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

Report Nos.: 50-250/90-31 and 50-251/90-31

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 Conducted: September 1, 1990 through October 4, 1990

Inspectors: _____ 10/30/90
R. C. Butcher, Senior Resident Inspector Date Signed

_____ 10/30/90
G. A. Schnebli, Resident Inspector Date Signed

Approved by: _____ 10/31/90
R. V. Crlenjak, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine resident inspector inspection entailed direct inspection at the site in the areas of monthly surveillance observations, monthly maintenance observations, engineered safety features walkdowns, operational safety, and plant events.

Results:

Within the scope of this inspection, the inspectors determined that the licensee continued to demonstrate satisfactory performance to ensure safe plant operations.

In the areas inspected, violations or deviations were not identified. One inspector followup item was identified.

50-250,251/90-31-01, Inspector Followup Item. Licensee's corrective actions to prevent wetting down critical heat tracing lagging. (Paragraph 9.b)

REPORT DETAILS

1. Persons Contacted

Licensee Employees
T. V. Abbatiello, Quality Assurance Supervisor
*J. C. Balaguero, Assistant Technical Department Supervisor
L. W. Bladow, Quality Manager
*J. M. Donis, Operations Support Supervisor
T. A. Finn, Assistant Operations Superintendent
*M. E. Freeman, Budget Supervisor
*R. J. Gianfrencesco, Assistant Maintenance Superintendent
*K. H. Greene, Juno Plant Nuclear Civic Supervisor
*S. T. Hale, Engineering Project Supervisor
*K. N. Harris, Senior Vice President, Nuclear Operations
E. F. Hayes, Instrumentation and Controls Supervisor
R. G. Heisterman, Assistant Superintendent of Electrical Maintenance
V. A. Kaminskas, Operations Superintendent
*J. E. Knorr, Regulatory Compliance Supervisor
G. L. Marsh, Reactor Supervisor
*R. G. Mende, Operations Supervisor
L. W. Pearce, Plant Manager, Nuclear
*T. F. Plunkett, Site Vice President
*D. R. Powell, Superintendent, Plant Licensing
K. L. Remington, System Performance Supervisor
*R. E. Rose, Design Control Supervisor
C. V. Rossi, Quality Assurance Supervisor
G. M. Smith, Service Manager, Nuclear
*W. A. Shelley, Juno Plant Nuclear Site Engineer Supervisor
*R. N. Steinke, Chemistry Supervisor
J. C. Strong, Mechanical Department Supervisor
*F. R. Timmons, Site Security Superintendent
M. B. Wayland, Maintenance Superintendent
*J. D. Webb, Assistant Superintendent Planning and Scheduling
A. T. Zielonka, Technical Department Supervisor

Other licensee employees contacted included construction craftsman, engineers, technicians, operators, mechanics, and electricians.

*Attended exit interview on October 4, 1990

Note: An alphabetical tabulation of acronyms used in this report is listed in paragraph 12.

2. Followup on Items of Noncompliance (92702)

A review was conducted of the following noncompliances to assure that corrective actions were adequately implemented and resulted in conformance with regulatory requirements. Verification of corrective action was achieved through record reviews, observation, and discussions with licensee personnel. Licensee correspondence was evaluated to ensure the

responses were timely and corrective actions were implemented within the time periods specified in the reply.

(Closed) Violation 50-250,251/90-04-02. Concerning a failure to follow procedure resulting in the loss of instrument air to Unit 4. The licensee responded to this violation in letter L-90-134 dated April 13, 1990. The inspectors reviewed the corrective actions required for this issue and found them to be adequate. This violation is closed.

3. Followup on Inspector Followup Items (92701)

(Closed) Unresolved Item 50-250,251/89-52-09. Failure to re-establish a roving fire watch in the auxiliary building per TS 3.14.5. The licensee issued LER 50-250,251/89-19 describing the event and their corrective actions. This event was the result of a cognitive error by licensed operators by failing to verify that auxiliary building fire watches were re-established within one hour following the evacuation of the auxiliary building. LER 50-250,251/89-19 was closed in inspection report 50-250,251/90-09. The licensee's corrective actions were extensive and timely.

4. Onsite Followup and In-Office Review of Written Reports of Nonroutine Events and 10 CFR Part 21 Reviews (90712/90713/92700)

The Licensee Event Reports and/or 10 CFR Part 21 Reports discussed below were reviewed. The inspectors verified that reporting requirements had been met, root cause analysis was performed, corrective actions appeared appropriate, and generic applicability had been considered. Additionally, the inspectors verified the licensee had reviewed each event, corrective actions were implemented, responsibility for corrective actions not fully completed was clearly assigned, safety questions had been evaluated and resolved, and violations of regulations or TS conditions had been identified. When applicable, the criteria of 10 CFR 2, Appendix C, were applied.

(Closed) LER 50-250/90-01. Concerning the liquid effluent process radiation monitor R-18 being inoperable during a liquid release due to a control circuit malfunction. This issue was previously discussed in detail in IR 50-250,251/89-54. This LER is closed.

(Closed) LER 50-250/90-02. Concerning the failure to perform post maintenance testing on a phase A containment isolation valve due to personnel error. This issue was discussed in detail in IR 50-250,251/90-04 and identified as NCV 90-04-01. This LER is closed.

(Closed) LER 50-250/90-03. Concerning the failure of the 3B spent fuel pool cooling pump shaft. This issue was discussed in IR 50-250,251/90-04 and identified as IFI 90-04-04. This issue will be closed out when the IFI is closed. This LER is closed.

(Closed) LER 50-250/90-04. Concerning a surveillance test of the emergency diesel not being completed in the required time. This event was previously discussed in IR 50-250,251/90-06 and identified as NCV 90-06-02. This LER is closed.

(Closed) LER 50-250/90-06. Concerning the isolation of control room ventilation system due to personnel error. This issue was previously discussed in IR 50-250,251/90-09 and identified as violation 90-09-01. This issue will be closed out when the violation is closed. This LER is closed.

(Closed) LER 50-250/90-07. Concerning the automatic start of the 3B CCW pump due to low CCW discharge header pressure. This issue was discussed in IR 50-250,251/90-09. This LER is closed.

(Closed) LER 50-250/90-08. Concerning a train B safeguards actuation during surveillance testing due to a component failure. This issue was discussed in IR 50-250,251/90-09. This LER is closed.

(Closed) LER 50-250/90-09. Concerning the breathing air containment isolation valve CV-3-6165 found pinned open while in mode 3. This issue was previously identified as URI 90-14-03 and later as NCV 90-18-01. This LER is closed.

(Closed) LER 50-250/90-10. Concerning entry into mode 3 without having at least one channel of the reactor vessel level monitoring system in service. This issue was previously discussed in IR 50-250,251/90-14 and identified as violation 90-14-01. This issue will be closed out when the violation is closed. This LER is closed.

(Closed) LER 50-250/90-11. Concerning a reactor trip due to the failure of a switch in the feedwater valve controller. This event was discussed in detail in IR 50-250,251/90-18. This LER is closed.

(Closed) LER 50-250/90-13. Concerning a reactor trip due to personnel error. This event was previously discussed in IR 50-250,251/90-18 and identified as violation 90-18-03. This issue will be closed out when the violation is closed. This LER is closed.

(Closed) LER 50-251/90-01. Concerning ICW pump 4C being declared inoperable while EDG A was out of service. This issue was previously discussed in IR 50-250,251/90-06 and identified as NCV 90-06-01. This LER is closed.

(Closed) LER 50-251/90-03. Concerning a unit trip due to a under frequency relay failure. This event was discussed in IR 50-250,251/90-09. This LER is closed.

(Closed) LER 50-251/90-04. Concerning a manual reactor trip during surveillance testing due to personnel error. This event was previously

discussed in IR 50-250,251/90-18 and identified as violation 90-18-03. This LER is closed.

(Closed) LER 50-251/90-05. Concerning a decrease in ICW flow to the CCW heat exchangers while cleaning the ICW/CCW basket strainer. This event was previously discussed in IR 50-250,251/90-18. This LER is closed.

5. Monthly Surveillance Observations (61726)

The inspectors observed TS required surveillance testing and verified: The test procedure conformed to the requirements of the TS; testing was performed in accordance with adequate procedures; test instrumentation was calibrated; limiting conditions for operation were met; test results met acceptance criteria requirements and were reviewed by personnel other than the individual directing the test; deficiencies were identified, as appropriate, and were properly reviewed and resolved by management personnel; and system restoration was adequate. For completed tests, the inspectors verified testing frequencies were met and tests were performed by qualified individuals.

The inspectors witnessed/reviewed portions of the following test activities:

- 3-OSP-075.2, Auxiliary Feedwater Train 2 Operability Verification;
- 3-OSP-059.5, Power Range Nuclear Instrumentation Shift Checks and Daily Calibrations;
- 3-OSP-19.1, Intake Cooling Water Pump Inservice Test; and
- 4-OSP-19.1, Intake Cooling Water Pump Inservice Test.

The inspectors determined that the above testing activities were performed in a satisfactory manner and met the requirements of the TS. No violations or deviations were identified in the areas inspected.

6. Engineered Safety Features Walkdown (71710)

The inspectors performed an inspection designed to verify the operability of the Auxiliary Feedwater System. This was accomplished by performing a complete walkdown of all accessible equipment. The following criteria were used, as appropriate, during this inspection:

a. Systems lineup procedures match plant drawings and as built configuration.

b. Housekeeping was adequate and appropriate levels of cleanliness are being maintained.

c. Valves in the system are correctly installed and do not exhibit signs of gross packing leakage, bent stems, missing handwheels or improper labeling.

d. Hangers and supports are made up properly and aligned correctly.

e. Valves in the flow paths are in correct position as required by the applicable procedures with power available and valves were locked/lock wired as required.

f. Local and remote position indication was compared and remote instrumentation was functional.

g. Major system components are properly labeled.

As a result of this walkdown, the inspectors found the system lineup to be in compliance with plant drawings and operating procedures, equipment material conditions to be satisfactory, and system component/equipment labeling to be adequate and correct. Minor discrepancies were noted and given to the licensee for corrective action. No violations or deviations were identified in the areas inspected.

7. Monthly Maintenance Observations (62703)

Station maintenance activities of safety related systems and components were observed and reviewed to ascertain they were conducted in accordance with approved procedures, regulatory guides, industry codes and standards, and in conformance with TS.

The following items were considered during this review, as appropriate: LCOs were met while components or systems were removed from service; approvals were obtained prior to initiating work; activities were accomplished using approved procedures and were inspected as applicable; procedures used were adequate to control the activity; troubleshooting activities were controlled and repair records accurately reflected the maintenance performed; functional testing and/or calibrations were performed prior to returning components or systems to service; QC records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were properly implemented; QC hold points were established and observed where required; fire prevention controls were implemented; outside contractor force activities were controlled in accordance with the approved QA program; and housekeeping was actively pursued.

The inspectors witnessed/reviewed portions of the following maintenance activities in progress:

- Repair of 3B MSIV Steam Leak,
- Cleaning 4C CCW Heat Exchanger,

- Repair of 4B Main Feed Pump Thrust Bearing, and

- Troubleshooting 3AS AMERTAP Recirculation Pump for Low Flow.

For those maintenance activities observed, the inspectors determined that these activities were conducted in a satisfactory manner and that the work was properly performed in accordance with approved maintenance work orders. No violations or deviations were identified in the areas inspected.

8. Operational Safety Verification (71707)

The inspectors observed control room operations, reviewed applicable logs, conducted discussions with control room operators, observed shift turnovers and confirmed operability of instrumentation. The inspectors verified the operability of selected emergency systems, verified maintenance work orders had been submitted as required and followup and prioritization of work was accomplished. The inspectors reviewed tagout records, verified compliance with TS LCOs and verified the return to service of affected components.

By observation and direct interviews, verification was made that the physical security plan was being implemented.

Plant housekeeping/cleanliness conditions and implementation of radiological controls were observed.

Tours of the intake structure and diesel, auxiliary, control, and turbine buildings were conducted to observe plant equipment conditions including potential fire hazards, fluid leaks, and excessive vibrations.

The inspectors walked down accessible portions of the following safety related systems to verify operability and proper valve/switch alignment:

- A and B Emergency Diesel Generators,
- Control Room Vertical Panels and Safeguards Racks,
- Intake Cooling Water Structure,
- 4160 Volt Buses and 480 Volt Load and Motor Control Centers,
- Unit 3 and 4 Feedwater Platforms,
- Unit 3 and 4 Condensate Storage Tank Area,
- Auxiliary Feedwater Area,
- Unit 3 and 4 Main Steam Platforms, and
- Auxiliary Building

The inspectors, as a result of routine plant tours and various operational observations, determined that the general plant and system material conditions were being satisfactorily maintained, plant security program was being effective, and that the overall performance of plant operations was good.

a. By letter dated September 26, 1990, the licensee requested a Temporary Waiver of Compliance of TS 3.6, Chemical and Volume Control System. The licensee had detected leakage from the boric acid filter discharge isolation valve 3-348. The boric acid filter bypass line must also be isolated to repair valve 3-348. This configuration results in no flow path from the boric acid storage tanks to the RCS during the time for valve repair. TS 3.6 requires system piping, interlocks and valves be operable to the extent of establishing one flow path to the RCS from the boric acid storage tanks and one flow path from the RWST to the RCS when the reactor is critical. TS 3.6 has no LCO for flow path unavailability and therefore TS 3.0.1 applies. The licensee estimated the valve repair would take longer than the time provided by TS 3.0.1 and would possibly require unit shutdown to repair. The revised TS have been approved by the NRC and are to become in effect following fuel off load of both units, scheduled to occur in December 1990. RTS 3.1.2.2, with no boration source path from a boric acid storage tank, requires demonstrating the second flow path from the RWST to the charging pump suction by verifying the flow path valve alignment and requires restoration of the boration source path from a boric acid storage tank within 72 hours or be in at least hot standby within the next 6 hours. Based on the RTS analysis, the licensee requested a Temporary Waiver of Compliance for up to 24 hours allowing the flow path from the boric acid storage tanks to the RCS to be inoperable. Based on the information given in the licensee's letter, the NRC verbally granted the Temporary Waiver of Compliance on September 27, 1990. The valve was declared out of service at 11:00 am on September 27, 1990 and was declared back in service at 12:38 pm (approximately 1.5 total hours) on September 27, 1990.

b. By letter dated February 26, 1988 the licensee notified the NRC of their intent to issue the ITS as a formal plant procedure. The ITS were issued as O-ADM-021, Technical Specification Implementation Procedure, and were treated as a controlled document. The ITS were placed in the control room to allow the operators to:

- become accustomed to the change of format (i.e. limiting conditions for operation, applicability, action statements, and surveillance requirements),
- become familiar with the surveillance requirements that were being added to the plant procedures,
- compare the CTS LCO action statements with the action statements as shown in the ITS (and follow the most restrictive), and
- to identify changes that would need to be made prior to approval of the RTS by the NRC.

By letter dated August 28, 1990, the NRC issued the RTS to replace the CTS. The RTS are to be implemented following the complete

defueling of both units during the upcoming dual unit outage. In order to acquaint the operators with the RTS, the licensee is cancelling O-ADM-021 and informally placing the RTS in the control room. The operators will refer to the RTS, except for section 5.0, Design Features, and Section 6.0, Administrative Controls, just as they previously referred to O-ADM-021 and if the performance of approved procedures would result in violation of any RTS requirement, this discrepancy will be documented and forwarded to the Operations Supervisor. The operators must comply with CTS at all times.

Procedures now reflect the requirements of the CTS and, when more restrictive, the requirements of the ITS (O-ADM-021). Procedures will not be modified to reflect any changes necessitated by the RTS until the RTS are implemented as noted above.

No violations or deviations were identified in the areas inspected.

9. Plant Events (93702)

The following plant events were reviewed to determine facility status and the need for further followup action. Plant parameters were evaluated during transient response. The significance of the event was evaluated along with the performance of the appropriate safety systems and the actions taken by the licensee. The inspectors verified that required notifications were made to the NRC. Evaluations were performed relative to the need for additional NRC response to the event. Additionally, the following issues were examined, as appropriate: details regarding the cause of the event; event chronology; safety system performance; licensee compliance with approved procedures; radiological consequences, if any; and proposed corrective actions.

a. At 1:15 pm on September 26, 1990, all blackstart diesel generators were declared out of service due to a shorted battery in the starting battery bank. The licensee jumpered out the shorted battery, adjusted the battery charger voltage setpoint and successfully started the number 1 blackstart diesel generator with the shorted battery jumpered out. At 3:55 pm blackstart diesel generators 1, 2, and 5 were returned to service.

b. At 8:55 am on October 3, 1990, the licensee entered TS 3.0.1 on unit 4 when critical heat tracing circuits were unable to maintain the boric acid flow path temperatures above 145 degrees F. At 9:20 am, unit 3 entered TS 3.0.1 when critical heat tracing circuits were observed to drop below 145 degrees F. Both units were at 100% power. TS 3.6.b.5 requires two channels of heat tracing be operable for the flow path from the boric acid tanks. TS 3.6.d.3 allows one channel of heat tracing to be out of service for 24 hours. TS 3.6.b.3 requires the boric acid tanks maintain the boron solution at a temperature of at least 145 degrees F. The BAST area had become contaminated when the floor was resurfaced. In an attempt to decontaminate the BAST area, maintenance used water hoses to wash

down areas as directed by the decontamination supervisor. The lagging on critical heat tracing circuits was inadvertently sprayed and upon getting wet, were not able to maintain boric acid flow path piping temperatures above 145 degrees F. On unit 3, circuit 69 was stabilized above 145 degrees F at 10:15 am and TS 3.0.1 was exited. On unit 4, circuit 6 was stabilized above 145 degrees F at 12:40 pm after removing and replacing wet lagging and TS 3.0.1 was exited. The inspectors will followup the licensee's corrective actions to prevent recurrence of this event. This will be Inspector Followup Item 50-250,251/90-31-01.

No violations or deviations were identified in the areas inspected.

10. Followup of Allegation RII-90-A-0146

The NRC, Region II, received an allegation that a portable hardness testing device from the Turkey Point Nuclear Plant that had been returned to the manufacturer for repair appeared to have been sabotaged. The licensee's Speakout Program office was aware of the above concern and had conducted an investigation. The licensee had purchased the hardness tester in June 1990, and while attempting to calibrate the instrument, found it defective. The hardness tester was returned to the manufacturer for repair without ever having been used. The licensee's investigation concluded that the hardness tester had most probably been damaged and an unauthorized repair attempted prior to being purchased by FP&L. This allegation is considered closed.

11. Exit Interview (30703)

The inspection scope and findings were summarized during management interviews held throughout the reporting period with the Plant Manager, Nuclear and selected members of his staff. An exit meeting was conducted on October 4, 1990. No proprietary information was provided to the inspectors during the reporting period. The inspectors identified one Inspector Followup Item.

50-250,251/90-31-01, Inspector Followup Item. Licensee's corrective actions to prevent wetting down critical heat tracing lagging.

12. Acronyms and Abbreviations

ADM	Administrative
AFW	Auxiliary Feedwater
AP	Administrative Procedures
ASME	American Society of Mechanical Engineers
BAST	Boric Acid Storage Tank
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CS	Containment Spray
CTS	Custom Technical Specification

DP	Differential Pressure
ECC	Emergency Containment Coolers
EDG	Emergency Diesel Generator
ENS	Emergency Notification System
ERDADS	Emergency Response Data Acquisition Display System
ERT	Event Response Team
F	Fahrenheit
FPL	Florida Power & Light
FSAR	Final Safety Analysis Report
HHSI	High Head Safety Injection
ICW	Intake Cooling Water
IE	Inspection Enforcement
IFI	Inspector Followup Item
IR	Inspection Report
ITS	Interim Technical Specification
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LIV	Licensee Identified Violation
LOCA	Loss of Coolant Accident
MP	Maintenance Procedures
MSIV	Main Steam Isolation Valve
NCR	Non-conformance Report
NCV	Non-Cited Violation
NPO	Nuclear Plant Operator
NPSH	Net Positive Suction Head
NRC	Nuclear Regulatory Commission
ONOP	Off Normal Operating Procedure
OOS	Out of Service
OP	Operating Procedure
OTSC	On the Spot Change
PC/M	Plant Change/Modification
PNSC	Plant Nuclear Safety Committee
PSN	Plant Supervisor Nuclear
PSP	Physical Security Procedures
QA	Quality Assurance
QC	Quality Control
RCC	Rod Control Cluster
RCO	Reactor Control Operator
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RTS	Revised Technical Specification
RWST	Refueling Water Storage Tank
SFP	Spent Fuel Pit
SFW	Standby Feedwater
SG	Steam Generators
SNPO	Senior Nuclear Plant Operator
SRO	Senior Reactor Operator
TPCW	Turbine Plant Cooling Water
TS	Technical Specification
TSA	Temporary System Alteration
URI	Unresolved Item