



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

Report Nos. 50-250/82-22 and 50-251/82-22

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

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: R. J. Vogt-Lowell R. D. Landis for 7/8/82
Date Signed

Approved by: C. Julian 7/8/82
C. Julian, Section Chief, Division of Project
and Resident Programs Date Signed

SUMMARY

Inspection on April 26 - May 25, 1982

Areas Inspected

This routine, announced inspection involved 196 resident inspector-hours on site in the areas of followup on licensee actions on previous inspection findings; plant operations; plant tours; surveillance test observation; followup on reactor trips; reactor coolant activity; solid radwaste shipments.

Results

Of the seven areas inspected, no violations or deviations were identified in six areas; one violation was found in one area (Violation - failure to adequately respond to refueling water storage tank low level alarm - paragraph 5; unauthorized defeat of the heat tracing system annunciator - paragraph 5; failure to record the taking out of service of the C-boric acid storage tank - paragraph 5).

DETAILS

1. Persons Contacted

Licensee Employees

- *J. K. Hays, Plant Manager - Nuclear
- J. P. Mendieta, Maintenance Superintendent Nuclear
- D. W. Haase, Operations Superintendent - Nuclear
- J. P. Lowman, Assistant Superintendent Mechanical Maintenance - Nuclear
- L. L. Thomas, Assistant Superintendent Mechanical Maintenance
- W. R. Williams, Assistant Superintendent Electrical Maintenance - Nuclear
- J. W. Kappes, Instrumentation and Control Supervisor
- V. B. Wager, Operations Supervisor
- A. E. Byrnes, Auxiliary Building Supervisor
- K. E. Beatty, Training Supervisor
- J. S. Wade, Chemistry Supervisor
- J. H. Hopkins, Radwaste Supervisor
- D. W. Jones, Quality Control Supervisor
- K. N. York, Document Control Supervisor
- J. A. Labarraque, Technical Department Supervisor
- J. C. Balaguero, Licensing Engineer

Other licensee employees contacted included technicians, operators, mechanics and security force members.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 1, 1982, with those persons indicated in paragraph 1 above. The inspector maintained frequent unprogrammed discussions and communications with the plant manager and members of his supervisory staff. The licensee did not take exception to violation cited in this report.

3. Licensee Action on Previous Inspection Findings

- a. (Closed) Violation (50-250, 251/81-31-01) Inadequate procedures for alignment of instrumentation root valves prior to filling the reactor coolant system. The inspector confirmed the implementation of the procedure revision committed to by the licensee in his March 4, 1982 response letter to the violation.
- b. (Closed) Violation (50-250, 251/81-31-02) Failure to conduct adequate surveillance of the overpressure mitigating system. The inspector confirmed the implementation of the procedure revisions committed to by the licensee in his March 4, 1982 response letter to the violation.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Plant Operations

The inspector kept informed on a daily basis of the overall plant status and any significant safety matters related to plant operations. Discussions were held with plant management and various members of the operations staff on a regular basis. Selected portions of daily operating logs and operating data sheets were reviewed daily during the report period. The inspector conducted various plant tours and made frequent visits to the control room. Observations included witnessing work activities in progress, status of operating and standby safety systems, confirming valve positions, instrument readings and recordings, annunciator alarms, housekeeping, radiation area controls, and vital area controls. Informal discussions were held with operators and other personnel on work activities in progress and status of safety-related equipment or systems.

On April 29, 1982 during a tour of the control room at approximately 10:45 a.m. the inspector noted that the annunciator window labeled "Refueling Water Storage Tank Tech Spec. Min. Level" on Unit 3 was illuminated. When the inspector questioned the reactor operator on shift, the operator indicated that the alarm had been in for a while but he had not done anything about it based on his assumption that the alarm must be malfunctioning since his digital RWST level indicator was reading 322,800 gallons. Procedure ONOP 0208.9, "Annunciator Panel G - Miscellaneous", requires the reactor operator to have the Nuclear Operator (NO) check the local indicator at the RWST whenever the annunciator in question alarms. This action was not taken until the inspector pointed it out to the reactor operator. A head pressure reading on the RWST corresponding to 320,324 gallons, obtained at the request of the inspector, revealed that the alarm was valid, since the low level setpoint is 322,200 gallons. This setpoint is 2,200 gallons above the Technical Specification minimum level requirement and therefore exceeding the limiting condition of operation for RWST level was averted.

Failure to request a check of the RWST local indicator upon receipt of the RWST low level annunciator, as required by ONOP 0208.9, is a violation of license requirements. (50-250/82-22-01)

On May 4, 1982, during a tour of the control room, the inspector noted that the annunciator card associated with annunciator window "Heat Tracing Trouble" was protruding from the panel, indicating that it had been unplugged and the alarm feature consequently defeated. This alarm was referred to by the licensee's operations staff as a "nuisance alarm". Such corrective action taken by the licensee to silence alarms associated with the heat tracing system is not authorized or prescribed by any approved plant procedure. Since such actions could compromise safety by precluding the annunciation system from alerting the operator of possible malfunctions

of safety-related heat tracing circuits, this constitutes another example of a violation of license requirements. (50-250,251/82-22-02).

On May 13, 1982 while conducting a system lineup verification, the inspector noted that "C" Boric Acid Storage Tank (BAST) was tagged out of service in order to replace its heaters. Further review disclosed that a clearance was issued (#5-26) on the C-BAST at 0900 hours on the previous day (May 12, 1982).

Paragraph 8.4.3 of A.P. 103.2, "Responsibilities of Operators on Shift and Maintenance of Operating Logs and Records," states, in part, the following:

"A system or component is operable when it is capable of performing its intended function. If a system or component is not capable of performing its intended function, e.g., damaged, dismantled for repairs, or is isolated from system, then it will be considered "out-of-service" and will be logged in the E00S Book.

All equipment in the following categories shall be recorded in the E00S Book:

1. All Technical Specifications related equipment and systems.
2. All Safety-Related equipment and systems.

Equipment placed out of service during the shift shall be recorded in the E00S Book by the Unit Nuclear Control Center Operator".

The recording of the C-BAST being taken out of service, as required by paragraph 8.4.3 of A.P. 103.2 was not performed until pointed out by the inspector. This is an example of the violation of license requirements. (50-250, 251/82-22-03).

The inspector observed portions of the following maintenance activities

- a. May 4, 1982: Replacement of oil seals on the 3C Charging Pump conducted in accordance with revision 0 of instruction "charging pump oil seal replacement" dated 8-31-79, as required by plant work order (PWO) 2755
- b. May 13, 1982: Calibration of process radiation monitor R-20 in accordance with procedure M.P. 11107.1, Appendix VII, "PRMS R-20, Letdown Line Calibration" as required by PWO-7424.

6. Plant Tours

An assessment of equipment conditions, plant conditions, radiological controls, security, safety, and adherence to regulatory requirements was regularly performed via various plant tours conducted by the inspector. Attention was focused on the operability of safety-related equipment in the following areas: cable spreading room; inverter and battery room; motor

generator set and battery rooms; rod control equipment rooms; switchgear rooms; diesel generator rooms and day tank rooms; auxiliary building.

No violations or deviations were identified within the areas inspected.

7. Surveillance Test Observation

The inspector observed portions of the performance of the following tests:

- a. O.P. 4004.1, "Containment Spray Pumps - Periodic Test" - date performed: 5-4-82
- b. O.P. 3104.1, "Component Cooling Water System - Periodic Test of Pumps" - date performed: 5-10-82
- c. O.P. 3204.1, "Residual Heat Removal system - Periodic Test" - date performed: 5-11-82

The inspector ascertained that the following objectives were being met: testing was scheduled in accordance with technical specification requirements, procedures were being followed, testing was performed by qualified personnel, LCOs were being met, and system restoration was correctly accomplished following testing.

On May 12, 1982, the inspector observed performance of O.P. 4104.1, "High Head Safety Injection system - Periodic Test". The inspector verified the following aspects of this surveillance test: procedure conformed to technical specification requirements, proper licensee review, test instrumentation was calibrated, removal of the system from service, conduct of the surveillance test, restoration of the system to service, review of the test data for accuracy and completeness, confirmation that surveillance test documentation was reviewed and test discrepancies were rectified, test results satisfied technical specification requirements, testing was done by qualified personnel, and the surveillance schedule for this test was met.

No violations or deviations were identified within the areas inspected.

8. Followup on Reactor Trips

- a. April 29, 1982: at 4:56 p.m. Unit 3 tripped during a turbine runback (followed by manual load reduction) from 100% power. The trip was initiated by an automatic trip of the 3A steam generator feed pump which resulted from loss of the 3A condensate pump when an electrical fault occurred in the C phase of the motor winding. The protection system logic responsible for the reactor trip consisted of a valid steam flow greater than feed flow signal received with a valid low level signal present on the 3B steam generator.

One minute later, at 4:57 p.m. Unit 4 tripped during a turbine runback from 100% power which was initiated by an invalid rod position indication (RPI) rod drop signal. This signal resulted from the loss

of alternate power supply to the RPI equipment when Unit 3 tripped. The turbine runback induced a transient which resulted in tripping both steam generator feed pumps. The reactor trip then occurred when a valid low level signal was received with a valid steam flow greater than feed flow signal present on the 4B steam generator.

Unit 3 and 4 were returned to service at 3:45 a.m. and 12:03 a.m. respectively on April 30, 1982.

- b. May 8, 1982: At 3:43 a.m. Unit 4 was removed from service by manual control from 100% power to repair a leaking turbine plant cooling water line inside the main electrical generator excitor housing. The reactor was kept critical. Entry into the exciter housing revealed a leak on a vent line from the exciter air cooler. The line is part of the turbine plant cooling system and is 1/2 inch copper tubing. A small hole had worked in the tubing due to rubbing against a hose coupling. The damaged section of tubing was replaced. The unit was placed on line at 6:49 a.m. and load increased to 300 MWe where it was held for approximately five hours to dry out the exciter. The load was then slowly escalated and 100% power was reached at 5:35 p.m. on May 8, 1982.
- c. May 15, 1982: At 4:58 p.m. Unit 3 tripped from 100% power due to receiving an overtemperature delta-T (OTAT) trip signal. The unit was operating on the 3B rod drive M-G set only since the 3A rod drive M-G set was out of service due to voltage regulator repairs. A failure of the 3B M-G set voltage regulator caused loss of power to the control rods which, in turn, inserted into the core resulting in the receipt of the initiating signal for the reactor trip. At the conclusion of the inspection report period repairs had been completed and both Unit 3 M-G sets were back in service.
- d. May 19, 1982: At 10:40 a.m. Unit 3 tripped from 100% power due to a trip of the 3A reactor coolant pump (RCP). While investigating an alarm on the 3A 4160 volt bus supply breaker fan failure, an electrician mistakenly removed the cover on the relay used for overcurrent relaying on the 3A startup transformer breaker. This actuated the relay's contacts, which resulted in a 3A bus lockout which opened the 3A RCP breaker, causing the reactor trip. The unit was returned to service at 12:56 p.m. after the problem had been identified and the 3A 4160 bolt bus had restored to service.

No Violations or deviations were identified during these events.

9. Reactor Coolant Activity

The inspector held discussions with the plant chemistry supervisor concerning the allowable radioiodine levels in the reactor coolant. Amendments 81 and 75 to DPR-31 and DPR-41 respectively, transferred the radioiodine normal and transient limits from an existing licensee condition to a limiting condition of operation (LCO) in the technical specifications. The normal operation limit is 1.0 microcuries/gram and 30 microcuries/gram during power transients. In order to ensure sampling of the reactor coolant

activity following power transients, the chemistry supervisor made the following commitments:

- a. Add the test requirement to NC-2 ("Schedule for periodic test")
- b. Change NC-65 by adding a records required section and giving instructions as how to calculate the required Iodine number ("Quantitative Determination of Radioactive Iodine Isotopes in the Reactor Coolant System").
- c. Issue a letter to the Lab to insure that all Chemistry Department personnel are informed of the required test.
- d. Issue a memo to Operations requesting the Chemistry Department be informed of all 15% changes in Thermal power within a one hour period.
- e. Complete the above items by June 1, 1982.

These commitments were met prior to the exit interview on June 1, 1982.

10. Solid Radwaste Shipments

On May 11, 1982 the inspector witnessed the packaging and subsequent transfer from the site of shipment number 82-045. Final destination of the solid radwaste was the Barnwell Waste Management Facility under volume allocation #0582-237-L. The total package consisted of 8 metal/wood boxes of 840 cubic feet combined volumes and a total of combined activity of 20 mCuries. The bill of lading described the shipment as compacted trash of solid form with the following chemical composition:

"Metallic oxides deposited on cloth, wood metal, plastic and rubber, shipped in wood and metal boxes (strong tight containers) Transportation group III and IV." The following isotopes were associated with the observed activity:

Cobalt - 57, 58, 60; Manganese - 54; Antimony - 124, 125; Zinc - 65; Cesium - 137; Niobium - 95; and Zirconium - 95

No Violations or Deviations were identified in this area.