



July 23, 2003

L-2003-188  
10 CFR 50.36b  
EPP 5.4.2

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Re: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Environmental Protection Plan Report  
Date of Event: June 25, 2003  
Non-Routine Environmental Event - Sea Turtle Mortality

The attached report is being submitted pursuant to the requirements of Section 5.4.2 of the St. Lucie Unit 1 and Unit 2 Environmental Protection Plans to provide a description of a reportable sea turtle mortality at the St. Lucie Plant.

Very truly yours,

A handwritten signature in black ink, appearing to read 'William Jefferson, Jr.', written over a horizontal line.

William Jefferson, Jr.  
Vice President  
St. Lucie Plant

WJ/GRM

Attachment

IE23

## **ST LUCIE PLANT SEA TURTLE MORTALITY**

### **EVENT DESCRIPTION**

At approximately 0900 hours on March 15, 2003 a green turtle (*Chelonia mydas*), weighing approximately 10 lbs., was retrieved from the top of the primary barrier net in the intake canal. The turtle was alive but had injuries to both the top and the bottom of its shell, suggesting it may have impacted a fixed structure. The turtle was sent to a rehabilitation facility as recommended by the Florida Fish and Wildlife Conservation Commission.

It was discovered on June 25, 2003 that the turtle died at the rehabilitation facility approximately one week after it was sent. The veterinarian's necropsy of the turtle indicated that this injury was probably not from a natural predator or boat. The possible cause could have been due to contact in or around the intake pipe or other fixed structure. Based on review of the veterinarian's report this incident has been determined to be a sea turtle mortality causally related to plant operation.

This is the only turtle mortality or injury this year to date at the St. Lucie Plant that has been attributed to plant operation. The limits for injuries or mortalities resulting from plant operation was set by the National Marine Fisheries Incidental Take Statement, issued and clarified by the NRC in 2001. For green and loggerhead turtles, the incidental take limit is one percent of total population captured in the intake canal for a calendar year. Where one percent is not a whole number, then the number will be rounded to the next higher whole number. In this case, over 500 green and loggerhead turtles have been captured at the site to date, therefore, the incidental take limit would be calculated to be six injuries or mortalities causally related to plant operation. Total incidental take limit is not final until the end of the calendar year.

### **CAUSE OF THE EVENT**

The necropsy of the turtle indicated that there was an increased velocity wound to the plastron penetrating into the coloem. This type of injury suggests that the injury could have occurred during the turtle's passage through the intake pipe. Other possibilities include a wave surge incident at the velocity caps or at the near shore reefs that these turtles are known to inhabit. The injury could also have occurred after the turtle's arrival into the intake canal.

A visual inspection of the velocity caps by divers on June 16, 2003 showed no gross abnormalities that would have contributed to the incident. A review of the weather conditions, which could have generated wave surge at the time of the event, indicated that wind conditions were not abnormally high.

The injuries could have occurred inside the intake pipe itself, but as mentioned above, over 500 turtles have entered the canal year to date, and no incident of this magnitude occurred prior to or following this event. The relatively small size of the turtle suggests that, if the incident occurred in the pipe, it might be a bio-fouling issue, such as barnacle or shell growth.

Dredging of the intake canal in 2002 reduced current velocities in that area to the point that this type of injury should not occur in the canal itself.

#### **CORRECTIVE ACTIONS**

Sea turtle condition upon capture will continue to be monitored and documented. Further evidence of this type of injury will be evaluated for possible relationship with size and species of turtle captured and potential plant operational characteristics.

#### **AGENCIES NOTIFIED**

The Florida Fish and Wildlife Conservation Commission was notified of the injured turtle as per the National Marine Fisheries Service Biological Opinion for St. Lucie Plant operation, issued May 4, 2001, and plant procedures.

A four-hour notification was made to the NRC at 1035 hours on March 15, 2003 as per 10 CFR 50.72(b)(2)(vi) for the transfer of the turtle to the rehabilitation center. An updated report was made to the NRC and the Florida Fish and Wildlife Conservation Commission on June 26, 2003 after FPL was notified of the sea turtle mortality.