UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-335/79-20

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

Facility: St. Lucie

Docket No. 50-335

License No. DPR-67

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

Inspectors: R. W. Zavadoski — 9/21/79 Date Signed

for J. R. Wray — 9/21/79 Date Signed

Approved by: A. F. Gibson, Section Chief, FFMS Branch — 9/21/79 Date Signed

SUMMARY

Inspection on August 20-24, 1979

Areas Inspected

This routine unannounced inspection involved 69 inspector-hours onsite in the areas of reactor coolant chemistry, liquid radioactive effluent control, gaseous radioactive effluent releases, procedures for controlling effluent releases, records and reports of radioactive effluents, liquid and gaseous monitor calibrations, testing of air cleaning systems and solid radioactive wastes.

Results

Of the eight areas inspected, no apparent items of noncompliance or deviations were identified in six areas, three apparent items of noncompliance were found in two areas (improper use of a certified cask (paragraph 10.a), improper classification of solid shipments (paragraph 10.b), invalid testing of engineered safety features filter (paragraph 9).

DETAILS

1. Persons Contacted

Licensee Employees

*C. M. Wethy, Plant Manager
*J. H. Barrow, Operations Superintendent
H. F. Buchanan, HP Supervisor
*C. A. Moore, Project Manager
*R. J. Frechette, Acting Chemistry Supervisor
*H. M. Mercer, Health Physics
*A. W. Bailey, QA Operations Supervising Engineer
*N. G. Roos, Acting QC Supervisor
*J. E. Bowers, Maintenance Supervisor
*R. R. Jennings, Technical Supervisor
*P. L. Fincher, Training Supervisor
*J. A. Sager, Technical Staff Engineer
*A. J. Collier, I&C Supervisor

Other licensee employees contacted included seven technicians, two operators, and three office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 24, 1979 with those persons indicated in Paragraph 1 above. Items discussed included the items of noncompliance regarding improper use of a certified shipping cask (paragraph 10.a), improper classification of solid waste shipments (paragraph 10.b), and invalid testing of engineered safety features filter systems (paragraph 9). The first two items were acknowledged by the Plant Manager. The third item of noncompliance was denied.

3. Reactor Coolant Chemistry

a. Technical Specification Table 3.4-1 lists the maximum coolant concentration limits for dissolved oxygen, chloride and flouride when the coolant temperature is above 250° F. Sampling frequencies are specified in Technical Specification Table 4.4-3. The inspector reviewed plant chemistry records for the period August 1978 through August 1979 and verified that the required tests were performed at the specified frequencies and that the results were within the appropriate limits. The inspector had no further questions.

b. Technical Specification 3.4.8 specifies the limit for specific activity of the reactor coolant system. Technical Specification Table 4.4-4 specifies the sampling frequencies for gross activity and determination. The inspector reviewed plant chemistry records for various periods

during calendar year 1979 and verified that specified analyses were performed as required by the Technical Specifications and that the results were within limits, where applicable. The inspector reviewed a change to Procedure C-45B, Rev. 3, dated July 10, 1978 which states that "isotopic anslysis may be utilized to determine Gross Activity by summation of the individual isotopic concentrations" in lieu of using liquid scintillation. The inspector informed a licensee representative that analysis log sheets report Gross Activity as the sum of gamma and beta activities and that if isotopic analysis is used to determine Gross Activity per Procedure C-45B, Rev. 3, no beta activity would be included. This item will be investigated in further detail in subsequent inspection (79-20-04).

c. Technical Specification 3.4.8 specifies the limit for dose equivalent iodine-131 concentration in reactor coolant system. Technical Specification Table 4.4-4 specifies the minimum sampling frequency for isotopic analyses for Dose Equivalent I-131 concentration and I-131, I-133, and I-135. The inspector reviewed the plant chemistry records for the period August 1978 through August 1979 and verified that the required tests were performed at the specified frequency and that the results were within limits. The inspector had no further questions.

4. Liquid Radioactive Effluent Control

The inspector examined selected liquid release permits for the period August 1978 to August 1979. Based on these examinations and subsequent discussions with licensee representatives, the inspector determined that the licensee appeared to be in compliance with the requirements of Technical Specification 2.4.1a, b, and c relating to:

(1) instantaneous release limits

(2) cumulative release limits

(3) establishment of alarm setpoints for the effluent control monitor

(4) activity in radwaste tanks

(5) sampling and analysis of liquid radwastes.

5. Gaseous Radioactive Effluent Releases

The inspector examined selected gaseous release permits, gaseous waste management running logs and licensee scheduling records for the period November 1, 1979 through July 31, 1979. Based on the records reviewed and discussions with licensee representatives, the licensee appeared to be in compliance with Appendix B Technical Specifications requirements related to:

(1) noble gas instantaneous, quarterly, and annual release rates.

(2) release rates for radioiodines

(3) establishment of gaseous waste monitor alarm settings

(4) maximum activity in decay tanks

(5) sampling and analysis of radioactive material in gaseous wastes.

The inspector also verified that adequate meteorological information was available during a release. No items of noncompliance or deviations were identified.

6. Procedures for Controlling Effluent Releases

The inspector reviewed revised Chemistry Department procedures for calendar year 1979. The inspector had no comments on the procedure content or comments concerning recent revisions. Based on a review of the procedures and discussions with licensee representatives, the inspector determined that revised procedures received the reviews and approvals required by licensee procedures. The aforementioned procedures required that each of the liquid and gaseous releases be done under a permit system. Based on a review of licensee release records for the period January 1978 to October 1978, the licensee appeared to be utilizing the permit system for all liquid and gaseous releases. No items of noncompliance or deviations were identified.

7. Records and Reports of Radioactive Effluents

The inspector verified from selected records of liquid and gaseous releases made during the period early 1979 to mid 1979, that records required by sections 2.4.1 and 2.4.4 of Appendix B Technical Specification were maintained. The inspector also noted that the licensee had submitted the Semiannual Radioactive Effluent Release Report for the period January 1, 1979 to June 30, 1979, as required by Appendix B Technical Specification 5.6.1. No items of noncompliance or deviations were identified.

8. Liquid and Gaseous Monitor Calibrations

Technical Specification 2.4.2(f) requires that liquid and gaseous effluent monitors be calibrated at least quarterly and functionally tested monthly. The inspector reviewed monitor calibration records, C-63 through C-69, (which include the condenser air ejector and liquid discharge monitors) for the period October 1978 to August 1979 and verified that all requirements of the Technical Specifications appear to have been met. No items of noncompliance or deviations were found.

9. Testing of Air Cleaning Systems

The inspector reviewed the records of surveillance requirements for (1) the Shield Building Ventilation System (HVE-6A and HVE-6B) covered by Technical Specification 4.6.6, (2) the ECCS Area Ventilation System (HVE-9A and HVE-9B) covered by Technical Specification 4.7.8, (3) the Control Room

Emergency Ventilation System (HVE-13) covered by Technical Specification 4.7.8 and (4) the Fuel Handling Building Ventilation System (HVE-16) covered by Technical Specification 4.9.12. The inspector also reviewed the results presented in a report entitled, "In-Place Testing of Nuclear Air Cleaning Systems, SLP #1," dated March 27 - April 5, 1979 and an addendum report entitled "Laboratory Tests," dated May 7, 1979. The inspector verified that all the in-place tests and laboratory tests for HVE-9A, HVE-9B, HVE-13, and HVE-16, as required by the Techncial Specifications had been performed and met the requirements. The inspector had no further questions or observations for these systems.

For the Shield Building Ventilation System (SBVS) Technical Specification Section 4.6.6.1.b requires that after any structural maintenance on the HEPA filter or charcoal adsorber housing, an in-place leak test of the adsorber and HEPA sections be performed in accordance with ANSI N510-1975. Section 10 of ANSI N510, entitled "In-Place Leak Test, HEPA Filter Banks," and Section 12 of ANSI N510, entitled "In-Place Leak Test, Adsorber Stage," describe the tests that were to be performed. Both sections 10 and 12 of ANSI N510 require that sections 8 and 9 of ANSI N510 be performed as prerequisites. Section 9.1 of ANSI N510 states "This test is prerequisite to the tests of Sections 10 and 12, in-place leak tests of HEPA filter and adsorber banks, respectively. The purpose of the test is to verify that tracer (DOP or refrigerant gas) injection and sample ports are located so as to provide proper mixing of the tracer in the air approaching the component stage (HEPA filter bank or adsorber stage) to be tested, or the sample plane. The test is made only upon completion of initial system installation, modification, or major repair, and is not required each time an in-place test of the filters or adsorbers is made. A valid in-place test is not possible without a uniform tracer-air mixture."

The two SBVS were each modified in April through June, 1978 by the addition of a 30 KW heater. The modification traversed the entire cross section of the HEPA filter and charcoal adsorber housings. In-place leak tests of the HEPA filter and charcoal adsorber banks were performed in June of 1978 and in March-April 1979. The prerequisite test (Section 9 ANSI N510, entitled Air-Aerosol Mixing Uniformity Test,") required by Sections 10 and 12 of ANSI N510 was not performed on either occasions, thus invalidating the tests that were made according to Section 9.1 of ANSI N 510. Licensee representatives could not identify any written record to justify the deletion of ANSI N510 Section 9 requirements. The inspector informed licensee representative that deletion of Section 9, ANSI N510, requirements was an item of noncompliance (79-20-01). Licensee representatives denied that the deletion of Section 9, ANSI N510 constituted an item of noncompliance. Licensee representatives stated that their architect engineer and filter testing consultant did not feel that the test was necessary. The inspector ascertained that no written evaluation had been performed by either the architect engineer or the filter testing consultant. The inspector told licensee representatives that (1) the final responsibility of meeting technical specification requirements rests solely with the licensee and (2) arbitrary deletion of testing requirements of a standard by their consultants did not relieve them of the responsibility of meeting their technical

specifications. Despite the denial of the item of noncompliance by the plant manager, the inspector maintained that failure to perform the test required by Section 9 of ANSI N510 was an item of noncompliance (79-20-01). The inspector had no further questions in this area.

10. Solid Radioactive Waste

a. Certified Casks

The inspector examined the solid radioactive waste shipment records for the year 1979. Through August 20, 1979, there were sixteen solid radioactive waste shipments from the site numbered consecutively 79-1 through 79-16. Two of the shipments involved the use of certified casks. Shipment 79-2 utilized a 14-195H shipping cask, certified by USNRC Certificate of Compliance Number 9094 (USA/9094/A) and shipment 79-4 utilized a 6-80 shipping cask, certified by USNRC Certificate of Compliance Number 9111 (USA/9111/A). Shipment 79-2 was made on March 24, 1979 and contained 4.13 curies of Groups III and IV material as defined by Apendix C of 10 CFR 71. Shipment 79-4 was made on April 14, 1979 and contained 51.47 curies of Groups III and IV material. Condition 6 of USA/9094/A requires that "shoring shall be placed between secondary containers ... and the cask cavity to prevent movement during normal conditions of transport" and condition 6 of USA/9111/A requires that "shoring shall be provided in the shipping cask cavity sufficient to prevent significant movement of the contents or secondary containers relative to the outer packaging under normal conditions of transport." From discussions with licensee representatives the inspector ascertained that neither the need nor the presence of shoring had been determined for shipments numbered 79-2 and 79-4. Previous inspection findings (see RII Report No. 50-335/78-25, page I-3, paragraph 8.a) identified a similar problem for past shipments where the conditions of a certificate of compliance were not being met and was classified as an item of noncompliance (50-335/78-20-02). The licensee's response to this item of noncompliance (see Florida Power and Light Company letter dated December 14, 1978, No. L-78-386) was to revise procedure HP-40, Shipping and Receipt of Radioactive Material, to help prevent recurrence. Revision 6 of HP-40 was reviewed by the FRG on January 30, 1979. The inspector informed licensee representatives that 10 CFR 71.12.b.1.ii requires that a person using a certified cask must comply with all the conditions of the license and that failure to do so for shipments 79-2 and 79-4 was a repeat item of noncompliance (79-20-02). The inspector had no further questions or observations in this area.

b. LSA Shipments

The inspector reviewed the detailed manifests for all LSA drum shipments from the site for the current year. The manifest for shipment 79-11, dated May 30, 1979 showed one undesignated drum weighing 185 pounds (last entry on page 2 of the manifest) containing 209 millicuries of mixed fission products (MFP) shipped as groups III and IV as defined by 10 CFR 71.4.p. The drum is certified for shipments of less

than Type A quantities, as defined by 10 CFR 71.4.q. The inspector informed licensee representatives that Appendix C to 10 CFR 71 defines MFP as group II and that the maximum amount of group II material that may be shipped in a Type A container is 50 millicuries. The inspector informed licensee representatives that delivering a drum to a carrier with more than Type A quantities in the drum was contrary to the requirements of 10 CFR 71.11.a.1 and was an item of noncompliance (79-20-03). The inspector had no further questions or observations in this area.

c. Semi Annual Report

The inspector verified that the amount and curies tabulated in the January 1, 1979 to June 30, 1979 Semi Annual Report for solid radwastes were accurate. The inspector had no further questions or observations in this area.

d. Solid Wastes Drumming Operations

In response to IE Bulletin No. 79-19, the inspector observed licensee low-level radioactive waste drumming practices and concluded that trash compaction procedures were being strictly followed. The licensee, at the request of the inspector, opened two drums of compacted low level waste ready for burial shipment and verified the contents and integrity of drums 79-796 and 79-760. It must be noted that at the time of this inspection, the formal response to IE Bulletin No. 79-19 had not been received. The written response to IE Bulletin No. 79-19 will be reviewed during a subsequent inspection. No items of noncompliance or deviations were identified.