



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
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DEC 02 2019

William Burton  
Office of Administration  
Mail Stop: TWFN-7-A60M  
ATTN: Program Management, Announcements and Editing Branch  
Turkey Point License Renewal  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Re: Supplemental Final Environmental Impact Statement for the License  
Renewal of Turkey Point Nuclear Generating Units 3 and 4, Florida; CEQ No.: 20190263

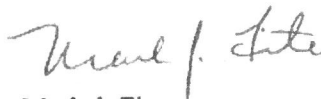
Dear Mr. Burton:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency Region 4 reviewed the Supplemental Final Environmental Impact Statement (SFEIS) for the license renewal of the Turkey Point Nuclear Generating Units 3 and 4 located in the vicinity of Homestead, Florida. The SFEIS is the result of Florida Power and Light Company (FPL) submitting an application to the U.S. Nuclear Regulatory Commission (NRC) for the relicensing of Turkey Point Nuclear Generating Units 3 and 4. The NRC evaluated the relicensing renewal (Proposed Action) and four other alternatives: No Action Alternative (Decommissioning), new nuclear plant, new natural gas combined-cycle power plant and combination of a new natural gas combined-cycle power plant and photovoltaic power generation. To mitigate the impacts associated with the existing cooling canal system (CCS), the NRC evaluated the alternative of replacing the CCS with onsite mechanical draft cooling towers. The NRC's recommendation is to select the applicant's Proposed Action (license renewal) as the preferred alternative citing that the Proposed Action has less adverse environmental impacts than the other build alternatives. The EPA provided scoping comments on June 20, 2018, and comments on the Supplemental Draft EIS (SDEIS) on May 20, 2019. The EPA's staff have participated in public meetings, agency coordination meetings and conference calls.

The EPA notes that the NRC provided responses to EPA's SDEIS comments via letter dated October 25, 2019. The EPA acknowledges that the NRC addressed some environmental concerns. However, other technical recommendations were not fully addressed in the SFEIS, which are further discussed in the enclosure. To address our primary concern regarding the effect of the hypersaline plume, the EPA recommends that the NRC consider incorporating language in the Record of Decision (ROD) or license that states that FPL must develop and submit an alternative mitigation plan to address water quality if FPLs monitoring results indicate that the corrective measures identified in the Florida Department of Environmental Protection (FDEP) and Miami-Dade County Department of Environmental Resources Management (DERM) consent agreements were not effective. Additionally, the EPA has provided technical comments that should be considered in the ROD, license or other appropriate mechanisms.

The EPA appreciates the opportunity to review the SFEIS and requests a copy of the license once finalized. If you need to discuss our technical comments and recommendations further, please contact Ms. Jamie Higgins, of my staff at, (404) 562-9681 or by e-mail at [higgins.jamie@epa.gov](mailto:higgins.jamie@epa.gov).

Sincerely,



Mark J. Fite  
Director  
Strategic Programs Office

Enclosure: EPA's Detailed Technical Comments

**Enclosure**  
**EPA's Detailed Technical Comments**  
**Supplemental Final Environmental Impact Statement (SFEIS)**  
**Turkey Point Nuclear Generating Units 3 and 4 License Renewal**  
**Homestead, Florida; CEQ No.: 20190263**

**License Renewal Term:** The hypersaline plume in the aquifer related to the Canal Cooling System (CCS) is the EPA's primary concern. The EPA notes that the Florida Department of Environmental Protection (FDEP) and the Miami-Dade County Department of Environmental Resources Management (DERM) entered into various consent agreements with Florida Power and Light (FPL) to address issues related to the CCS. The EPA supports the FDEP and DERM's efforts to work with FPL to remediate impacts of the hypersaline plume in the aquifer and the ammonia releases to surface waters. The consent agreements outlined various corrective actions to address issues related to the CCS. However, these corrective measures have only recently been implemented. Given the uncertainties regarding the effectiveness of the corrective measures and the timing and length of the license renewal, the EPA recommends that Nuclear Regulatory Commission (NRC) consider incorporating language in the Record of Decision (ROD) or license that states that FPL must develop and submit an alternative mitigation plan to address water quality if FPL's monitoring results demonstrate that the corrective measures identified in the consent agreements are not effective. As part of this condition, we recommend that the NRC and the licensee re-evaluate and reassess alternative corrective measures such as the Cooling Water System Alternative.

**Environmental Impact and Alternatives Analysis:** The EPA identified several issues related to the environmental impact and alternatives analysis from Chapter 4 of the SDEIS. These issues were not addressed in the SFEIS. The EPA recommends these technical comments be considered and be addressed in any subsequent NEPA analysis.

**National Pollution Discharge Elimination System (NPDES):** The EPA recommended the NRC conduct a water balance calculation of the CCS in our SDEIS comment letter. The EPA acknowledges that the NRC conducted a water balance analysis and provided additional information within the SFEIS. In addition to the water balance calculation of the CCS which was provided in the SFEIS, the EPA also recommended the NRC address the structural integrity of the CCS. This recommendation was not addressed. While the current NPDES permit requires monitoring of the berms for structural issues, in order to ensure that there are no point source discharges from the cooling ponds to the adjacent surface waters, it is important for the facility to use relevant techniques to verify that all CCS barriers are intact and able to retain nutrient-rich wastewater. This issue should be considered as part of the Aging Management Program or other relevant mechanism.

**Climate Resiliency:** As noted in our SDEIS comment letter, the NRC provided a discussion regarding climate, adaptation, and resiliency in Florida and the southeast. The analysis, however, did not discuss how these changes would potentially impact Turkey Point Units 3 and 4. In response to this comment, the NRC states in their Oct 25, 2019 letter, "*...Evaluation of potential climate change impacts, including sea level rise, flooding, and storm surge on nuclear power plant operations and physical infrastructure are outside the scope of the NRC's license environmental review.*" The EPA recommends that the NRC consider evaluating potential impacts that climate may have on the nuclear units and supporting facilities as part of the Safety Program, Aging Management Program, or other appropriate mechanism.



**Hurricane and Storm Impacts:** The EPA provided technical recommendations related to the environmental impacts should a hurricane or storm damage the nuclear units or supporting facilities. The EPA acknowledges that the NRC updated the SFEIS to better explain the hurricane surge description differences between the licensing of Turkey Point Units 6 and 7 and the relicensing of Units 3 and 4. In the SFEIS, the NRC explains the differences that result from using different storm models (See page 3-41). The EPA notes that the NRC does not describe the “detailed model” used in the storm surge analysis for Turkey Point Units 3 and 4. The storm surge model used in the Turkey Point Units 6 and 7 FSER<sup>1</sup> was the Sea, Lakes, Overland and Surge from Hurricane (SLOSH) model that is also used by the National Weather Service when determining storm surge predictions.<sup>2</sup> It is considered the standard model for determining storm surge and flooding and is also used by the Federal Emergency Management Agency and the US Army Corps of Engineers. The EPA recommends that the NRC better describe the detailed model used for determining storm surge and flooding including the rationale for using the detailed model over the SLOSH model in future assessments.

**Environmental Justice (EJ):** According to the SFEIS responsiveness summary, the SFEIS was revised to reflect public outreach efforts to minority populations including Hispanic populations. To address barriers resulting from limited English proficiency, Spanish presentation materials were provided to the public and Spanish speakers were available at public meetings. NRC also consulted with Native American tribes and no subsistence activities were identified. The EPA appreciates the updates and clarification in the SFEIS and responsiveness summary. The EPA notes that the EJ analysis was not expanded to include the 50% or greater threshold as a means for identifying minority populations. According to the NRC and the EPA agrees, the additional evaluation would have only confirmed that the project area includes a majority minority population.

**Everglades National Park, Biscayne National Park, Biscayne Bay Aquatic Preserve and Comprehensive Everglades Restoration Plan (CERP):** In our SDEIS comment letter, the EPA recommended the NRC create a separate impact area for significant state and Federal resources to include Everglades National Park, Biscayne National Park, Biscayne Bay Aquatic Preserve and CERP projects. The NRC did revise the SFEIS to better describe impacts to Everglades National Park, Biscayne National Park, Biscayne Bay Aquatic Preserve, but did not update the SFEIS to address impacts to CERP projects. The NRC also did not revise the SFEIS to consider state and Federal resources as an impact area for the alternative analysis as reflected in Table 2-2.

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<sup>1</sup> Nuclear Regulatory Commission, Final Safety Evaluations for Turkey Point, Units 6 and 7 Application, Nov 10, 2016. <https://www.nrc.gov/reactors/new-reactors/col/turkey-point/documents/ser-final.html>

<sup>2</sup> National Weather Service, <https://slosh.nws.noaa.gov/slosh/>