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## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960

June 20, 2016

Briana Grange  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-001

Service CPA Code: 04EF2000-2011-CPA-0317  
Service Consultation Code: 04EF2000-2011-I-0299  
Project: Extended Power Uprate at  
Turkey Point Nuclear Power Plant  
Applicant: Florida Power and Light  
County: Miami-Dade

RE: Request to reinitiate consultation on Florida Power and Light's operation of Turkey Point Power Plant, Units 3 and 4

Dear Ms. Grange:

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) that the U.S. Fish and Wildlife Service (Service) has identified new information regarding adverse effects from the operations at Florida Power and Light's (FPL) Turkey Point Power Plant on the threatened American crocodile (*Crocodylus acutus*; crocodile). The Service finds that this new information necessitates reinitiation of consultation under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1532 *et seq.*). The Act's implementing regulations state that reinitiation of consultation is required and shall be requested by the Federal Agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law (CFR §402.16), and if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered (CFR §402.16 (b)). This letter is submitted pursuant to the Service's authorities under section 7 of the Act.

On September 9, 2011, the NRC reinitiated consultation with the Service for the operation of the existing nuclear power units 3 and 4 at the Turkey Point Power Plant in Miami-Dade County. The consultation considered a license amendment request from FPL that allowed for an extended power uprate (*i.e.*, an increase in electrical power production) at the facility. The Service completed the consultation with the NRC on the extended power uprate at FPL's Turkey Point Power Plant on October 25, 2011. The Service determined, based on the information available at that time, that the projected increase in water temperature and salinity due to proposed increase in power production at units 3 and 4 would be less than originally estimated, and concluded that the project "may affect, but is not likely to adversely affect" the crocodile and its designated critical habitat. However, the Service's document stated that if ongoing monitoring


revealed measurable, negative effects on the crocodile in this area, it would be considered additional information involving effects on the species and NRC (or FPL on their behalf) should contact the Service to reinitiate consultation.

Monitoring has revealed new information regarding the effects of the Turkey Point Power Plant extended power uprate on the crocodile and its critical habitat within the cooling canal system (CCS). The extended power uprate appears to be significantly reducing the quality of the habitat within the CCS. This reduced water quality corresponds with adverse effects observed in the existing crocodile population. Recent water quality data from the CCS indicate that following the uprate, the maximum temperature of the water in the CCS has increased by more than 4.0 degrees F (2.2 degrees C) - twice what FPL predicted. Moreover, the salinity of the water in the CCS has increased dramatically, reaching over 90 parts per thousand (ppt) during certain times of year, greatly exceeding the predicted increase of 2 to 3 ppt. Furthermore, the increases in temperature and salinity coincided with an outbreak of blue-green algae (cyanobacteria) and very turbid conditions within the waters of the CCS, degrading the quality of the water for prey species and reducing the availability of prey to crocodiles. Recent examinations of crocodiles captured in the CCS indicate that the body condition of juvenile, sub-adult, and adult crocodiles has steadily decreased following the power uprate from 2013 to the present (Mazotti *et al.* 2015). Moreover, crocodile nesting within the CCS has dropped from 25 nests observed in 2013 and 2014 to 9 nests observed during 2015. Finally, anecdotal evidence suggest that much of aquatic life, which supports the species (*i.e.*, fish and other potential prey items for crocodiles, sea grasses *etc.*), no longer exists in the CCS. The data suggests that the recent declines in habitat quality and crocodile health in the CCS are likely the result of the change in uprate at Turkey Point Power Plant. The effects of the current conditions were not considered or analyzed in the previous consultation and appear to be adversely affecting the species. Consequently, unauthorized take of crocodiles is likely occurring due to the uprate.

The ongoing monitoring has documented measurable negative effects on crocodiles, which triggers reinitiation of consultation under section 7 of the Act. Therefore, the Service requests that the NRC reinitiate consultation with the Service on their license amendment authorizing the extended power uprate at the Turkey Point Power Plant. In order to meet its responsibilities under the Act, we ask that the NRC contact the Service at its earliest convenience to schedule a meeting to discuss the operation of the Turkey Point Power Plant and determine the steps needed to rectify the decrease in habitat quality and avoid and minimize the adverse effects to the species.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact John Wrublik at 772-562-3909, extension 282.

Sincerely yours,

  
Roxanna Hinzman  
Field Supervisor  
South Florida Ecological Services Office

cc: electronic only  
Corps, Miami, Florida (Megan Clouser)  
FWC, Tallahassee, Florida (Brooke Talley)  
FWC, Tallahassee, Florida (FWC-CPS)  
FWC, West Palm Beach, Florida (Jennifer Goff)  
Service, Vero Beach, Florida (Patrick Pitts)

### **Literature Cited**

Mazzotti, F. M. Squires, V. Briggs-Gonzalez, M.S. Cherkiss, C. Smith and J Beauchamp 2015.  
American Crocodile Monitoring Program for the Turkey Point Uprate. Report submitted  
to the U.S. Fish and Wildlife Service, Vero Beach, Florida.