management feature" created at an FPL fill source and is discussed in Section 4.1.2.3 FPL-Owned Fill Source and in Section 5.2.1.2.1 Fill Borrow Areas. In Section 4.1 the "water management feature" is stated as being a "newly created lake," and according to Section 5.2 it "would be designed to store excess stormwater to complement regional wetland rehydration projects." Clarify the intended use of the "water management feature," and whether this would be a water of the state of Florida or of the United States. If the "water management feature" is to be used to store stormwater, provide the estimated average and maximum monthly discharges into the water management feature.