FLORIDA POWER & LIGHT COMPANY

November 16, 1976
L-76-397

Central Files
50-389

Norman C. Moseley, Director
Office of Inspection and Enforcement, Region II
U. S. Nuclear Regulatory Commission
230 Peachtree Street, N. W., Suite 818
Atlanta, Georgia 30303

Dear Mr. Moseley:

Re: IE:II:DHD
50-389/76-2

Florida Power & Light Company has reviewed the subject inspection report and has determined that it contains no proprietary information.

Yours very truly,

Robert E. Uhrig
Vice President

REU/LLL/hlc

cc: Jack R. Newman, Esq.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 818
ATLANTA, GEORGIA 30303

NOV 2 1976

In Reply Refer To:
IE:II:DHD
50-389/76-2

Florida Power and Light Company
ATTN: Dr. R. E. Uhrig, Vice President
of Nuclear and General Engineering
P. O. Box 013100
9250 West Flagler Street
Miami, Florida 33101

Gentlemen:

This refers to the inspection conducted by Mr. D. H. Danielson of this office on September 22-24, 1976, of activities associated with your application for an NRC Construction Permit for St. Lucie Plant, Unit 2 and to the discussion of our findings held with Mr. B. J. Escue at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection we identified no significant deviations from the requirements of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants," of the NRC regulations.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you submit a written application to this office requesting that such information be withheld from public disclosure. If no proprietary information is identified, a written statement to that effect should be submitted. If an application is submitted, it must fully identify the bases for which information is claimed to be proprietary. The application should be prepared so that information sought to be withheld is incorporated in a separate paper and referenced in the application since the application will be placed in the Public Document Room. Your application, or written statement, should be submitted to us within 20 days. If we are not contacted as specified, the enclosed report and this letter may then be placed in the Public Document Room.

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Very truly yours,

C. E. Murphy, Chief
Reactor Construction and Engineering
Support Branch

Enclosure:
IE Inspection Report No.
50-389/76-2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 818
ATLANTA, GEORGIA 30303

IE Inspection Report No. 50-389/76-2

Licensee: Florida Power and Light Company
P. O. Box 013100
Miami, Florida 33101

Facility Name: St. Lucie Unit 2
Docket No.: 50-389
License No.: Pending
Category: A1

Location: Hutchinson Island, Florida

Type of License: 800 Mwe (CE)

Type of Inspection: Routine, Unannounced, Construction

Dates of Inspection: September 22-24, 1976

Dates of Previous Inspection: July 28-30, 1976

Principal Inspector: D. H. Danielson, Reactor Inspector
Projects Section
Reactor Construction and Engineering
Support Branch

Accompanying Inspector: R. W. Wright, Reactor Inspector
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

Other Accompanying Personnel: None

Principal Inspector: V. L. Brownlee for 10/29/76
D. H. Danielson, Reactor Inspector Date
Projects Section
Reactor Construction and Engineering
Support Branch

Reviewed By: L. E. Foster for 10/29/76
J. C. Bryant, Chief Date
Projects Section
Reactor Construction and Engineering
Support Branch

SUMMARY OF FINDINGS

I. Deviations

None

II. Licensee Action on Previously Identified Deviations

None

III. New Unresolved Items

None

IV. Status of Previously Reported Unresolved Items

None

V. Design Changes

None

VI. Unusual Occurrences

None

VII. Other Significant Findings

None

VIII. Management Interview

On September 24, 1976, the inspectors met with Mr. B. J. Escue, Project Construction Superintendent, and members of the plant staff to review the scope and findings of the inspection. It was noted that within the scope of the inspection we identified no significant deviations from the requirements of 10 CFR 50, Appendix B.

DETAILS I

Prepared by: _____ 10/27/76
R. W. Wright, Reactor Inspector Date
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

_____ 10/27/76
D. H. Danielson, Reactor Inspector Date
Projects Section
Reactor Construction and Engineering
Support Branch

Dates of Inspection: September 22-24, 1976

Reviewed by: _____ 10/27/76
T. E. Conlon, Chief Date
Engineering Support Section No. 1
Reactor Construction and Engineering
Support Branch

1. Persons Contacted

a. Florida Power and Light Company (FP&L)

B. J. Escue - Project Construction Superintendent
N. T. Weems - Assistant QA Manager, Construction
A. M. Anderson - QA Engineer, Electrical
R. H. Roehn - QA Engineer
T. Page - QA Engineer, Civil
D. R. Stone - Project QC Supervisor
R. G. Reesby - Area QC Supervisor (Civil)
G. L. Chibas - Receiving Inspection QC Supervisor
C. Carlo - HQ:QC Coordinator, Construction (Civil)

b. Contractor Organizations

(1) Ebasco Services, Inc. (Ebasco)

J. E. Ramondo - Project Superintendent
J. C. Murphy - Senior Resident Engineer
G. F. Goodheart - Site Soils Engineer

(2) Moretrench American Corporation (MAC)

C. L. Williams - Project Superintendent

2. Scope

This inspection was conducted to determine the status of the licensee's LWA-2 construction activities; to perform a followon inspection of his site preparation activities by observation of such functions and review of associated quality records.

3. Status of Work

The contractor had excavated to within a few feet of grade (el-25.5) inside the reactor containment building (RCB) cofferdam. The final ring of the cofferdam has been installed and scheduling personnel anticipate the 5-inch mud mat will be poured around mid October. The first base mat pour is tenitively scheduled for mid November. The major emphasis has been placed on the RCB cofferdam excavation; consequently minimal progress has been accomplished on the intake structure cofferdam.

4. Observation of Work Activities

a. Excavation

Final excavation was observed being accomplished with a bulldozer working inside the RCB cofferdam loosening, shaping and piling up the excess soil which was then loaded into a dump truck with a crane operated clam shell bucket located outside the cofferdam. The excavation material was then hauled to a spoil area. The IE inspector observed QC soil inspectors employing a Troxler Model 3411 Moisture-Density Gauge along the periphery of the RCB cofferdam excavation. The excavation surface was at grade and the contractor wanted the testing accomplished (in-place soil moisture and density) in order to measure the efficiency of a CM21 Wisconsin Vibro Plus compactor that was being used. In addition to the in-place moisture-density testing, bag samples from the same soil testing location were taken for gradation and proctor testing. Discussions with the QC soil supervisor revealed that adequate foundation soils would be confirmed by sufficient soils testing prior to the placing of any concrete.

b. Dewatering System

The proposed dewatering system was found complete and operational in accordance with specification FLO 2998.472 (Rev. 5) and Moretrench American (MAC) drawings. Two functional piezometers (R_1 and R_2) were installed on the inside of the RCB cofferdam next to the north and south faces of the sheet piling.

Discussions were conducted with Ebsco's senior resident engineer, his site soils engineer and the MAC project superintendent concerning the daily monitoring of piezometers within the construction area. Samples of recent readings taken, the plotting of weekly piezometric surface profiles through the excavation examined and discussion with above personnel gave assurance that the actual field conditions were continually being evaluated and compared to theoretical design conditions. Piezometric readings taken to date did indicate the need for 4 additional wells to be installed outside the RCB cofferdam at the south end. The dewatering contractor was in the process of mobilizing his equipment for this purpose and he planned to install another piezometer between the RCB cofferdam and Unit No. 1's auxiliary building to better define the piezometric level in that area.

5. Review of Quality Records

The following quality records were selected for review to ascertain that the work was being accomplished and documented in accordance with applicable codes, commitments and procedural requirements:

a. Soils - RCB Cofferdam Excavation

Excavation Work Package 102A - Sample and Test for Classification

Line item 240 - 260, Sample E1-2.0; Line item 250 - 260, Sample E1-9.5 and E1-11.0; Line item 260 - 270, Sample E1-14.0

b. Dewatering System

(1) Pumping test records for the following well numbers; 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 83, 85, 87, 89, 91, 93 to assure that the developed wells did not produce more than 5 ppm solids in a 2-hour pumping period.

(2) Piezometer installation (R1 and R2) and testing records verifying their operability.

(3) Initial Surveillance Inspection Checklist for the dewatering system conducted August 27, 30, 1976.

(4) Monthly Inspection - Review of dewatering system main site.

c. Audit of Contractor's Operating Procedure COP-2-1 Rev. 2

The IE inspector examined FP&L's QA checklist of questions and findings pertaining to an audit conducted on September 15, 1976, on Raymond International's procedure entitled, "Sheet Pile and Excavation."

d. Personnel records for several concrete - soils type QC inspectors were examined for their work qualifications, certifications and history of their jobsite training acquired.

6. Nondirected Inspection Activity

a. Training

Discussions were conducted with the project QC supervisor and his training coordinator to determine what training had been accomplished to date, and what was planned for the future in the civil discipline area. FP&L's site QC department has developed, on its own, a reference library of video tape recordings for training on various concrete and soils subjects and testing methods as precribed by acceptable ACI, ASTM or AASHTO standards. The IE inspectors randomly selected three video tapes for showing and review of content. They were ASTM-C-173, "Air Content of Concrete - Volumetric;" AASHTO-T-217, "Moisture Content--Speedy;" and ASTM-A-615, "Steel Bars for Concrete Placement." The majority of the subject tapes are all inclusive while some are supplemented by classroom lecture. QC inspector comprehension of the subject matter is gauged by written examinations. FP&L has developed a broad, three phase training program designed to handle a variety of job personnel situations and the program has definite training objects in mind.

b. Receiving Inspection

The IE inspectors witnessed the receiving inspection of a truck load (containing 2-heats) of reinforcing steel shipped by Florida Steel Corporation. The shipment was held in abeyance until the QC supervisor of receipt inspection completed a Receipt Inspection Report (RIR) which contained accept/reject criteria in accordance with requirements specified in the purchase order or specification. Upon meeting the RIR acceptance criteria (proper identification and marking, manufacturer documentation, mill test reports of chemical and mechanical analysis, inspection for physical damage and dimensions, etc.), a letter of release for storage was authorized by the project QC supervisor. The subject rebar was observed being unloaded

and placed in a "hold" storage area. All rebar has been placed in a "hold" category pending satisfactory tensile testing of the manufacturers representative samples. The tensile testing is being performed by an independent testing laboratory. FP&L does not have a tensile testing device installed on site to-date.

Within the scope of this inspection, no significant deviations from the LWA-2 authorization were identified.