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Mr. Andrew Kugler
U.S. Nuclear Regulatory Commission
Division of Site and Environmental Reviews, Office of New Reactors
Mail Stop T7-E30
Washington, DC 20555-0001

Subject: Scoping Process Comments (10 CFR Part 51) to support development of an Environmental Impact Statement for Florida Power & Light Company's Combined License Application for Turkey Point Units 6 and 7, located in Miami-Dade County near Homestead, Florida

Dear Sir:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 will be reviewing the U.S. Nuclear Regulatory Commission's (NRC) Environmental Impact Statement (EIS) associated with the application by Florida Power & Light Company (FPL) for a combined license (COL) to build Units 6 and 7 at its Turkey Point site, located in Miami-Dade County, Florida. The nearest incorporated municipality is the City of Homestead, located approximately 4.5 miles from the nearest boundary of the Turkey Point site. The site is approximately 25 miles south of the City of Miami. The application for the COL was submitted by FPL by letter dated June 30, 2009, pursuant to Title 10 of the Code of Federal Regulations (10 CFR), Part 52. The NRC is currently providing the public with an opportunity to participate in the environmental scoping process, as defined in 10 CFR 51.29. We further understand that the U.S. Army Corps of Engineers, Jacksonville District, will be participating with the NRC in the preparation of the EIS as a cooperating agency. The NRC reports that a "notice of acceptance" for docketing of the application for the COL was published in the *Federal Register* on October 7, 2009 (74 FR 51621).

EPA Region 4 appreciates the recent invitation conveyed by NRC Project Manager Ms. Tomeka L. Terry to allow EPA Health Physicist Rick Button to attend the NRC's Site Audit, held on June 7-10, 2010 at the Turkey Point site. We also appreciate the recent invitation extended by Ms. Terry to EPA Environmental Scientist Ron Miedema (from our Region 4 Water Protection Division's South Florida Office) to attend the NRC's Environmental Scoping Meeting held on July 15, 2010 at the Homestead, FL YMCA. Both of these events were very helpful to EPA staff in understanding this large and complex project.

NRC's scoping process is being conducted for purposes of creating a Draft EIS for public comment. Participation in this scoping process is to include members of the public and local, State, Tribal, and Federal government agencies. Under Section 309 of the CAA, EPA is responsible for reviewing and commenting on major federal actions

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significantly affecting the quality of the human environment. EPA concurs with the NRC's stated EIS-scoping goals of accomplishing the following tasks:

- Define the proposed action that is to be the subject of the EIS;
- Determine the scope of the EIS and identify the significant issues to be analyzed in depth;
- Identify and eliminate from detailed study those issues that are peripheral or that are not significant;
- Identify any environmental assessments and other EISs that are being or will be prepared that are related to but are not part of the scope of the EIS being considered;
- Identify other environmental review and consultation requirements related to the proposed action;
- Identify parties consulting with the NRC under the NHPA, as set forth in 36 CFR 800.8(c)(1)(i);
- Indicate the relationship between the timing of the preparation of the environmental analyses and the Commission's tentative planning and decision-making schedule;
- Identify any cooperating agencies and, as appropriate, allocate assignments for preparation and schedules for completing the EIS to the NRC and any cooperating agencies;
- Describe how the EIS will be prepared, including any contractor assistance to be used.

EPA offers the following specific scoping comments for the EIS process:

1) The Draft EIS should discuss any plans by the applicant to seek a Limited Work Authorization (LWA). On similar projects an LWA was sought prior to certain environmental permits being obtained. EPA understands that an LWA could potentially authorize site development and deep/shallow foundation construction.

2) The Draft EIS should discuss the status and any issues/concerns associated with the following approvals:

- Approval of the application to the NRC for a COL;
- Approval of the application to the State of Florida for site certification;
- Approval of any required National Pollutant Discharge Elimination Permit(s) (NPDES) for water discharge;
- Approval of the Prevention of Significant Deterioration (PSD) air permit;
- Approval of a 316(b) demonstration for the proposed cooling water intake;
- Approval of the U.S. Army Corps of Engineers (USACE) Section 404 and Section 10 permits to construct structures in wetlands and regulated waterways;
- Approval of hazardous waste management and disposal plans;
- Approval of the "determination of consistency" under the requirements of the Coastal Zone Management Act to ensure the expanded plant is consistent with existing federal and state coastal zone management plans.

3) The Draft EIS should disclose/summarize results from all recent hydrologic studies and on-going assessments of the existing cooling canal system being utilized by Florida Power & Light Company's (FPL) for Turkey Point. EPA has met with National Park Service (NPS) officials from the Biscayne National Park regarding their concerns with the existing cooling canal system and its contribution to salt water intrusion in the South Miami-Dade area. NPS is concerned that the planned increased electric output from the existing units and the construction of two new nuclear reactors may exacerbate the salt water intrusion. This has raised concerns about adversely affecting local potable water supplies and the on-going Everglades restoration efforts.

- EPA understands that a Final Order licensing (uprating) existing Units 3 and 4 was signed by Florida Secretary Sole in October 2008, and this license requires FPL to develop and implement plans for monitoring the impacts on Biscayne Bay from the Turkey Point cooling canal system.
- As part of an agreement with the South Florida Water Management District (SFWMD), the license also requires FPL to develop and implement a plan to determine the cooling canal system impacts on SFWMD's groundwater and surface water resources.
- EPA understands that the underground plume of salt water is thought to extend inland to at least Homestead-Miami Speedway, and is being studied by the South Florida Water Management District.

The Draft EIS should address concerns by agencies that the canal system has created a very warm and "hypersaline" water that sinks and spreads into the Biscayne Aquifer below.

4) FPL has reportedly received all of the necessary approvals from FDEP to proceed with the uprate project. Construction activities for this project will occur primarily during two scheduled outages per unit, with each outage lasting approximately 50 days. Construction activities for Unit 3 and 4 are anticipated to conclude in the fall of 2011 and 2012, respectively. After completion, the cooling water flow rate will remain unchanged, although the temperature rise across the condensers is anticipated to increase by 2.5°F. FPL proposes that Units 6 and 7 will have their cooling water needs provided by cooling towers as opposed to the existing canal system. Make-up for the towers is to be provided by reclaimed water. The Draft EIS should assess the cumulative effects of the uprated Units 3 and 4 combined with construction of new Units 6 and 7. Also, any increased removal of water from area basins as a result of operations of the interceptor ditch pumps should be discussed.

5) As mentioned previously, FPL apparently proposes that Units 6 and 7 will have their cooling water needs provided by cooling towers as opposed to the existing canal system. The Draft EIS should discuss the wastewater-to-reclaimed water process, including describing the processes to remove debris, sand, sediment, and other large solids. The Draft EIS should discuss use of any microorganisms to break down organic materials, proposed clarifiers to remove microorganisms and remaining solids, filtering processes, and what type of disinfection (chlorine?) will be used to kill microorganisms. The monitoring of the re-use facilities and processes should be discussed in order that only high-quality reclaimed water is distributed and that it is clear and free of pathogens.

6) In 1973 EPA issued the original NPDES permit for the Turkey Point cooling canal system. The permit contained water quality monitoring requirements for the cooling canal system. The permit was reissued by EPA and then by FDEP after the delegation of the NPDES program. The existing NPDES permit expired on May 5, 2010. Any issues associated with the reissuance of this NPDES permit (FL0001562) should be discussed in the Draft EIS.

7) The Draft EIS should discuss how the construction of Units 6 and 7 would impact sensitive coastal wetlands and any mangrove protected areas along Biscayne Bay and adjacent to Biscayne National Park. The Draft EIS should also address any issues related to the Florida Everglades Mitigation Bank.

8) The Draft EIS should discuss any remaining design issues with the AP1000 reactor, which we understand received design certification from the NRC in 2006. EPA understands that Westinghouse has submitted revisions to the certified design for purposes of reducing cost and financial risk to buyers, affording extra protection against large aircraft crashes, improving instrumentation & control, and improving pipe layouts. It was later reported to EPA that in October 2009 the NRC would require Westinghouse to perform a corrective design on the AP1000 reactor shield building.

9) The Draft EIS should discuss sources of limestone rock proposed for use in the construction of Units 6 and 7. Any impacts from required mining should be discussed, particularly the impacts on Biscayne National Park or U.S. Air Force lands.

10) The Draft EIS should discuss hurricane design considerations and how sea level change might be incorporated into the project. EPA recommends a "risk based" analysis be performed for each alternative based on low, intermediate and high rates. Local mean-sea level trends may be higher than the rate of eustatic mean sea-level rise.

11) The Draft EIS should discuss the cumulative impacts to the environment associated with FPL's past, present, and future expansion in the south Florida region.

12) The Draft EIS needs to fully address the alternative transmission line corridors and the environmental effects it may have on Everglades National Park.

13) The Draft EIS should discuss other alternative sources of energy that may be available to serve the project purpose that would have less impact on sensitive wetland resources.

14) The Draft EIS needs to provide information on measures that have been taken to avoid and minimize wetland impacts. According to the Clean Water Act (CWA) Section 404(b)(1) Guidelines, an applicant must demonstrate avoidance and minimization of wetland impacts before compensatory mitigation can be considered. Specifically, no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. Practicable alternatives include activities which do not involve the discharge of dredged or fill material into waters of the United States.

15) Please provide in the Draft EIS a proposed mitigation plan to offset unavoidable wetland impacts. The mitigation plan should be in compliance with Federal Compensatory Mitigation Rule, dated April 10, 2008.

16) The Draft EIS should address safety concerns as it relates to protection of the surrounding communities and storage of waste material.

17) The project's draft PSD permit incorporates the use of reclaimed water as the primary source of cooling water for the cooling towers as well as the use of salt water from radial collector wells as a backup source or some combination of the two as necessary. As presented in the PSD emissions calculations, particulate emissions are highly dependent on the source of the cooling water. The Draft EIS should discuss: impacts related to particulate emissions with respect to the source of the cooling water; anticipated availability of reclaimed water to support the new units in addition to existing units; recordkeeping and monitoring plans to assess water flow rates and the ratio of reclaimed to salt water used; and any salinity changes outside of the range used for the emissions calculations.

18) Construction related emissions and other temporary or secondary emissions are not included in the PSD emissions analysis. The impacts from these activities on air quality should be discussed qualitatively in the Draft EIS. Air emissions of criteria and toxic pollutants should be addressed. A discussion of the designation status of the area in which the units will be built should also be included in the document. Finally, the Draft EIS should discuss any issues or concerns regarding obtaining the required Title V operating permit once the units are operational.

Thank you, again, for the opportunity to comment on the scoping of this upcoming EIS. Please include us in any notifications of future interagency meetings. If you wish to discuss EPA's comments, please contact me at 404/562-9611 (mueller.heinz@epa.gov) or Paul Gagliano of my staff at 404/562-9373 (gagliano.paul@epa.gov), or Ron Miedema of our EPA Region 4 Water Protection Division - South Florida Office at 561-616-8741 (miedema.ron@epa.gov).

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

cc: Ms. Tomeka Terry, Project Manager
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Division of Site and Environmental Reviews, Office of New Reactors
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