



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

Report Nos.: 50-250/83-40 and 50-251/83-39

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

Docket Nos.: 50-250 and 50-251

License Nos.: DPR-31 and DPR-41

Facility Name: Turkey Point 3 and 4

Inspection at Turkey Point site near Homestead, Florida

Inspector: *Kenneth M. Jensen* *for*
R. J. Vogt-Lowell

1/25/84
Date Signed

Accompanying Personnel: B. R. Brewer

Approved by: *V. W. Panciera*
for Stephen A. Elrod, Chief, Project Section 2C
Division of Project and Resident Programs

1/26/84
Date Signed

SUMMARY

Inspection on October 26 - December 2, 1983

Areas Inspected

This routine, unannounced inspection involved 160 inspector-hours on site in the areas of licensee event report followup; previous inspector followup items; surveillance testing; plant operations; maintenance activities; plant tours.

Results

Of the six areas inspected, no violations or deviations were identified in five areas; and one violation - failure to perform a post reactor trip review - and eleven examples of violations which had been previously identified in Report 250, 251/83-38 were identified in one area (paragraph 9b).

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4. Unresolved Items

Unresolved items were identified during this inspection and are addressed in paragraphs 9d, 9e, and 9f.

5. Violations Noted in Inspection Report 250, 251/83-38

Several additional examples of those violations noted in Inspection Report 250, 251/83-38 have been included in this report in paragraph 9. These examples support the aforementioned violations. As discussed in a telephone conversation between H. C. Dance, of this office, and C. O. Woody, Director of Nuclear Operations on January 11 and 12, 1984, the number of procedural violation examples indicates a need for increased management attention.

6. Licensee Event Report (LER) Followup

The followup LERs were reviewed and closed. The inspector verified that reporting requirements had been met, causes had been identified, corrective actions appeared appropriate, generic applicability had been considered, and the LER forms were complete. Additionally, for those reports identified by asterisk, a more detailed review was performed to verify that the licensee had reviewed the event, corrective action had been taken, no unresolved safety questions were involved, and violations of regulations or Technical Specification (TS) conditions had been identified.

| | |
|------------|--|
| 250-83-17 | Condenser Air Ejector Monitor |
| 250-83-20 | Procedure for Loss of Component Cooling Flow |
| *250-83-21 | Component Cooling Water to RHR System |
| *250-83-14 | 4B Containment Spray Pump |
| *251-83-17 | 4B Containment Spray Pump |

7. Review of Previous Inspector Followup Items

The following Inspector Followup Items have been reviewed and are considered closed:

| | |
|-----------------------|--|
| IFI 250, 251/79-31-02 | Rod Position Indicator System Vital Power |
| IFI 250, 251/81-05-04 | Technical Specification Amendments |
| IFI 250, 251/81-20-04 | 4B High Head Safety Injection (HHSI) Pump |
| IFI 250, 251/81-25-02 | Update procedure OP 4103.1, "HHSI and Containment Spray Lineup for Automatic Operation." |
| IFI 250, 251/81-25-03 | Relay Coil Replacement |

REPORT DETAILS

1. Persons Contacted

Licensee Employees

H. E. Yaeger, Site Manager
*C. J. Baker, 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
J. Kenney, Primary Maintenance Supervisor
P. Banister, Secondary Maintenance Supervisor
W. R. Williams, Assistant Superintendent Electrical Maintenance - Nuclear
J. W. Kappes, Instrumentation and Control Supervisor
T. A. Finn, Operations Supervisor
A. W. Byrnes, Auxiliary Supervisor
W. Miller, Training Supervisor
V. A. Kaminskas, Reactor Engineering Supervisor
J. S. Wade, Chemistry Supervisor
P. W. Hughes, Health Physics Supervisor
J. H. Hopkins, Rad Waste Supervisor
*D. J. Jones, Quality Control Supervisor
K. N. York, Document Control Supervisor
*J. A. Labarraque, Technical Department Supervisor
J. Arias, Licensing Engineer
M. J. Crisler, Operations QA Supervisor

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

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on December 5, 1983, with those persons indicated in paragraph 1 above. The inspectors conducted frequent unprogrammed discussions with the plant manager and various members of his supervisory staff. Significant aspects associated with the inspection scope and relevant findings were routinely brought to their attention. See also paragraph 5 of this report.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

IFI 250, 251/81-25-04 Records Required on Nuclear Chemistry Procedures

IFI 250, 251/82-02-01 IE Circular Tracking System

8. Surveillance Testing

The inspector observed portions of various surveillance testing activities in progress on safety-related systems to ascertain whether testing was conducted in accordance with approved procedures; test instrumentation was calibrated; the testing was not violating Limiting Conditions of Operation (LCO); systems tested were removed from service and returned to service following the testing in accordance with required administrative controls; radiological controls were implemented as applicable; surveillance test documentation was reviewed and that discrepancies were recertified; and surveillance tests results and schedules met TS requirements.

9. 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 operations logs and operating data sheets were reviewed 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, obtaining the status of operating and standby safety systems, confirming valve positions, observing instrument readings and recordings, annunciator alarms, house-keeping, radiation area controls, and vital area controls. Informal discussions were held with operators and other personnel on work activities in progress and the status of safety-related equipment or systems.

- a) On November 10, 1983, the inspector began a review of the quality assurance records which documented a Unit 4 reactor trip that occurred during a routine shutdown on October 12, 1983. The inspector determined that contrary to the requirements of 10 CFR 50.72 the unexpected automatic actuation of the Reactor Protection System was not promptly reported to the Nuclear Regulatory Commission Operations Center. The inspector reviewed Administrative Procedure (AP) 103.12, Notification of Significant Events to the NRC. AP 103.12 provides administrative controls for notification of significant events to the NRC via the Emergency Notification System (ENS). The inspector determined, based on AP 103.12 Appendix A item number 7.(1), that the licensee mistakenly believed that only reactor trips from a critical condition need be reported. At the time of the trip the reactor was subcritical and power was low in the intermediate range. The licensee was informed that all reactor trips, except those which occur as part of a planned evolution, are to be reported. This is a further example of the failure to maintain adequate procedures specifying reporting requirements as cited in Inspection Report 250, 251/83-38 (251/83-39-01).

- b) On November 10, 1983, the inspector reviewed Off-Normal Operating Procedure (ONOP) 0208.1, Appendix A, which is a quality assurance record documenting the occurrence of a post reactor trip review and found that no post trip review of the trip occurring on October 12, 1983, was held and the reactor was returned to operation on October 16, 1983. This is a violation, 251/83-39-02.

Reactor operator's logs of October 12, 1983, states that the cause of trip was due to a failed source range nuclear instrument, N-32. However, the Operations Supervisor felt that the trip was due to an intermediate range instrument problem. On November 10, 1983, this disparity had not been resolved. On November 15, 1983, the post trip review was held. The inspector reviewed the data on November 16, 1983. The explanation for the cause of the trip did not clearly point out that the trip resulted from a failure of source range nuclear instrument N-32. The post trip review implied that the cause of the trip was an improper setpoint which caused nuclear instrument N-32 to energize at greater than 1×10^5 cps. Additionally, the post trip review referenced spiking on intermediate range nuclear instrument N-36 as an observed problem. The spiking was actually on instrument N-35. On November 18, 1983, an addendum was filed with the post trip review which clarified the discrepancies. A request for a procedural change was also initiated which would require the Operations Supervisors to review and sign each post trip review so that inaccuracies can be corrected.

- c) On November 14, 1983, the inspector reviewed Off Normal Operating Procedure (ONOP) 12108, Source Range Nuclear Instrumentation Malfunction, because Source Range Nuclear Instrument (SRNI) N-32 had been placed out of service as a result of the reactor trip on October 12, 1983. Section 5.1.1.3.3 of ONOP-12108 requires that shutdown margin be confirmed by performing OP-1009.3, Shutdown Margin Calculation. The licensee did not recalculate shutdown margin when SRNI N-32 failed. This is a further example of failure to implement procedures as cited in Inspection Report 250, 251/83-38 (251/83-39-03). The licensee has agreed to rewrite ONOP-12108 in order to replace general guidance with specific recommendations and to provide cautionary notes concerning limitations placed on the plant while one or both source range instruments are deenergized.
- d) On November 17, 1983, the inspector met with the Plant Manager to discuss the pending revision to the licensee's independent verification program. The revised policy is being designed to implement item I.C.6 of NUREG-0737. The licensee committed to promulgating the revised independent verification procedure by December 15, 1983. At this same meeting the inspector reiterated his concern over the lack of a normal OP for the Residual Heat Removal (RHR) system. This system provides

the primary means of decay heat removal while the reactor is shut down and is utilized to fulfill this function during refueling outages. The licensee has agreed to promulgate an operating procedure governing shutdown operations. This is an unresolved item (URI 250/83-40-01) and will be further inspected by the resident inspector.

- e) On November 18, 1983, the inspector witnessed the performance of a containment instrument reliability inspection for various Unit 4 instruments. The inspection consists of verifying that pressure, level and flow instruments are not isolated and is routinely performed by the Instrument and Control department just prior to startup. No discrepancies were noted in the inspection; however, old seal injection flow transmitters for each of the three reactor coolant pumps had not been removed as indicated by plant Drawing 5610-T-E-4503 Revision 12. The old transmitters had been disconnected and new transmitters installed in spring 1983. The old transmitters had not been removed as originally planned but revision 6A to Drawing 56-T-E-4503 dated June 21, 1983, deleted them. The old transmitters are located next to the new transmitters and tagged with the same identification numbers. Local meters on the old transmitters are apparently operational but the instruments are no longer kept calibrated. The licensee is attempting to determine why these instruments were not removed and is modifying drawing 5610-T-E-4503 to show that both old and new instruments are physically present. This item will be reviewed as unresolved item (UNR 251/83-39-04) by the resident inspector.
- f) On November 20, 1983, the inspector accompanied a Quality Control Supervisor while he made a final inspection of the Unit 4 containment. Some electrical extension cords, which were identified for removal, had not been removed. A fire extinguisher, a ladder and a piece of sheet metal were not tied in place. Post maintenance cleanup inside the containment appeared to not have been thorough, and the numerous discrepancies were stated to be representative of post maintenance conditions in containment. Additional personnel were called into the containment to correct the discrepancies. The review of post maintenance procedures and practices is unresolved item (UNR 251/83-39-05) and will be completed by the resident inspector.
- g) On November 23, 1983, the inspector witnessed the startup of Unit 4. Numerous discrepancies were noted and are documented as follows:
- (1) During the withdrawal of control rod bank A, rod E-7 tracked above the group step counter and the other individual position indicators for rods in the bank. A rod deviation alarm was received when rod E-7 individual position indicator was approximately 22 steps above the bank. The annunciator was ignored by personnel conducting the startup because they were aware that rod E-7 position indication was recently adjusted while the plant was

cold and had not been readjusted after plant heatup. A change in plant temperature is known to effect the resistance of the rod position indication coils. Operations personnel assumed the rod deviation alarm was the result of the cold rod adjustment. They chose to continue the startup with the rod deviation alarm rather than to secure rod motion and investigate and correct the alarm. Operational personnel did not follow the Off Normal Operating Procedure (ONOP), full length RCC malfunction, which precluded further rod motion until the position of rod E-7 could be verified. This is a further example of failure to follow procedures as cited in Inspection Report 250, 251/83-38 (251/83-39-06).

- (2) During the startup, the inspector noticed that Source Range Nuclear Instrument (SRNI) N-31 was reading higher than SRNI N-32. At one point SRNI N-31 indicated 8×10^3 cps while SRNI N-32 indicated only 1.5×10^3 cps. The inspector pointed out this discrepancy to the plant supervisor-nuclear (PS-N). The PS-N could not explain the discrepancy but felt that it was related to the fact that SRNI N-32 was connected to its spare detector while SRNI N-31 was connected to its normal detection. The inspector subsequently questioned Instrument and Control and engineering support personnel about this possibility and they were unable to confirm that the N-32 reading was as expected. No plant work order was submitted. The Engineering Department has committed to evaluate the discrepancy by December 15, 1983. This is an inspector followup item (IFI 251/83-39-07).

On November 23, 1983, shortly after the reactor startup of Unit 4, it was discovered that motor operated pressurizer relief stop valve 4-535 could not be fully closed when its switch was operated from the control room. This stop valve is an isolation for the discharge path through pressurizer power operated relief valve 4-536 and it was being cycled in an attempt to determine if valve 4-536 was leaking. The stop valve (4-535) was declared out of service at 0650 a.m. Attempts were immediately commenced to repair the motor operator and an associated 480 Vac electrical ground. Approximately five hours after the stop valve was placed out of service the inspector inquired if the valve had been manually shut. The inspector was informed that the valve was open and he then inquired as to the applicability of any Limiting Condition of Operation (LCO) placed on the plant by the valve failure. At this time the licensee began a thorough review of TS 3.1.1.e and ONOP-1208.1, Power Operated Relief System - Malfunction, which revealed that the reactor was required to be placed in hot shutdown no later than seven hours after the valve was placed out of service. The licensee concluded that there was not then remaining enough time to ensure that the valve could be manually shut prior to exceeding the limitations of TS 3.1.1.e and ONOP-1208.1. In order to avoid exceeding

an LCO an unscheduled reactor shutdown was quickly initiated. The shutdown of Unit 4 may have been avoided if a detailed review of the applicable requirements had been made shortly after valve 4-535 was placed out of service. This is an example of failure to implement off-normal procedures included in report 250, 251/83-38-(251/83-39-08).

- h) On November 23, 1983, the inspector observed the performance of OP 7304.1, Auxiliary Feedwater System - Periodic Test which is to verify proper operation of the auxiliary feedwater (AFW) pumps and to meet the requirements of TS 4.10. Pump A was tested satisfactory. When pumps B and C were tested each pump started and then tripped after running approximately 15 seconds. The C pump was immediately reset, retested and run properly. The plant supervisor - nuclear certified pump C as fully operational. The inspector suggested that pump C be started again to ensure it could be relied upon. The plant supervisor - nuclear declined to authorize the additional test until directed to do so by the Operations Supervisor. When further testing was conducted, pump "C" started and tripped after 15 seconds. Subsequent investigation revealed minor steam leakage into the supply header which was positioning the governor valve in an intermediate position such that it could not reliably handle a starting surge. This problem was overcome by lining up pump C and pump A to the same steam train, which is the same as the normal operational lineup. Pump C was shown to start consistently when tested in this manner. The inspector noted that the procedural change was not formalized nor was it approved by two members of the plant management staff contrary to the requirements of Technical Specification 6.8.3. This is a further example of failure to process field procedure changes as cited in Inspection Report 250, 251/83-38, and will be further reviewed (251/83-39-09). The inspector was informed that pump "B" had been certified to be operational based on an investigation and testing performed by the Technical Support Department. Subsequent investigation revealed that the Technical Support personnel who looked at the pump were not aware it had previously tripped, and performed a test on the pump which involved successfully starting the pump once. The licensee committed to perform additional tests on pump B by December 7, 1983. This is an inspector followup item (IFI 251/83-39-10). The licensee meets the TS requirement in that two AFW pumps are fully operational during single unit operation.
- i) On November 25, 1983, the inspector reviewed the quality assurance records associated with the performance of OP-7304.1, Auxiliary Feedwater System Periodic Test. No mention of the difficulties encountered during the performance of the test were documented, and the unauthorized modification to the procedure, necessary to successfully test pump C, was not documented. Pages nine and ten of the procedure provide a space to document discrepancies and to make comments. These spaces were not utilized. Step 8.3 of the procedure was marked "not applicable" signifying that OP-0209.3 was not performed simultaneously with OP-7304.1. In reality the Technical Support Department performed

OP-0209.3 in order to satisfactorily complete OP-7304.1. This is a further example of failure to implement procedures as cited in Inspection Report 250, 251/83-38 and will be further reviewed (251/83-39-11).

- j) During routine inspections of the control room, it was noted that contrary to the requirements of Administrative Procedure 0103.2, Section 8.1.4, the on duty operators had not taken action to investigate problems or to initiate maintenance requests to correct problems beyond the capabilities of the operators to resolve. This is a further example of failure to follow procedures as cited in Inspection Report 250, 251/83-38 and will be further reviewed. (251/83-39-12). The problems are itemized as follows:
- (a) A failed pen trace existed on one of the two channels for recorder NR-4-45. The pen for channels would stick in one spot and would fail to show any change in power level that might occur. (November 22, 1983)
 - (b) Noticeably loud relay chatter was evident in the control room. While clearly audible, the source of the chatter was not investigated. The chattering relay was associated with the pressurizer surge line control for Unit 4. (November 21, 1983)
 - (c) Both startup rate meters for the source range instruments on Unit 4 were pegged low, indicating a constant negative startup rate of (-) 0.5 dpm. (November 20, 1983)
 - (d) A pen trace on recorder 426 was inoperative for six hours. (November 21, 1983)
 - (e) Safety Injection Pump clearance tags hanging in the Unit 4 side of the control room were not properly filled out. The tags were not dated and did not indicate the time at which they were hung.

10. Maintenance Activities

The inspectors observed various maintenance activities in progress on safety related systems to ascertain that the activities were not violating LCO redundant components were operable; required administrative approvals and tagouts were obtained prior to initiating the work; approved procedures were used; replacement parts and materials used were properly certified; radiological controls, as applicable, were being implemented; Quality Control hold points were observed; and equipment was properly tested prior to returning to service.

11. Plant Tours

Various plant tours were conducted by the inspectors. 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 and day tank rooms; and auxiliary building.