UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

APR 29 1987

Report No.: 50-250/87-15 and 50-251/87-15

Licensee: Florida Power and Light Company
9250 West Flagler Street
Miami, FL 33102

Docket No.: 50-250 and 50-251 License No.: DPR-31 and DPR-41

Facility Name: Turkey Point

Inspection Conducted: March 29-April 3, 1987

Inspectors: W. T. Cooper 4/21/87 Date Signed

M. J. Cioffi 4/21/87 Date Signed

Accompanying Personnel: D. M. Collins

Approved by: C. M. Hosey, Section Chief 4/21/87 Date Signed
Division of Radiation Safety and Safeguards

SUMMARY

Scope: This routine, unannounced inspection involved a review of the licensee's health physics program, including internal exposure control and assessment, external exposure control and personal dosimetry, respiratory protection, control of radioactive materials, a review of the licensee's program to maintain exposures as low as reasonably achievable and a review of open items.

Results: One violation for failure to post documents as required by 10 CFR 19.11(a)(4).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*C. M. Wethy, Site Vice President
*C. J. Baker, Plant Manager
*D. D. Grandage, Operations Superintendent
*F. H. Southworth, Maintenance Superintendent
*J. W. Anderson, Quality Assurance Supervisor
*J. Arias, Jr., Regulation and Compliance Supervisor
*P. W. Hughes, Health Physics Supervisor
*G. Salamon, Compliance Engineer
*J. A. Labaraque, Technical Department Supervisor
*R. E. Lee, Acting Quality Control Supervisor
*A. D. Rice, Radiochemist
M. A Jimenez, Staff Health Physicist
*E. R. LaPierre, Chemistry Project Supervisor
M. L. Cooper, General Employee Training Supervisor
T. A. Coleman, Health Physics Administrative Support Supervisor
J. R. Bates, ALARA/Support Supervisor
R. Brown, Health Physics Operations Supervisor
R. M. Givens, ALARA Engineer
G. L. LaGarde, Health Physics Radwaste Supervisor
D. Hicks, Health Physics Foreman
D. E. Cooper, Health Physics Foreman
G. E. Jennings, Health Physics Foreman
M. E. Lauzon, Health Physics Foreman
F. Marder, Health Physics Coordinator

Other licensee employees contacted included three construction craftsmen, ten technicians, two operators, three mechanics, and seven office personnel.

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*D. R. Brewer, Senior Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 3, 1987, with those persons indicated in Paragraph 1 above. The inspector discussed the inspection findings in detail with licensee management. The inspector also discussed one apparent violation involving the failure to post documents as required by 10 CFR 19.11(a)(4) (Paragraph 4). Licensee management acknowledged the inspection findings and took no exceptions.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters (92702)

(Closed) Violation (85-17-01): This violation involved a failure to package Low Specific Activity (LSA) material to DOT specifications.

The inspector reviewed and verified the licensee's corrective actions as stated in FP&L's letter of August 8, 1985.

(Closed) Violation (86-04-01): This violation involved a failure to properly train individuals in the use of survey instruments.

The inspector reviewed and verified the licensee's corrective actions as stated in FP&L's letter of May 28, 1986.

(Closed) Violation (86-36-02): This violation involved the failure to calibrate airline pressure gauges on the Nomonox air distribution system.

The inspector reviewed and verified the licensee's corrective actions as stated in FP&L's letter of December 26, 1986.

(Closed) Violation (86-36-05): This violation was for the failure to conduct an adequate alpha survey program and the failure to evaluate the alpha hazard present.

The inspector reviewed and verified the licensee's corrective actions as stated in FP&L's letter of December 26, 1986.

(Closed) Violation (86-04-02): This violation involved multiple Technical Specification 6.8.1 violations of procedures.

The inspector reviewed and verified the licensee's corrective action commitments made during an Enforcement Conference held in the Region II office on January 31, 1986. The corrective actions included meeting held by the plant manager with all workers emphasizing the requirement to follow procedures and regulations; review of plant procedures for appropriateness of health physics controls with revisions made where controls were found inadequate; and administratively controlling the transversing incore probes during outages.

4. Organization and Management Controls (83722)

The inspector reviewed the licensee's health physics (HP) staffing level related to having two units in outage. Approximately 200 senior ANSI qualified contract health physics technicians (HPT) were onsite to provide outage support. Licensee representatives stated that the work load was increasing and the licensee and contract HPT groups were being scheduled to work seven ten-hour days. The inspector stated that routine observations should be made for fatigue of the HP staff, such that fatigue would not impact performance.

10 CFR 19.11(a)(4) required the licensee to post current copies of any Notice of Violation involving radiological working conditions and any response from the licensee. This section also required the documents to be posted within two working days after receipt from the Commission, and to remain posted for a minimum of five working days or until actions correcting the violation were completed, whichever was later. The inspector reviewed the postings on plant bulletin boards in the facility and noted that the Notice of Violation contained in Inspection Report No. 50-250, 251/86-36 was not posted. The inspector also noted that the licensee's response to the Notice of Violation was not posted and actions correcting the violations were not scheduled for completion until April 30, 1987. The inspector discussed the posting requirements with licensee representatives who stated that the postings were the responsibility of the Quality Control Department. Licensee representatives further stated that it did not appear that the postings had been updated since the licensee put the new Administration Building into use in May 1986. The inspector stated that the failure to post the Notices of Violation and any licensee response was an apparent violation of 10 CFR 19.11(a)(4) (50-250, 251/87-15-01).

5. Internal Exposure Control and Assessment (83725, 83525)

The inspector reviewed selected portions of the licensee's whole body counting and respiratory protection programs.

The inspector reviewed the assignment of maximum permissible concentration hours (MPC-hrs) for iodines for those individuals entering the Unit 3 and Unit 4 containments after shutdown. While initial entries into the containments were made using self contained breathing apparatus, subsequent entries by some licensee personnel were made using airline respirators or full-facepiece respirators equipped with particulate and charcoal (GMRI) cartridges. The licensee did not have an exemption from the NRC which would allow the licensee to take protection factor credit for respiratory protection from iodines when GMRI cartridges were used. The inspector reviewed the RWP sign-in sheets for personnel entering the Unit 3 and Unit 4 containments and verified that MPC-hrs were being assigned and tracked as required. The inspector also reviewed a computer printout listing the MPC-hrs for all plant personnel and verified that no personnel had exceeded the 40 MPC-hr control level as specified in 10 CFR 20.103(b)(2).

10 CFR 20.103(c) (3) required a written policy statement on respirator usage to be issued covering such things as: use of practicable engineering controls instead of respirators; routine, nonroutine, and emergency use of respirators and relief from respirator use. This section also required the licensee to advise each respirator user that the user may leave the area at any time in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other condition that might require such relief. The inspector reviewed licensee procedures to determine compliance with the requirement. The inspector

determined that there was no written statement on policy. Licensee representatives stated that the policy statement was apparently omitted when the procedure went through the procedure upgrade program. It appeared that the last procedure that contained the policy statement was revised April 30, 1985. The licensee provided the inspector with a copy of a recent Quality Assurance (QA) audit that contained a finding related to the absence of the policy statement. At the time of the inspection, the licensee had not responded to the QA finding. The inspector stated that in accordance with the criteria outlined in 10 CFR 2, Appendix C, for licensee identified violations, no Notice of Violation would be issued. However, since the actions correcting the licensee identified violation had not been completed at the time of the inspection, the inspector stated that the corrective actions implemented as a result of the QA finding would be an inspector followup item and would be reviewed during a future inspection (50-250, 251/87-15-02).

The inspector requested a copy of all positive whole body counts for 1986 and 1987. Licensee representatives stated that there had been no positive counts for either of the years requested by the inspector.

The inspector reviewed the implementation of the licensee's program for sampling, analysis and posting of airborne alpha radiation areas. The licensee had established an action point for alpha control when the ratio of beta/gamma activity to alpha activity fell below 50 to 1. The program currently in place required that the highest beta/gamma smear found in a particular area also be counted for alpha emitting radionuclides. Smears and air samples which had been sent to an offsite vendor for analysis had indicated the presence of various alpha emitting radioisotopes. The licensee has established an alpha MPC value of 2.0 E-12 microcuries per milliliter (uCi/ml) based on Curium-241. Due to the presence of large amounts of radon and radon decay products found in the area, licensee representatives stated that some trouble was being experienced in posting areas as potential alpha airborne areas, due to the long half-life of the radon products. The inspector stated that based upon the studies performed by the licensee staff, areas where alpha activity was most likely to be found could be determined. The inspector also stated that the control efforts put in place by the licensee should concentrate on those areas to insure proper controls were implemented whenever alpha airborne contamination was suspected.

The evaluation performed by the licensee in addressing alpha contamination was thorough, well documented and provided good guidance to those personnel responsible for implementing the program.

No violations or deviations were identified.

6. External Occupation Exposure Control and Personal Dosimetry (83724)

The inspector toured the Unit 4 containment and observed the outage activities in progress. The inspector noted that the licensee was using flashing lights to warn personnel of areas where the dose rates exceeded

one rem per hour (R/hr), even though this practice was not addressed by the facility Technical Specifications (TS). A licensee representative stated that the use of the flashing lights was a commitment made by HP to the plant management and was not intended to be used as a control for locked high radiation areas and that locked doors or HP escorts were still being used to ensure access controls were maintained. The inspector stated that the TS required that areas where dose rates exceeded one R/hr would be required to be locked to restrict access or would require the presence of a HPT to control access to the area.

The inspector noted that lead shielding had been hung around the Unit 3 reactor cavity drain line to restrict access to the area and that flashing lights were also in use. The inspector also noted that a step ladder was in position outside the shielding and would provide access to the area. The inspector reviewed survey data for the Unit 3 reactor cavity drain area and found the highest general area dose rates in the area to be 800 millirem per hour.

The inspector reviewed the licensee's program for the identification of hot particles and the skin dose calculations to be used if the skin contamination was found to be due to a hot particle. The licensee had recently updated the personnel contamination procedure to incorporate recent guidance and had changed the methodology for performing skin dose calculations. Current guidance to the HPT's onsite was to contact a Health Physics Shift Supervisor if such a contamination was suspected. Also, guidance was provided to make attempts to save the particle if possible. The inspector reviewed one skin dose calculation based upon the presence of a Cobalt-60 particle found in one worker's underclothing. The calculation, performed by the licensee and verified by the inspector, assigned 400 millirems of dose to the skin of the individual in question. In discussions with licensee representatives, it was noted that good frisking practices were essential for the detection and capture of these small particles, especially before they were inadvertently carried offsite. Licensee management stated during the exit interview, that it was the intent of the licensee to acquire state-of-the-art frisking booths to ensure that such an incident would not occur and to ensure that all personnel exiting the radiation control area received a good frisk. Licensee management stated they planned to have the friskers onsite and operational in four to five months.

No violations or deviations were identified.

7. Program for Maintaining Exposures as Low as Reasonably Achievable (83728)

The licensee's program for maintaining occupational exposures As Low As is Reasonably Achievable (ALARA) was reviewed to determine program effectiveness during the planned Unit 3 outage and the unscheduled Unit 4 outage. The inspector reviewed selected procedures, the ALARA Shielding Log, the RWP dose tracking system, and conducted discussions with licensee and contractor personnel.

The licensee appeared to have a well-established ALARA group, adequate dose-saving techniques and an effective computer tracking system to track and trend collective person-rem for all RWPs. The estimated person-rem for the Unit 3 outage work packages appeared to be conservatively determined.

Many Unit 4 work package estimates had already been exceeded. The licensee stated that the Unit 4 outage work package estimates were based upon the Unit 3 outage estimates. The licensee explained that this person-rem estimating technique would permit a means for more thorough documentation of the problems encountered as a result of the unscheduled Unit 4 outage when the post-job ALARA reviews were performed on the work packages.

The licensee's original ALARA goal for 1987 was 1000 person-rem. However, due to the unscheduled Unit 4 outage, the licensee expects this estimate will be exceeded.

During discussions concerning planning to maintain exposures ALARA, the inspector learned that extensive work was being planned to replace approximately 2,000 Ray-Chem cable splices in each of the licensee's two units. Initial estimates made by the ALARA group concerning exposures were that the completion of this work in both units would require the expenditure of an additional 100 to 300 person-rem for calendar year 1987. Licensee representatives stated that a large part of this work would be inside the bio-shield, and therefore would be a dose intensive task. The inspector stated that the ALARA planning and exposure controls placed into effect for the splice replacement work would be an inspector followup item and would be reviewed during a future inspection (50-250, 251/87-15-03).

No violations or deviations were identified.

8. Followup on Inspector Followup Items and Unresolved Items (92701)

(Closed) Unresolved Item (URI) (86-36-03): This item was for the review of potential uptakes associated with the failure to calibrate airline pressure gauges on the Nomonox breathing air distribution system.

The inspector reviewed the assignment of MPC-hrs associated with this finding. The highest MPC-hrs assigned to any individual was 22 MPC-hrs, and did not exceed the 40 MPC-hr control measure which would have required an evaluation to be performed by the licensee.

(Closed) URI (86-36-04): This unresolved item dealt with the uptake assessment for workers using respirators with expired medical qualifications.

During inspection 50-250, 251/86-36, the inspector had initially stated that no grace period was allowed for medical qualifications and that the medical qualifications must be performed at least every 12 months. Based upon guidance received from the NRC Headquarters staff, a grace period is

allowed and will be consistent with the grace period allowed for the completion of surveillances outlined in the facility Technical Specifications (± 25 percent).