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

APR 20 1984

Report Nos.: 50-250/84-08 and 50-251/84-08

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

Docket Nos.: 50-250 and 50-251

License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point

Inspection at Turkey Point site near Homestead, Florida

Inspector: C. M. Hosey — 4/13/84 Date Signed

Approved by: G. R. Jenkins, Section Chief — 4/16/84 Date Signed
Emergency and Preparedness and Radiological Protection Branch
Division of Radiation Safety and Safeguards

SUMMARY

Inspection on March 19 - 23, 1984

Areas Inspected

This routine, unannounced inspection involved 35 inspector-hours on site in the areas of training and qualifications of radiation protection and chemistry staff, organization and management controls, external radiation exposure control, internal radiation exposure control, implementation of 10 CFR Part 61 and 10 CFR 20.311 changes and followup on previous enforcement matters and inspector identified items.

Results

Of the six areas inspected, no violations or deviations were identified in four areas; two apparent violations were found in two areas (failure to adhere to Technical Specifications requirements pertaining to procedures and failure of chemistry technicians in responsible positions to meet the minimum experience requirements).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

H. E. Yaeger, Site Manager
*C. K. Baker, Plant Manager Nuclear
*P. W. Hughes, Health Physics Supervisor
*J. S. Wade, Jr., Chemistry Supervisor
E. Hayes, I&C Support Supervisor
*M. J. Crisler, Quality Control Supervisor
*W. Bladow, Supervisor, Quality Assurance Operations
*J. Arias, Regulatory Compliance Engineer
*D. Grandage, Operations Support Supervisor
*J. A. Labarraque, Technical Department Supervisor
*E. R. LaPierre, Radiochemist
*R. M. Brown, Health Physics Operations Supervisor
*J. R. Bates, Health Physics ALARA Supervisor
*T. A. Coleman, Health Physics ALARA Supervisor
A. J. Gould, Radiochemistry and Waste Management (Corporate Office)

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

NRC Resident Inspectors

*T. A. Peebles, Senior Resident Inspector
*D. R. Brewer, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 23, 1984, with those persons indicated in paragraph 1 above. The inspector informed the licensee that failure of technicians performing chemical analyses and radioactivity effluent release measurements to have the minimum experience required by ANSI N18.1-1971 was an apparent violation of Technical Specification 6.3.1.

The inspector also informed the licensee that failure to have the revised operating procedure 11550.40 (HP-40), Shipping and Receiving Radioactive Material, reviewed by the Plant Nuclear Safety Committee, and approved by the Plant Manager - Nuclear prior to implementation and failure of the plant to complete the laboratory qualification guide, documenting the qualifications of chemistry technicians specified in Nuclear Chemistry Procedure NC-120 would be considered two examples of failure to comply with Technical Specification 6.8. The Plant Manager - Nuclear agreed to review chemistry technician qualifications and to take action to assure that technicians not

participating in on-the-job training who perform chemical analyses and radioactivity measurements have completed this lab qualification guide for the task they are performing. This action is to be completed as soon as possible, but in any case prior to April 6, 1984.

3. Licensee Action on Previous Enforcement Matters

   a. (Closed) Violation (83-31-03) Failure to Package LSA Material in Strong Tight Container. The inspector reviewed the licensee's corrective actions which were discussed in their letter of October 12, 1983 to the NRC. Plant Procedure HP-40 was revised to have special packages inspected by the appropriate health physics supervisor prior to shipment. The inspector had no further questions.

   b. (Closed) Violation (83-37-04) Failure to Have Approved Procedure for Resin Transfer. The inspector reviewed the licensee's corrective actions which were discussed in their letter of March 5, 1984 to the NRC. Approved procedures were used during subsequent activities involving the resin transfer. The inspector had no further questions.

   c. (Closed) Infraction (78-02-01) RCS Leak Detection Radiation Monitors Never Calibrated. The inspector reviewed the most recent calibration results for the containment ventilation monitors (R-11 & R-12) for Units 3 and 4. The licensee has an approved calibration procedure and appears to be calibrating the monitors in an acceptable manner. The inspector had no further questions.

4. Unresolved Items

   Unresolved items were not identified during this inspection.

5. Followup On Previous Inspector Identified Items (IFI)

   a. (Closed) IFI (83-31-01) Evaluation of Ventilation Flow in Auxiliary Building - Retest. The item pertains to the retesting of the auxiliary building ventilation system to verify that each room had an air exchange rate of at least five per hour. The retest was performed and all rooms tested were found to have at least five air exchanges per hour as stated in the FSAR. The inspector had no further questions.

   b. (Closed) IFI (83-31-05) Training, Replacement and Retraining of Chemistry Personnel to Operate Post Accident Sampling System. This item pertained to the development of a formalized and documented training program. This item has been added as a part of the overall discussion of training in paragraph 6 of this report. This item is closed.

   c. (Closed) IFI (83-31-08) Approved Procedure for Calibration of the Containment High Radiation Monitors. The inspector reviewed Maintenance Procedure 14007.36, Calibration of the Containment Hi Range Radiation Monitoring System and had no further questions.

d. (Closed) IFI (83-31-10) Training of Personnel to Operate the SPING-4 Monitor (Chemistry and Operations). This item pertained to the development of a formalized and documented training program. This item has been added as a part of the overall discussion of training in paragraph 6 of this report. This item is closed.

e. (Closed) IFI (83-37-01) Errors in Calculation of MPOB by Whole Body Counter. This item pertained to an apparent software error in the computer program that converted measured activity to percent of maximum permissible organ burden. The inspector reviewed the data during this inspection and concluded that the program was in fact properly calculating the percent of an organ burden and the original concern was due to an calculational error by the inspector. This item is closed.

6. Implementation of 10 CFR 61 and 10 CFR 20.311 Requirements

The inspector reviewed the licensee's implementation of 10 CFR 61 and 10 CFR 20.311 requirements for the packaging, classification and shipment of radioactive waste to low-level waste burial facilities.

Technical Specification 6.8.2 requires that each procedure and, changes thereto, shall be reviewed by the PNSC and approved by the nuclear plant superintendent prior to implementation. The inspector reviewed the licensee's organization and procedures for the packaging and classification of waste. During the procedure review, the inspector noted that the licensee's procedure, Operating Procedure 11550.40 (HP-40), Shipping and Receiving Radioactive Material, which incorporated the waste classification, labeling and manifest requirements of 10 CFR 61 and 10 CFR 20.311 was in "final draft" form. In discussions with the inspector, licensee representatives stated that the draft procedure had been used to classify and document shipments to waste burial facilities since the effective date of the new requirements and that the procedure had not been reviewed by the PNSC or approved by the plant manager-nuclear prior to its implementation. A licensee representative also informed the inspector that the fact that the procedure had not been reviewed by the PNSC had been identified to the plant's quality control group and a non-conformance report was written on February 8, 1984. The nonconformance report indicated the corrective action (submit procedure to PNSC for review) would be completed on March 8, 1984. The procedure was submitted to the PNSC on March 22, 1984. The inspector stated that ample time was available after the regulation was issued to revise HP-40 and submit it to the PNSC prior to the effective date of the new regulations. The other alternative was to suspend shipments until the procedure had been reviewed and approved. Even after the nonconformance report was written, timely and appropriate corrective action was not taken, in that shipments of waste to burial facilities continued and the due date for obtaining approval for the procedure was not met. The inspector stated that failure to have the revised Operating Procedure 11550.40 (HP-40) reviewed by the PNSC and approved by the plant manager-nuclear was an apparent violation of Technical Specification 6.8.2 (84-08-01).

The inspector discussed the audit and surveillance program related to radioactive waste management with licensee representatives. Quality control personnel routinely inspect each waste shipment for compliance with regulations. Although the licensee's quality assurance group had not performed an audit of radioactive waste shipping activities since the implementation of the new regulations, licensee representatives stated that the requirements of 10 CFR 61 and 10 CFR 20.311 would be included in the next audit of the radioactive waste area.

The inspector selectively reviewed the manifest prepared for waste shipments in 1984 and shipping papers to verify that a tracking system is being used to insure that shipments arrive at the intended destination without undue delay. In reviewing the tracking system, the inspector noted that the licensee had not received signed receipts from U. S. Ecology for shipments made to the burial facility in State of Washington. A licensee representative stated that the plant calls the burial facility on the estimated arrival date and frequently thereafter, if necessary, to verify that the shipments actually arrived. The licensee contacted the burial facility operator and was told that the receipt would be promptly returned in the future and that receipts for past shipments would be sent to the licensee.

The methods used by the licensee to assure that waste is properly classified, meets the waste form and characteristics required by 10 CFR 61 and that the disposal site license conditions are met were reviewed by the inspector and discussed with licensee representatives.

The licensee uses scaling factors to quantify radionuclides not easily identified in waste streams. Laboratory analyses of samples from various waste streams have been performed to validate the scaling factors. Generally, good agreement is obtained between measured activity and the calculated activity based on scaling factors. The licensee is still awaiting the results of Fe-55 analyses to determine the appropriateness of the scaling factor currently being used. The licensee currently uses high integrity containers for the disposal of resins and filters. The classification of waste by the licensee appears to be appropriate. The inspector stated he would review the results of the Fe-55 analyses during a subsequent inspection (84-08-02).

7. External Exposure Control

The inspector discussed the dose monitoring program with licensee representatives. The inspector reviewed the computer printouts (NRC Form 5 equivalent) for 1983 for whole body exposures and the extremity dose data for 4th Quarter 1983 and first Quarter 1984 and verified that the radiation doses recorded for plant personnel were well within NRC limits, and that exposure histories were being maintained in accordance with 10 CFR 20.102. During tours of the plant the inspector observed workers wearing the appropriate personnel monitoring devices.

No violations or deviations were identified.

8. Internal Exposure Control

The inspector selectively reviewed the results of measurements performed in 1984 to determine internal deposition and discussed the bioassay program with licensee representatives. The inspector also reviewed the results of calibrations of the whole body counters (bed and chair) performed by a vendor.

No violations or deviations were identified.

9. Posting, Labeling and Control

The inspector reviewed the licensee's posting and control of radiation, high radiation, airborne radioactivity areas, contamination areas and radioactive material areas and the labeling of radioactive material during tours of the plant. The inspector performed independent radiation surveys in the plant to verify that radiation areas were properly posted.

No violations or deviations were identified.

10. Radiation Work Permits

The inspector selectively reviewed active radiation work permits (RWP) issued in 1984 for appropriateness of the radiation protection requirements based upon work scope, location and conditions. During a tour of the plant, the inspector observed the adherence of plant workers to the RWP requirements.

No violations or deviations were identified.

11. Qualifications

Technical Specification 6.3.1 requires that each member of the facility staff meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions. Paragraph 4 of ANSI N18.1 states, in part, that technicians in responsible positions shall have a minimum of two years of working experience in their specialty. The inspector selectively reviewed the experience of senior contract health physics technicians.

The inspector reviewed the experience of the chemistry technicians who performed chemical and radiochemical analyses and radioactivity determinations and discussed the qualifications of the technicians with licensee representatives. The inspector noted during this review that two of the technicians did not have the required two years of working experience in their specialty prior to serving in a responsible position. The inspector interviewed one of the individuals and determined that he had laboratory experience not identified as such on his resume and thus had the minimum of two years experience at the time of the inspection. The inspector also selected two chemistry procedures and had the technician collect the appropriate sample and perform the required analysis. The technician was familiar with the test and performed satisfactorily. The inspector interviewed the other technician by telephone and discussed his previous

experience. The individual stated he performed some chemistry analyses while serving in the U. S. Navy. After crediting the individual with some experience while in the Navy, he met the minimum experience level required of a technician in a responsible position. The inspector noted during a review of test results, that in December 1983 this technician had performed chemical analyses which should have been performed by an ANSI qualified technician. At that time, he did not have the two years of working experience in his specialty. In discussions with the inspector, a licensee representative stated that the fact an individual did/or did not have two years of experience was not a consideration when assigning work in the laboratory. He further stated that new individuals were trained and immediately put to work and that they probably were performing most tasks within three to four months. The inspector stated that technicians not in on-the-job training under the direct supervision of a qualified technician or supervisor who performs chemical and radiochemical analyses, the results of which are used to make decisions in the operation of the plant, or who performs radioactivity measurements to quantify radioactive releases are serving in responsible positions and must have two years of working experience in their specialty. The inspector noted that Plant Administrative Procedure 0103.9, Facility Staff Qualifications, failed to fully implement the training and experience requirements of the ANSI Standard required by Technical Specifications, in that it did not require chemistry technicians to meet the requirements of ANSI N18.1-1971.

The inspector stated that failure of the licensee to require that chemistry technicians in responsible positions have two years of working experience in their specialty is an apparent violation of Technical Specification 6.3.1 (84-08-03).

Nuclear Chemistry Procedure NC-120, Nuclear Chemistry Training Program, specifies the use of a Lab Qualification Guide to document the qualification of a chemistry technician to perform a chemical or radiochemical analysis or radioactivity measurement. The procedure calls for an instructor to initial the guide when the individual is qualified and for the Lab Supervisor or designee to give the technician a walk through to verify competence in the test. When the inspector ask to see the qualification guides for the technicians currently assigned to the chemistry laboratory, a licensee representative stated that the guides were not used to document qualification of technicians although their use was specified in the procedure. He further stated that no other formal system was used to assure that technicians could satisfactorily collect the necessary samples and perform the required analyses. The inspector stated that failure of the plant to document the qualifications of chemistry technicians to perform laboratory tests as required by procedure NC-120 was another example of an apparent violation of Technical Specification 6.8(84-08-01).

The inspector discussed the audit and surveillance program related to radiation protection and the qualifications and training of the facility staff performed by the licensee's quality assurance and quality control groups with licensee representatives. The inspector reviewed the following quality assurance audits:

QAO-PTP-83-12-511, Training, December, 1983
QAO-PTP-83-12-513, General HP Requirements, December 1983
QAO-PTP-83-09-481, Organization, Facility Staff Qualifications, September 1983
QAO-PTP-83-08-477, Personnel Radiation and Contamination Monitoring, August 1983
QAO-PTP-82-09-419, Facility Staff Qualifications, September 1982

The inspector noted that the formal audits conducted over the last two years did not address the qualifications and training of the chemistry staff. The inspector stated that the audit and surveillance program should review the training and qualification of each segment of the facility staff on an annual basis, to identify and correct the types of problems identified in this paragraph.

12. Training

Technical Specification 6.4.1 states that a retraining and replacement training program for the facility staff shall be maintained under the direction of the Training Supervisor and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI N18.1-1971. Paragraph 5.5 of ANSI N18.1 states that a training program shall be established which maintains the proficiency of the operating organization through periodic training exercises, instruction periods and reviews.

The inspector discussed the replacement training and refresher training program for chemistry personnel with licensee representatives and selectively reviewed the training records. The licensee has developed a nine week training program for new technicians in the chemistry group which includes, lectures and on-the-job training. The licensee has also begun an extensive refresher training program for chemistry technicians. Although the licensee is developing lesson plans for the refresher training, the inspector stated that training should be formalized in a procedure. The formalization should include use of approved lesson plans, establishment of performance objectives (methods of evaluation), qualifications of instructors and management review of the training.

The chemistry group is responsible for operating the post accident sampling system required by NUREG 0737, Item II.B.3 and the effluent monitors (SPING-4) required by NUREG 0737, Item II.F.1(1) and (2). Although the licensee has conducted some training, they do not have a formal program for assuring that the required training for the presently assigned personnel is completed, nor has the method of replacement personnel training or refresher training been formally addressed by the licensee. The inspector stated that this special training should be included in the development of an overall chemistry group training program. The inspector will followup on the development of this training program during a subsequent inspection (84-08-04).

No violations or deviations were identified.