

From: Grange, Briana
Sent: Wednesday, May 22, 2019 9:53 AM
To: 'Audra Livergood - NOAA Federal'
Cc: Eldridge, Jodie; Eaton, Kristin
Subject: RE: Request for Additional Information to Support Reinitiated Consultation for FPL St. Lucie
Attachments: NRC Responses to NMFS 5-08-19 Requests for Additional Information.pdf

Audra,

With this email, I am transmitting to you the NRC's responses to your May 8, 2019, requests for additional information concerning the reinitiated Endangered Species Act Section 7 consultation for the St. Lucie Plant, Unit Nos. 1 and 2. FPL has reviewed the responses for accuracy and also provided input on the responses.

From our communications last week, I understand that you will consider the olive ridley in the revised biological opinion based on FPL's capture of a live olive ridley on May 11. At this time, you have not requested any additional information from FPL or NRC related to this event or species. Please let me know if this changes or if you find you need any further information once you review the attached responses.

Thank you,

Briana

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St. Lucie Plant, Unit Nos. 1 and 2
Continued Operation Under Renewed Facility Operating License Nos. DPR-67 and NPF-16
Responses to the National Marine Fisheries Service's (NMFS) May 8, 2019, Questions
May 22, 2019

1. NMFS requests FPL's 2016 and 2017 PSL Annual Environmental Operating Reports (we have already received the 2018 report from FPL).

Florida Power & Light Company's (FPL) Annual Environmental Operating Reports for St. Lucie Plant, Unit Nos. 1 and 2 (St. Lucie) for 2005 through 2017 are available on the NRC's public website at: <https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/stl1-2.html>.

2. In NMFS's March 24, 2016 Biological Opinion (BO) to NRC, we required FPL to develop a monitoring and maintenance plan (within 6 months of BO issuance) to inspect and remove debris and biofouling organisms from the intake pipes based on increased flow rate through the intake pipes and number of fresh scrapes on sea turtles (RPM 2, Term and Condition 2, p. 66 of the BO). The Term and Condition states the plan must be coordinated with NMFS Southeast Regional Office. Has FPL developed the monitoring and maintenance plan required by this Term and Condition? If so, please provide the plan to Audra Livergood via email at Audra.Livergood@noaa.gov. In particular, we are interested in how often FPL plans to clean the intake pipes. It is our understanding, from reading the Biological Assessment, the last cleaning occurred in 2011. When is the next scheduled cleaning of the intake pipes?

FPL submitted an initial Monitoring and Maintenance Plan to the NMFS on September 14, 2016. FPL revised the plan based on comments it received. The final plan is attached to this response. As stated in the plan and the current biological opinion (Reasonable and Prudent Measure 2 of Term and Condition 3), FPL will base intake pipe inspections and cleaning on meeting fresh scrape thresholds. FPL will start the process for inspecting the St. Lucie ocean intake system once the thresholds specified in the biological opinion, as outlined in the final Monitoring and Maintenance Plan, are met.

3. On page 9 of the Biological Assessment, the NRC states, "Intake pipe-related mortality appears more likely in cases where a pre-existing injury, disease, or other condition has already weakened the turtle." In the case of a sea turtle with a pre-existing condition that ends up being classified as an "intake pipe-related mortality," does FPL consider these cases to be causal mortalities?

Yes, FPL classifies mortalities as causal when such mortalities result from pre-existing injury or disease in combination with injury or asphyxiation attributable to travel through the intake pipes. For instance, see the descriptions of the October 19, 2015, mortality of a juvenile green turtle (*Chelonia*

mydas) and October 9, 2016, mortality of an adult female loggerhead (*Caretta caretta*) turtle in Table A8 of the NRC's biological assessment.¹

4. Were any smalltooth sawfish captured in the intake canal by FPL biologists in 2018 or 2019? If yes, please share available data with NMFS.

No smalltooth sawfish (*Pristis pectinata*) entered the St. Lucie intake canal in 2018 or to date in 2019. As stated on page 9 of the NRC's biological assessment, only three smalltooth sawfish have been captured since St. Lucie began operating. The three individuals were captured in May 2005, September 2017, and November 2017, and all were alive, in good health, and released back to the ocean unharmed.

Enclosures:

1. St. Lucie Nuclear Power Plant (SLNPP) Monitoring and Maintenance Plan to Inspect and Remove Debris and Biofouling Organisms from Ocean Intake System

¹ U.S. Nuclear Regulatory Commission. 2019. Biological Assessment of Impacts to Sea Turtles and Smalltooth Sawfish for St. Lucie Plant, Unit Nos. 1 and 2, Continued Operation Under Renewed Facility Operating Licenses DPR-67 and NPF-16. April 2019. 63 p. ADAMS Accession No. [ML19093A064](#).

St. Lucie Nuclear Power Plant (SLNPP) Monitoring and Maintenance Plan to Inspect and Remove Debris and Biofouling Organisms from Ocean Intake System

Introduction

The portion of the ocean intake system subject to this monitoring and maintenance plan are the three velocity cap structures, three ocean intake pipes and the two headwall structures where the pipes enter the canal. The monitoring is intended to identify adverse trends in the number of fresh scrapes on turtles. Based on this monitoring, corrective actions shall be taken to identify and address the potential cause of the adverse trend in fresh scrapes on turtles.

Biological Opinion's Action Threshold

FPL is required to record the number of captured turtles with fresh causal scrapes and categorize them as minor, moderate or severe. FPL shall start the process for inspecting the Ocean Intake System, as soon as possible, if numbers 1 or 2 below are met. A milestone schedule for inspection of the Ocean Intake System that considers equipment/vendor availability and plant operating conditions shall be provided to NMFS, within one month of exceeding action threshold:

1. The number of turtles with severe fresh scrapes reaches 0.5 percent of the number of captured turtles during two consecutive years or;
2. The number of turtles with moderate or severe fresh scrapes reaches 15 percent of the number captured during two consecutive years.

Inspection Discussion

Due to flow velocities in the ocean intake pipe, the pipes are required to be isolated prior to performing an inspection of the interior of the pipes. Isolation of a single pipe requires taking at least one of the Nuclear Reactors off line. The two Nuclear Reactors are on alternating 18 month refueling cycles that results in one unit being shutdown, approximately every 9 months.

FPL will schedule the commencement of the inspection and associated corrective actions at the next available outage (or outages) of sufficient duration, provided there is sufficient time to safely plan for the inspection and mobilize the required contractors and equipment.

Because of the amount of equipment, safety concerns, weather/sea state issues, specialized inspection contractors, scheduling and budget, it is recommended that the process for identification of the potential cause of the turtle injuries be started early in the process of the identification of a potential negative trend. As a minimum, within one month of reaching a regulatory required action threshold, FPL shall submit and co-ordinate a schedule for inspection of the ocean intake system with the NRC and NMFS.

FPL shall submit report(s) and video on the condition of the pipe as it was found and condition of the pipe after any corrective actions, if required, were taken. All reports and supporting documentation on the inspection and inspection results will be submitted to NRC and NMFS for review, as required.

Maintenance/Corrective Actions

Based on results of the pipe inspection, FPL will consult with regulatory agencies to determine appropriate corrective actions. Based on past operating experience, numerous conditions could result in an increase in negative trend in turtle injuries:

1. Structural failure of pipe or velocity caps
2. Wide spread build-up of marine growth
3. Localized marine growth at entrance to pipe or transition area
4. Miscellaneous trash or debris that enters the pipe

The cause of the adverse trend will impact the timing of the implementation of the corrective action. Items such as the removal of localized marine growth or trash can most likely be addressed during the same outage as the inspection. Repair of structural failures, modifications to the pipe, or removal of wide spread marine growth may take multiple outages to implement and complete.

Based on inspection findings, maintenance or inspection requirements shall be reviewed and coordinated with agencies, as required.

Inspection Implementation Requirements:

1. Within 48 hours of the quantity and severity of scrapes exceeding a Biological Opinion (BO) action threshold, a Condition Report shall be entered into FPL corrective action program.
2. The Condition Report disposition shall document apparent cause, required inspections, and corrective actions, as required, with responsible department and due dates.
3. If corrective actions require the inspection of the interior of the Ocean Intake Piping, the inspection shall be scheduled for the next available outage of sufficient duration, provided there is sufficient time to safely prepare and schedule the inspection.
 - a. A milestone schedule for inspection shall be submitted to NMFS for review and comment within one month of exceeding a *regulatory required action threshold*.
 - b. Based on inspection results, corrective actions shall be scheduled as soon as they can be safely prepared and scheduled.
4. Proposed schedule and maintenance/corrective action(s) to address a *regulatory required action threshold* shall be coordinated with NMFS.

References:

1. National Marine Fisheries Service (NMFS) biological opinion pursuant to section 7(a)(2) and the conservation review pursuant to section 7(a)(1) of the Endangered Species Act, as amended (ESA; 16 U.S.C. 1536(a)(2)), Dated March 24, 2016.
2. Engineering Evaluation PSL-ENG-SECS-06-040, Revision 1, Removal of Circulating Water Ocean Intake and Discharge System Piping from Service for Inspection Repair and/or Maintenance.