



Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

March 24, 2010

L-2010-061
10 CFR 50.4
10 CFR 50.36.b
EPP 4.1

U. S. Nuclear 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 Dates: March 1, 2010; March 7, 2010; March 10, 2010; March 12, 2010
Unusual or Important Environmental Event – Turtle Mortality

On March 1, 2010, a sub adult loggerhead sea turtle (*Caretta caretta*) was recovered from the east side of the St. Lucie Plant Intake Cooling Canal five-inch turtle barrier net. On March 7, 2010, March 10, 2010 and March 12, 2010, three juvenile green sea turtles (*Chelonia mydas*) were also removed from the five-inch turtle barrier net. The draft necropsy reports determined that all four sea turtles drowned and the mortalities were causal to plant operations.

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 reportable sea turtle mortality events that were causal to plant operations at the St. Lucie Plant.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric S. Katzman'.

Eric S. Katzman
Licensing Manager
St. Lucie Plant

ESK/tlt

Attachment

FE23
NR

DESCRIPTION OF THE EVENT

On March 1, 2010, a sub adult loggerhead sea turtle (*Caretta caretta*) was recovered from the east side of the St. Lucie Plant Intake Cooling Canal five-inch turtle barrier net. On March 7, 2010, March 10, 2010 and March 12, 2010, three juvenile green sea turtles (*Chelonia mydas*) were also removed from the five-inch turtle barrier net. The draft necropsy reports determined that all four sea turtles drowned and the mortalities were causal to plant operations.

The limits for sea turtle injuries and mortalities resulting from plant operations were set by the National Marine Fisheries Incidental Take Statement, issued and clarified by the NRC in 2001. These limits have not been exceeded.

CAUSE OF THE EVENT

The probable cause of death was the entrainment of the sea turtles in the plant cooling water intake system at the end of a breathing cycle. The travel time to traverse the intake pipe most likely exceeded the turtle's air reserve.

This region of Florida has experienced prolonged extreme cold water temperatures for the entire winter; as a result an unprecedented amount of marine life mortality has occurred. The prolonged cold water temperatures resulted in cold stunning of sea turtles and were a contributing factor to the high number of mortalities.

CORRECTIVE ACTIONS

The five-inch turtle net was inspected by divers to determine if any irregularities had occurred that could have contributed to the mortalities. The net was found in good condition and did not require any repair or reconfiguration.

Hourly inspections of the five-inch turtle net during daylight hours facilitate the identification and removal of any cold stunned or weakened sea turtles.

ACTIONS TO PRECLUDE FUTURE EVENTS

Aggressive hand captures and boat netting captures minimizes the resident time of the entrained sea turtles population thus reducing their risk.

The staff biologists have commenced to schedule a night shift during nights of extreme cold water temperatures (water temperatures of $\leq 60^{\circ}$ Fahrenheit) to monitor the five-inch turtle net to identify and rescue distressed sea turtles.

St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Environmental Protection Plan Report
Unusual or Important Environmental Event – Turtle Mortality

L-2010-061
Attachment
Page 2 of 2

AGENCIES NOTIFIED

The Florida Fish and Wildlife Conservation Commission were notified of these events on March 1, 2010, March 7, 2010, March 10, 2010 and March 12, 2010, in accordance with marine Permit #125, and the Site Environmental Protection Plan.

A notification was made to the NRC on March 1, 2010, March 7, 2010, March 10, 2010 and March 12, 2010, per the requirements of 10 CFR 50.72(b)(2)(xi).