



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

JUL 05 1984

Report Nos.: 50-335/84-22 and 50-389/84-24

Licensee: Florida Power and Light Company  
9250 West Flagler Street  
Miami, FL 33101

Docket Nos.: 50-335 and 50-389

License Nos.: DPR-67 and NPF-16

Facility Name: St. Lucie 1 and 2

Inspection Date: June 18-22, 1984

Inspection at St. Lucie site near Ft. Pierce, Florida

Inspector: John R. Wray  
J. R. Wray

7/3/84  
Date Signed

Approved by: G. R. Jenkins  
G. R. Jenkins, Section Chief  
Division of Radiation Safety and Safeguards

7/3/84  
Date Signed

SUMMARY

Area Inspected

This routine unannounced inspection involved 32 inspector-hours on site in the areas of transportation of radioactive materials, solid radwaste management, QA audits, area radiation monitoring system, surveys, and the ALARA program.

Results:

No violations or deviations were identified.

## REPORT DETAILS

### 1. Persons Contacted

C. M. Wethy, Plant Manager  
\*J. H. Barrow, Operations Superintendent  
\*H. F. Buchanan, Health Physics Supervisor  
\*A. W. Bailey, QA Operations Supervisor  
\*J. A. Dyer, Quality Control Engineer  
\*J. L. Danek, Corporate Health Physicist  
\*R. M. McCullers, Health Physics  
L. L. Large, Health Physics  
R. B. Somers, Health Physics

NRC Resident Inspector

\*C. D. Feierabend, Senior Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on June 22, 1984, with those persons indicated in Paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Transportation of Radioactive Material (86721)

The inspector selectively reviewed radwaste shipping records for 1984. The records appeared to be complete. The licensee maintained records of certificates of compliance for shipping casks they are authorized to use. The inspector verified that the licensee maintains current copies of licenses for those licensees to whom they ship radioactive material. No limits specified by the certificate were exceeded.

Records indicate that the licensee has properly selected appropriate packaging, adequately filled, loaded, marked, and labeled shipments, and monitored radiation and contamination levels of the packages and vehicles prepared for transport. The inspector verified that the licensee had established and maintains adequate management control of radwaste shipments including audits and training of personnel. The inspector had no further questions.

5. Solid Radwaste Management (84722)

The inspector reviewed the licensee's solid radwaste program for compliance with the regulations and Technical Specifications. The requirements for a Process Control Program are contained in Technical Specification 6.13 (Unit 2) and 6.17 (Unit 1). Technical Specification 6.9.1.10 (and 10 CFR 50.36(a)) require periodic reports of solid waste (as defined in 10 CFR 61) shipped offsite during the report period. These reports include volume, curie content, principle radionuclides, waste types, container type, and solidification agent if applicable. Technical Specifications 6.8.1.g and 6.5.2.8.j, require written procedures for and biennial audits of the Process Control Program respectively. Administrative Procedure 0520025 describes the site Process Control Program. Health Physics Procedures HP-40, "Shipment and Receipt of Radioactive Material," and HP-47, "Classification of Radioactive Waste Material for Land Disposal," provide details to comply with the requirements of 10 CFR 61, 10 CFR 71, and 49 CFR. Operating Procedure 0520023, "Dewatering Radioactive Bead Resins," provides requirements for radwaste dewatering of spent resins.

The inspector reviewed applicable procedures, QA Audit QSL-OPS-84-314 (dated May 1984), and Technical Specification required reports. No violations or deviations were identified. Radwaste shipping records for shipments 84-01T through 84-70 were selectively reviewed for compliance with procedures and the regulations. The inspector verified that waste manifests were prepared pursuant to 10 CFR 20.311, that wastes were classified in accordance with 10 CFR 61.55 and HP-47, and that the waste met the characteristics of 10 CFR 61.56 for those records reviewed. The licensee has established QA audit functions and QC reviews and holdpoints on each shipment in accordance with 10 CFR 61.55 and 10 CFR 61.56 and 10 CFR 20.311(d)(3). The inspector observed packages prepared for shipment marked with the class of waste pursuant to 10 CFR 20.311(d)(2). No violations or deviations were identified.

6. QA Audits (83724, 83726, 84722, 86721)

During an inspection May 14-18, 1984, licensee audits of the health physics program conducted by the site Quality Control department and the Corporate Health Physics group were reviewed. During this inspection, audits of the health physics program performed by the site Quality Assurance department pursuant to Technical Specification 6.5.2.8 were examined. The following audits were reviewed:

5/84	QSL-OPS-84-314	Process Control Program U-1 TS 6.17 U-2 TS 6.13
9/83	QSL-OPS-83-289	Environmental Protection Plan
12/83	QSL-OPS-83-296	Special Nuclear Material

11/83 QSL-OPS-83-292

Administrative Controls  
TS Section 6.0

The inspector agreed with the findings and corrective actions. No violations or deviations were identified.

7. Area Radiation Monitoring System (83726, 92706)

Unit 1 Technical Specification Table 4.3-3 establishes the channel check, channel calibration, and channel functional test frequencies for the Fuel Storage Pool Area, Containment (CIS), and Containment High Range Radiation (CHRRM) monitors in unit 1. Unit 2 Technical Specification Table 4.3-3 establishes the check, calibration, and functional test frequencies for the Fuel Storage Pool Area, Containment Isolation, Control Room Isolation, and Containment High Range Area Monitors in Unit 2. Operating Procedure 1-1120060, "Area Radiation Monitoring System (ARMS), Calibration of", provides instructions for calibrating the Unit 1 Fuel Storage Pool Area and CIS radiation monitors. Operating Procedure 2-1120060, "Calibration of the PSL-2 Area Radiation Monitoring System," provides requirements for calibration of each Unit 2 Technical Specification area radiation monitor. Operating Procedures 1-1120050 and 2-1120050, provide requirements for performing periodic tests of the Technical Specification monitors for Units 1 and 2 respectively. I&C Procedure 1-1120070 provides methodology for electronically calibrating the Unit 1 CHRRM up to full scale. Health Physics Procedure HP-13M provides instructions for a calibration check of the CHRRM to a radiation source on a low scale. Each shift, a control room operator performs a channel check of the Technical Specification area radiation monitors and records his findings in the RCO log book.

During this inspection, the inspector reviewed the following documents and completed procedure data sheets for the specified time periods for compliance to Technical Specification requirements:

<u>Document</u>	<u>Unit Applicability</u>	<u>Review Time Period</u>
RCO log	1 & 2	6/1/84 - 6/19/84
OP1-1120050	1	1/84 - 5/84
OP2-1120050	2	4/83 - 5/84
OP1-1120060	1	4/84
I&C 1120070	1	4/17/84

The inspector determined that monitor checks, calibrations, and functional tests of Technical Specification area radiation monitors for both units have been performed in accordance with the requirements. No violations or deviations were identified.

## 8. Surveys (83726, 83724)

The inspector reviewed the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive material storage areas, and the labeling of radioactive material during tours of the plant. The posting of notices, as required by 10 CFR 19.11, was examined by the inspector and appeared to meet the requirements. No violations or deviations were observed.

Health Physics Procedure HP-71, "Decontamination of Tools, Equipment and Areas," specifies the limits for contamination in clean areas. On June 20, 1984, the inspector accompanied by a licensee representative surveyed the following plant site areas outside of the radiation control area for compliance to release limits and postings required by 10 CFR 20.203.

Unit 1	Stores Covered work area Mechanical maintenance tool room I&C shop I&C valve room Electrical shop Lunch room Maintenance areas back of Service Building Water plant area All elevations of Turbine Building Vending machine area Yard between Turbine and Service Buildings
Unit 2	Stores All elevations of Turbine Building Backfit Tool Room Backfit Shops Backfit yard areas
Units 1 & 2	Common access area between Turbine Buildings

No violations or deviations were identified.

10 CFR 20.205 requires radiation and contamination surveys to be performed on a package upon receipt, if the package contains radioactive material in excess of specified limits. Health Physics Procedure HP-40, "Shipment and Receipt of Radioactive Material", establishes the requirements for receipt surveys. The inspector reviewed package receipt surveys (form HP-40.1) from December 1983 through May 1984. No violations or deviations were identified.

Technical Specification 3/4.7.10 requires each licensee to conduct contamination surveys of each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material at specified time intervals. Each source is required to be free of greater than or equal to 5 microcuries

of removable contamination. Health Physics Procedure HP-10 addresses sealed source surveys. The inspector examined records of surveys performed pursuant to Technical Specification 3/4.7.10 (form HP-10) for 1984. No violations or deviations were identified.

9. Alara Program (83728)

Administrative Procedure 3300120, "St. Lucie Plant ALARA Program", describes the licensee's ALARA program. Station personnel responsibilities and organization is defined. An ALARA committee is described with representation from all major plant departments. Based on discussions with licensee representatives and review of records, the inspector concluded that the program has adequate corporate and site management support. The ALARA group reviews radiation work permits and conducts pre- and post-job evaluations.

The inspector examined a final report of the man-rem expenditures for the 1983-84 Unit 1 Refueling, Thermal Shield Removal, Core Support Barrel Repair Outage. Total exposure was 1965.1 man-rem which represented over 211,000 man hours of work. This averaged 0.009 man-rem per hour worked on the project. Previous year's refueling outage values ranged from a previous low of .011 Man-Rem per hour worked in 1979 to a high of 0.023 man-rem per hour worked during the 1982 outage. Although the total man-rem of 1965.1 far exceeds the previous site man-rem high of 720 in 1981, the relatively low man-rem per hour worked value suggests exposures were kept as low as reasonably achievable in light of the length and scope of the outage. The inspector had no further questions.