

May 9, 1973

Regulatory

File Cy.

Mr. A. Giambusso, Deputy Director  
for Reactor Projects  
Directorate of Licensing  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

Dear Mr. Giambusso:

Re: Turkey Point Plant Units 3 and 4  
Docket Nos. 50-250 and 50-251



In accordance with paragraph 4.0 A.1.i. of Appendix B, Environmental Technical Specifications (ETS), issued with Facility Operating License DPR-41 on April 10, 1973, Florida Power & Light Company hereby submits in three signed originals and 19 additional copies the program established for assessment of impacts from turbidity in discharged water from the cooling system defined in ETS 1.0 d.

A grid of sampling points has been established to include the area potentially affected should any turbid discharges occur. The grid also includes enough of the surrounding area to provide an unaffected zone for comparison. The grid is located on a series of concentric circles about the outfall selected by predicting the most distant points where turbidity increases could be  $0.9\Delta T$ ,  $0.5\Delta T$ , and  $0.1\Delta T$ . Sampling stations are located at the intersections of these concentric circles with transect lines radiating from the outfall.

Data will be taken in accordance with the following program if turbid waters (in excess of 10 JTU above ambient) from the operation of the licensed facilities or from construction and testing of the cooling system are being discharged to receiving waters (i.e., Card Sound or Biscayne Bay) as a result of:

- (A) A once-through cooling mode being used, or
- (B) Institution of other modes of operation involving discharges into either Card Sound or Biscayne Bay.

#### 1. TURBIDITY MEASUREMENT AT CANAL MOUTH

Turbidity will be measured at the mouth of Card Sound Canal and/or Grand Canal in accordance with ETS 3.0 3.

#### 2. OTHER TURBIDITY MEASUREMENTS

Samples taken at the grid locations described above will be used to prepare a map showing location and relative turbidity

of the area. Any significant and contributory physical condition occurring at the time will also be recorded. For example:

- a. High Winds - direction and velocity
- b. Waves - when they could be a significant influence on the turbidity of the area.
- c. Silt Barriers - if present, shall be noted along with their location in relation to the turbid areas.

The location, time and date of collection of the samples will also be recorded.

### 3. SAMPLE COLLECTION PROCEDURES

Turbidity samples will be collected from the top two feet of water. Enough samples will be taken during any given sampling to insure that the samples are statistically valid and representative of the area in which turbidity occurs.

Equipment such as the Hach model 2100A turbidimeter will be used for measurements. The units of measure will be formazene turbidity units. (Calibration of instrument based on a ratio of 5 grams of hydrazene sulfate and 50 grams of hexamethylene teramine and one liter of distilled water, after standing for 48 hours. This gives a standard of 4000 JTU.)

Before measurement, the sample will be shaken vigorously to counteract settling of particles in the sample bottle. Air bubbles will be allowed to come out of the sample before measurements are made.

### 4. PARAMETERS FOR ASSESSMENT OF THE IMPACT OF SEDIMENTATION ON MARINE ECOSYSTEMS (To begin as soon as conditions (A) or (B) above continue or are expected to continue for more than one month)

A square meter will be permanently staked out on the estuary bottom near each sample location. The square meter will be divided into four equal quadrants.

Located near but not within the quadrant, a one-half inch thick layer of silica sand will be put on the bottom in an area two feet square. It is to be of grain size which closely meets the grain size of sediments already on the bottom.

#### 4.1 Species Composition

Once a month the number and species of the macroalgae and selected fauna in each of the quadrants shall be determined. The counts for each of the four quadrants in each square meter are to be kept separately.

#### 4.2 Growth Rates

The blade width, length, and blades per plant and the rate of growth of a representative number of blades is to be determined for the dominant grass Thalassia in a 10 centimeter square area of each square meter.

The height, diameter, and other applicable measurements of coelenterates and porifera in each square meter will be made each month.

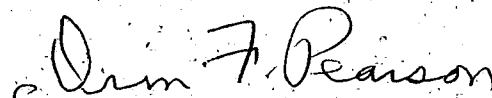
#### 4.3 Benthic Infauna

Every other month a sample of the benthic infauna will be collected at each station and analyzed as described in ETS 4.0 A.1.a.

#### 4.4 Sedimentation Rate

Every month a two-inch diameter core will be made of clear plexiglass tube in each of the two-foot square areas where silica sand was put down. The deposit of the sediment above silica sand will be measured. The type of sediment will be described. This will be correlated with changes in the epibenthic fauna, benthic infauna, macroalgae, porifera, and coelenterates.

Yours very truly,

  
for James Coughlin  
Vice President

JC:rp

cc: Mr. Jack R. Newman