FPL

October 24, 2016

L-2016-191
10 CFR 50.4
10 CFR 50.36.b
EPP 4.1

U.S. Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Environmental Protection Plan Report
Event Date: October 9, 2016
Unusual or Important Environmental Event - Turtle Mortality

On October 9, 2016, a live adult female loggerhead turtle (Caretta caretta) was recovered from the east side of the St. Lucie Plant intake cooling canal. The turtle was very lethargic and was en route to a rehabilitation facility when it expired during transport. A necropsy was performed on October 10, 2016, and determined cause of the mortality to be drowning.

The attached report is being submitted pursuant to the requirements of Section 4.1 of the St. Lucie Units 1 and 2 Environmental Protection Plans to provide the description of a reportable sea turtle mortality.

Sincerely,

Michael J. Snyder
Licensing Manager
St. Lucie Plant

MJS/rcs

Attachment

cc: FDEP Siting Office

IE23
NRR

DESCRIPTION OF THE EVENT

On October 9, 2016, a live adult female loggerhead turtle (Caretta caretta) was recovered from the east side of the St. Lucie Plant intake cooling canal. The turtle was very lethargic and recovering from a variety of other nonfatal injuries such as two partially amputated front fins apparently from shark bites and a 40.7 cm by 18.2 cm L-shaped fracture on its carapace presumed to be from a blunt force boat strike. The external wounds were at least a few weeks old and were healing. While en route to the Loggerhead Marinelife Center for rehabilitation, the turtle expired during transport. The Loggerhead Marinelife Center is located approximately an hour from the plant in Juno Beach, FL.

A necropsy was performed by Dr. Brian A Stacy, DVM, at the University of Florida, Aquatic Pathobiology Laboratory on October 10, 2016. Although additional trauma was noted on the turtle, the necropsy determined that the mortality was due to drowning.

The limits for sea turtle injuries and mortalities resulting from plant operations were set by the National Marine Fisheries Incidental Take Statement, issued by the NRC in 2016. These limits have not been exceeded.

CAUSE OF EVENT

The most probable cause of the mortality is that the turtle was entrained in the plant's intake cooling system at the end of a breath cycle. The time required to traverse the intake pipe exceeded the turtle's air reserve.

This event occurred while both Unit 1 and Unit 2 were shut down for Hurricane Matthew. During such times, the plant runs with a reduced number circulating water pumps and reduced intake flow. This may have increased the time that the turtle spent submerged while entering the intake cooling canal.

Sea turtle handling procedures were reviewed for potential improvements that could have prevented this mortality. The St Lucie biologists are very proficient at handling sea turtles, and no improvements were warranted. No additional action by the turtle's handlers could have prevented this mortality.

CORRECTIVE ACTION

St Lucie is designing a sea turtle excluder to be installed on the entrances to the intake piping to prevent mature sea turtles from entering the pipes that lead to the intake cooling canal.

ACTIONS TO PRECLUDE FUTURE EVENTS

Aggressive turtle monitoring and removal protocols remain in place. Hourly inspections of the five-inch net and continuous surveillance of the intake canal's two tangle nets occur during daylight hours. When visibility allows, staff biologists perform hand and dip net turtle captures in an effort to minimize turtle residence time.

AGENCIES NOTIFIED

The Florida Fish and Wildlife Conservation Commission was by notified St Lucie of the initial live stranding on October 9, 2016, in accordance with Marine Turtle Permit MTP-125 and the Site Environmental Protection Plan. A notification was also made to the NRC on October 9, 2016, per the requirements of 10 CFR 50.72(b) (2) (xi).

In order to authorize and coordinate the necropsy, follow-up notifications to the Florida Fish and Wildlife Conservation Commission were performed by the staff of the Loggerhead Marinelife Center.