



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

Report Nos. 50-250/82-26 and 50-251/82-26

Licensee: Florida Power and Light  
P. O. Box 529100  
Miami, FL 33152

Facility Name: Turkey Point 3 and 4

Docket Nos. 50-250 and 50-251

License Nos. DPR-31 and DPR-41

Inspection at Turkey Point site near Homestead, Florida

Inspectors:	<u>John R. Wray</u>	<u>7/28/82</u>
	J. R. Wray	Date Signed
	<u>John R. Wray</u>	<u>7/28/82</u>
	C. M. Hosey	Date Signed
Approved by:	<u>K. P. Barr</u>	<u>7/28/82</u>
	K. P. Barr, Section Chief	Date Signed
	Technical Inspection Branch	
	Division of Engineering and Technical Programs	

SUMMARY

Inspection on July 12-16, 1982

Areas Inspected

This routine, unannounced inspection involved 64 inspector-hours on site in the areas of licensee audits of radiation protection, procedures review, in-plant radiological surveys, radiation work permits, advance planning and preparation for Unit 4 steam generator replacement, radioactive effluent releases, preparation and shipment of radioactive material, training, posting, labeling and control of radiological areas, and followup on previous inspector identified items.

Results

In the areas inspected, no violations or deviations were identified.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*H. E. Yaeger, Site Manager
- \*D. W. Haase, Acting Plant Manager - Nuclear
  - P. W. Hughes, Health Physics Supervisor
  - J. L. Danek, Corporate Health Physicist
- \*S. C. Perle, Corporate Health Physics
  - J. S. Wade, Jr., Nuclear Chemistry Supervisor
- \*V. A. Kaminskis, Acting Operations Superintendent
- \*D. W. Jones, QC Supervisor
- \*T. Essinger, Assistant Manager - Quality Assurance
- \*S. M. Feith, Quality Assurance Operations Supervisor
- \*J. R. Bates, HP ALARA Supervisor
- \*R. M. Brown, HP Operations Supervisor
  - E. R. LaPierre, Radiochemist
  - D. E. Cooper, HP Shift Supervisor
  - J. H. Hopkins, Radwaste Supervisor
- \*R. M. Givens, Health Physics
- \*F. Marder, Health Physics

Other licensee employees contacted included five technicians, two operators, two mechanics, four security force members, and three office personnel.

#### NRC Resident Inspector

- R. Vogt-Lowell, Senior Resident Inspector
- \*J. Agles, Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on July 16, 1982, with those persons indicated in paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. (Closed) 80-17-32 Determination of Transport Groups I and II. The inspector reviewed results of analyses performed at Oak Ridge National Laboratory of several types of licensee waste material which indicated that no shipment

of radwaste would exceed DOT Transport Group I or II limits. A licensee representative stated that analyses may be repeated periodically to assure continued compliance. The inspector had no further questions.

(Closed) 82-05-02 More Frequent TLD Processing. A licensee representative stated that more frequent processing of TLDs will be performed during the Unit 4 Steam Generator Repair Project. The inspector had no further questions.

(Closed) 82-16-01 Calibrated PNR-4. The inspector reviewed calibration stickers on neutron rem-meters (PNR-4) ready for use and verified that calibrated instruments are available for containment entries at power. This item is closed.

(Closed) 82-16-03 Buckled Shipping Liner Disposal. The licensee conducted an analysis of the lifting lugs on the buckled liner which indicated that welding had to be performed prior to lifting for shipment and final disposition. During the inspection, the welding was completed. The inspector had no further questions.

(Closed) 82-16-04 Disposal of Contaminated Soil. The inspector reviewed onsite burial approval documents issued by NRR in response to the licensee request pursuant to 10 CFR 20.302(a). The inspector verified that the contaminated soil was disposed of onsite in a manner approved by NRR. The inspector had no further questions.

## 6. Licensee Audits

The inspector discussed the audit and surveillance program related to radiation protection, radioactive waste management and transportation with licensee representatives. An inspector reviewed the following Quality Assurance Operations Audits:

- QAO-PTP-81-09-359, Radioactive Material Releases, 9/8-17/81
- QAO-PTP-81-09-302, Personnel Radiation and Contamination Monitoring and Surveys, 9/16-29/81
- QAO-PTP-81-09-368, Inventory and Leak Testing of Sealed Sources, 10/20-29/81
- QAO-PTP-81-11-389, Cask Handling, 11/9/81
- QAO-PTP-82-04-404, High Radiation Areas, 4/16-23/82
- QAO-PTP-82-02-391, RWP and Respiratory Protection, 2/19-26/82

An inspector reviewed selected Quality Control surveillances in the areas of health physics activities, radioactive waste processing and shipments of radioactive waste to offsite burial facilities which were performed in 1981 and 1982. Quality control personnel performed a surveillance for each offsite shipment of radioactive waste.

The inspector evaluated the frequency, scope and followup action and had no further questions. No violations or deviations were identified.

The inspectors also reviewed an assessment of the plant's radiation protection program performed by personnel from the corporate health physics office in September 1981. This assessment included a review of procedures, records and operational or practical aspects of the plant's health physics program.

#### 8. Radiological Procedures

An inspector reviewed changes made to the following radiological protection procedures and verified that the changes were properly made and were consistent with regulations, technical specifications, and acceptable health physics practices:

- Health Physics Procedure HP-1, Radiation Work Permit, Approved July 1, 1982
- Health Physics Procedure HP-81, Health Physics Training, Approved May 13, 1982
- Health Physics Procedure HP-4, Scheduling of Periodic Health Physics Activities, Approved January 29, 1982
- Health Physics Procedure HP-80, Qualification of Health Physics Personnel, Approved September 3, 1981.

No violations or deviations were identified.

#### 9. Radiological Surveys

The inspectors selectively reviewed the records of radiation, contamination and airborne radioactivity surveys performed in 1982, discussed the survey results with licensee representatives, and observed health physics personnel performing surveys.

The inspectors performed independent radiation and loose surface contamination surveys in the auxiliary building, Unit 4 containment building, and in the restricted areas outside the radiation controlled area and verified that the areas surveyed were properly posted.

No violations or deviations were identified.

#### 10. Radiation Work Permits

The inspector reviewed active radiation work permits (RWP) for appropriateness of the radiation protection requirements based upon work scope, location, and conditions. During tours of the plant, the inspectors observed the adherence of plant workers to the RWP requirements. Particular attention was given to the performance of eddy current testing of a Unit 4 steam generator.

At the time of the inspection most RWPs were of a general nature rather than written for specific tasks. For example, RWPs were written to cover the repair of all valves in the auxiliary building, rather than a specific RWP to provide the radiological protection requirements unique to the repair of each valve. A licensee representative stated that they had intended for the RWPs to be very general and to provide requirements that would be applicable to all related activities covered by the RWP (e.g., minimum protective clothing requirements for repair of valves in the auxiliary building). Specific information such as additional clothing requirements, degree of additional health physics coverage required, special dosimetry and respiratory protection requirements, would be specified by the qualified radiation protection man (RPM) or technician assigned to cover the work. Radiological survey results are posted at the entrance to each room in the auxiliary building. An inspector stated that general RWPs were appropriate for entering area for observation, valve or breaker operations and inspections. Use of this type of RWP for most maintenance activities places the responsible RPM in the position of having to review the work to be done, specifying radiation protection requirements and determining the radiological surveys to be performed in the midst of overseeing other tasks being performed in his assigned area and other demands on his time by day-to-day activities. Consistency of requirements could also be a problem, without the standardizing influence of an RWP for specific jobs.

A licensee representative stated that they were reassessing the RWP program. He further stated that the licensee has begun implementing a program to minimize the use of general RWPs and to write specific RWPs for specific tasks. HP Procedure HP-1 was revised and approved on July 1, 1982, to strengthen the RWP system, by specifically detailing what tasks require specific RWPs. A licensee representative stated that implementation of a new RWP system, including requiring workers to sign in and out on RWPs would require approximately one year. An inspector stated that this schedule appeared not to be very timely and that the changes should be implemented for the upcoming steam generator replacement project. Plant management acknowledged the inspector's comments.

#### 11. Planning and Preparation for Unit 4 Steam Generator Replacements

The inspector reviewed the plant's health physics staff planning and preparation for the Unit 4 steam generator replacement project (SGRP) which will begin this fall.

Tentative plans call for augmenting the plant HP staff with 30-50 contractor personnel (excluding decon personnel), most of which will be senior health physics technicians. An additional 50-70 decontamination technicians will be utilized during the project.

The HP staff is in the process of reviewing the work package for the project and recommending changes which will keep radiation exposure ALARA. For example: the plant is considering using strippable coatings to decon the reactor cavity at a considerable estimated saving in man-rem rather than

deconing the cavity with water. Shielding for areas of the containment basement, near RHR lines, has been proposed to minimize exposure to personnel accessing the steam generators.

## 12. Radioactive Effluent Release

An inspector selectively reviewed radioactive liquid effluent release records for July 1982 and discussed the records with licensee representatives. Technical Specification 3.9.1 specifies the requirements related to release rates, sampling and analysis, release points and analysis for specific radionuclides. No violations or deviations were identified.

The inspector observed the installation of new in-line particulate, iodine and noble gas post-accident monitors for the plant vent, Unit 3 spent fuel pool exhaust and the steam jet air ejector. The old monitors are still in place and operating. The inspector noted that the sample lines for the new monitor contained a number of 90 degree elbows. Appendix B to ANSI Standard N13.1-1969, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities, recommends that elbows in sample lines be avoided if at all possible, but when they are required, the bend radius of the elbow should be as long as practical. An inspector stated that some of the 90 degree elbows could be easily eliminated by repositioning the monitor. A licensee representative stated that the effect of the elbows on sampling would be negligible at the system design flow rate, particle size anticipated, and the sample line diameter. However, the licensee representative stated that the plant would review the sample line design with the architectural engineering firm that did the initial design work.

The inspectors discussed with a licensee representative a problem which was discovered at another facility involving the correction of pressure differential between the main plant vent stream and the sample chamber in the off-line sample system. Reduced pressure in the sample chamber results in a reduction in the density of the sample chamber gas and a commensurate reduction in the quantity of gas in the chamber. This could result in significant errors in estimating radioactive gases released. A licensee representative stated that the plant's sampling system would be reviewed to determine if the same problem existed at the plant.

The inspector stated that the gaseous sampling system would be reviewed during a subsequent inspection (82-26-01).

## 13. Transportation Activities

The inspector reviewed plant procedure HP-43, Radioactive Material Receipt and Shipment, and discussed the procedure with licensee representatives.

10 CFR 71.62 specifies the records the licensee is required to maintain for each shipment of more than Type A quantity of radioactive material in a single package. The inspectors selectively reviewed the records of radioactive waste shipments to burial facilities in 1982. The licensee was maintaining the records required by 10 CFR 71.62. The inspectors also

verified that the licensee has a system for ensuring that the Department of Transportation is notified in the event of fire, accident, breakage or suspected contamination involving radioactive material when the licensee acts as the carrier.

The licensee has assigned the responsibility for ensuring that radioactive material leaving the site meet the requirements of DOT, the State of Florida and the NRC to an individual. This individual has attended seminars and industry workshops on the shipment of radioactive materials.

The inspector reviewed the shipping papers, inspected the shipping boxes and performed independent radiation surveys for a shipment of radioactive waste contained in eight boxes made on July 13, 1982. No violations or deviations were identified.

An inspector discussed the periodic maintenance of packages used for shipping radioactive material. The licensee does not use any company owned shipping packages. Therefore, they do not have a periodic maintenance program for packages. The packages used by the licensee are one-time use containers, or if reuseable are leased. The package owner maintains a quality assurance program for containers holding NRC certificates of compliance and thus, should perform periodic maintenance as necessary.

#### 14. Posting, Labeling and Control

The inspector reviewed the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity area, contamination areas, radioactive material areas and the labeling of radioactive material during tours of the plant. No violations or deviations were identified.

#### 15. Training

The inspectors reviewed the licensee's radiation protection orientation training program for workers, and toured the licensee training facilities. In addition to the classroom training the worker is required to dress out in protective clothing, perform a task in a simulated contaminated area, remove the protective clothing, and properly monitor for personnel contamination upon exiting the contamination area. The training appears to be well organized and appropriate. No violations or deviations were identified.