



Florida Power & Light Company, 6351 S. Ocean Drive, Jensen Beach, FL 34957

September 14, 2000

L-2000-187  
10 CFR 50.36b  
EPP 5.4.2


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  
Date of Event: August 16, 2000  
Non-Routine Environmental Report

The attached report is being submitted pursuant to the requirements of Section 5.4.2 of the St. Lucie Units 1 and 2 Environmental Protection Plans. The attached provides a description of the sea grass intrusion event that caused a unit downpower.

Should there be any questions on this information, please contact us.

Very truly yours,

  
Rajiv S. Kundalkar  
Vice President  
St. Lucie Plant

RSK/GRM

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, St. Lucie Plant

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### **SEA GRASS INTRUSION IN THE ST. LUCIE PLANT INTAKE CANAL**

An influx of sea grass into the St. Lucie Plant intake canal increased to the point that Unit 2 had to be downpowered to approximately 56% on August 16, 2000 at 0810 hrs. The downpower was in response to increased differential pressure across the 2A1 and 2A2 travelling screens. Unit 2 returned to 100% power August 17, 2000 at 0835 hrs. The increase in sea grass and subsequent effect on plant operation prompted a 72-hour notification to the NRC, pursuant to Section 4.1 of the Environmental Protection Plan (EPP), Operating License Appendix B, on August 17, 2000, at 1202 hrs.

The sea grass intrusion was composed of several species of green and red algae, which usually grow attached to hard bottom in the Atlantic Ocean. This algae often detaches and drifts with the currents and is considered a natural phenomenon although this is the first time in the operating history of St. Lucie Plant that algae has appeared in quantities that affected plant operation.

The 5-inch mesh sea turtle barrier net in the intake canal also had to be lowered August 14, 2000, due heavy sea grass loading. This net was installed near the intake headwall to retain sea turtles in a small area of the canal so they can be quickly captured and removed. The design of this net allows it to be lowered under such circumstances to reduce the possibility of damage to the net and its anchoring system. The recently upgraded 8-inch back-up net, located just downstream of the 5-inch net, has been effective in retaining turtles near the entrance of the canal and away from plant intake wells. Both nets performed satisfactorily as designed.

Plant Operations and Maintenance personnel took appropriate action to mitigate the effect of sea grass loading on plant intake systems by throttling circulating water pumps, continually running the travelling screen system and increasing screen wash flow. Sea grass from screenwash was collected in baskets to reduce re-entry into the intake system. Heat exchanger strainer backwash frequency and duration were also increased. These actions should minimize the impact of sea grass on the plant operation and help prevent a downpower event due to sea grass in the future.