

**Responses to Requests for Information
Congressman Raúl M. Grijalva
Letter Dated March 7, 2017**

1. The FEIS underestimates the impacts of the proposed project on the quality and quantity of surface and groundwater, particularly with respect to the Comprehensive Everglades Restoration Plan (CERP). Will the NRC and Army Corps fully evaluate these impacts and their bearing on CERP before issuing a Record of Decision (ROD)?

The U.S. Nuclear Regulatory Commission (NRC) staff fully considered and evaluated the potential direct and cumulative impacts to surface water and groundwater, including potential interactions between those planned under the CERP and actions proposed by Florida Power and Light (FPL) for Turkey Point Units 6 and 7.¹

Proposed Turkey Point Units 6 and 7 would rely primarily on treated wastewater (reclaimed water) from the Miami-Dade Water and Sewer Department for cooling water during operation. FPL's proposed back-up cooling water source would be shallow horizontal wells (radial collector wells) that extend beneath Biscayne Bay, through which FPL would withdraw saltwater. The radial collector wells, however, can only be used in a limited capacity and therefore minor impacts are expected.²

While FPL would use the radial collector wells to withdraw surface water (saltwater) indirectly from Biscayne Bay, construction and operation of Turkey Point Units 6 & 7 would not otherwise rely on surface water and near-surface groundwater and would have only minor impacts on surface water, including the CERP.³ Accordingly, the staff does not intend to perform any further analysis of impacts to surface water and groundwater, except as may be necessary in the context of ongoing adjudicatory processes before the Commission, from which the Commission will obtain the information it uses to draft the NRC Record of Decision. The U.S. Army Corps of Engineers will address the Record of Decision for which it is responsible.

2. Will the NRC and the Army Corps reconsider alternative sites for the project using the same criteria applied to screening the Turkey Point site, instead of using different and prejudicial criteria as has been done up to this point?

In its FEIS, the NRC staff followed the guidance contained in the NRC's Environmental Standard Review Plan (ESRP, NUREG-1555) for evaluating the process FPL used to identify the proposed site (Turkey Point) and the alternative sites. The ESRP guidance was vetted by the public and industry through a public comment process. The NRC staff compared the ESRP guidelines to the FPL process and concluded that FPL's process was reasonable and consistent with the guidelines.

The staff thoroughly evaluated the environmental impacts at the alternative sites using reconnaissance level information (in accordance with the guidance in NRC ESRP Section 9.3).⁴ In evaluating the alternative sites, the NRC staff used the best available information

¹ See Sections 2.3.1.1, 2.3.1.2, and 7.2 of NUREG-2176, "Environmental Impact Statement for Combined Licenses (COLs) for Turkey Point Nuclear Plant Units 6 and 7," Final Report (October 2016) (the FEIS).

² See FEIS Section 5.2.1.2.

³ See FEIS Sections 2.3.1.1, 2.3.1.2, and 7.2,

⁴ See Sections 9.3.2 through 9.3.5 of the FEIS.

from numerous sources.⁵ The staff then performed an independent comparison of the proposed and alternative sites and concluded that none of the alternative sites was environmentally preferable to the proposed site.⁶ Because the NRC staff used the normal process for evaluating alternative sites set forth in NRC guidance in the ESRP, the NRC staff does not intend to repeat the analysis.

3. Will the NRC and the Army Corps require FPL to address the operational failures of the existing Turkey Point cooling canals before granting COLs to FPL for additional nuclear reactors at the same site?

The Florida Department of Environmental Protection (FDEP) Conditions of Certification for Turkey Point Units 3, 4, and 5 govern operation of the cooling canals or industrial waste facility (IWF). The FDEP and Miami-Dade County have required FPL to implement an approved plan for remediating the conditions in and beneath the cooling canals. There is also an existing National Pollutant Discharge Elimination System permit issued by the State of Florida for the IWF.

While the NRC regulates radioactive discharges from Turkey Point Units 3 and 4, the radioactive effluent discharges and measurements of radioactivity in the environment have been within NRC regulatory limits and are as low as is reasonably achievable. However, the NRC has no other regulatory authority over the existing IWF. The IWF is used to cool existing Turkey Point Units 3 and 4 and would not be used by the proposed new units. Construction and operation of the new units will have only minor impact on the cooling canals. Nonetheless, the staff did consider the potential impacts the new units might have on the IWF, as well as the potential cumulative impacts of the new units.⁷

4. Neither the FEIS nor the Final Safety Evaluation Report addresses the potential impacts to the surrounding environment, public health, and public safety from hurricane and storm damage to the two proposed reactors. Will the NRC and Army Corps address these issues in the ROD?

NRC regulations require new nuclear plant designs to reflect appropriate consideration of the most severe natural phenomena events that have occurred at or near the proposed site, with margin to account for uncertainty.⁸ Such events are design basis events, and application of GDC 2 in the licensing review of a new reactor ensures adequate protection of public health and safety. In this regard, the staff Safety Evaluation Report (SER) provided a detailed safety analysis and findings that the plant at this site would meet all NRC regulatory requirements related to hurricanes and potential storm damage.⁹ The staff's safety findings regarding hurricanes and flooding were also reviewed and deemed acceptable by the NRC independent Advisory Committee on Reactor Safeguards, as documented in a letter to the Commission dated September 16, 2016.

As for the environmental review, the staff considered the environmental impacts of these design basis events and evaluated severe accidents (beyond the design basis).¹⁰ In particular, the NRC staff described how the AP1000 reactor vendor considered extratropical cyclones, hurricanes up to Category 5 on the Saffir-Simpson scale, and tornadoes up to EF5

⁵ See FEIS Sections 9.3.2 through 9.3.5.

⁶ See FEIS Section 9.3.6.

⁷ See FEIS Sections 5.2.1, 7.2, 7.8, and Appendix G.3.2.

⁸ See 10 CFR Part 50, Appendix A, Criterion 2 (General Design Criterion (GDC) 2).

⁹ See SER Sections 2.3.1 and 2.4.5.

¹⁰ See FEIS Sections 5.11.1 and 5.11.2.

on the enhanced Fujita scale in the AP1000 design and how the staff evaluated these events.¹¹ As set forth in the FEIS, the risk from such accidents is small and below the NRC safety goals. The staff does not intend to perform any further analysis of impacts of hurricane and storm damage to the proposed reactors, except as may be necessary in the context of ongoing adjudicatory processes before the Commission, from which the Commission will obtain the information it uses to draft the NRC Record of Decision.

5. Will the Army Corps provide the Clean Water Act Least Environmentally Damaging Practicable Alternative and Public Interest Review documents for public review and comment before issuing a ROD?

The question is directed to the U.S. Army Corps of Engineers.

6. Will the NRC initiate consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act to evaluate potential impacts to wood stork and snail kite populations that utilize areas proposed to be disturbed by this project?

The NRC staff has been informally consulting with the U.S. Fish and Wildlife Service (USFWS) since 2010. These discussions were with respect to all applicable threatened and endangered species, including the wood stork and snail kite, pursuant to Section 7 of the Endangered Species Act. Furthermore, wood stork and snail kite populations were evaluated in the staff's analysis.¹² These discussions are in addition to, and consistent with, the evaluation of potential impacts to the wood stork and snail kite as outlined in the Biological Assessment developed for formal Section 7 consultation under the Endangered Species Act.

The NRC staff transmitted the Biological Assessment to the USFWS in February 2015 and initiated formal consultation on September 28, 2016. If the USFWS provides a Biological Opinion to the NRC staff upon completing their review, mitigation measures identified in the Biological Opinion relevant to the action before the NRC, as required, will be documented in the NRC's Record of Decision if the application is granted.

¹¹ See FEIS Section 5.11.2.4.

¹² See Section 4.3.1.3 and 5.3.1.3 of the FEIS.