

# UNITED STATES NUCLEAR REGULATORY COMMISSION

#### **REGION II**

SAM NUNN ATLANTA FEDERAL CENTER 61 FORSYTH STREET SW SUITE 23T85 ATLANTA, GEORGIA 30303-8931

July 26, 2000

Florida Power and Light Company

ATTN: Mr. T. F. Plunkett

President - Nuclear Division

P. O. Box 14000

Juno Beach, FL 33408-0420

SUBJECT: NRC's TURKEY POINT INTEGRATED INSPECTION REPORT 50-250/2000-03,

50-251/2000-03

Dear Mr. Plunkett:

On July 1, 2000, the NRC completed an inspection at your Turkey Point 3 & 4 reactor facilities. The enclosed report presents the results of that inspection, which were discussed on July 6, 2000, with Mr. R. Hovey and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection no findings were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <a href="http://www.nrc.gov/NRC/ADAMS/index.html">http://www.nrc.gov/NRC/ADAMS/index.html</a> (the Public Electronic Reading Room).

Sincerely,

/RA/

Leonard D. Wert, Chief Reactor Projects Branch 3 Division of Reactor Projects

Docket Nos. 50-250, 50-251 License Nos. DPR-31, DPR-41

Enclosure: NRC Inspection Report

w/attached NRC's Revised Reactor Oversight Process

cc w/encl: (See page 2)

FPL 2

cc w/encl:
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FPL 3

PUBLIC

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# U.S. NUCLEAR REGULATORY COMMISSION REGION II

Docket Nos: 50-250, 50-251 License Nos: DPR-31, DPR-41

Report No: 50-250/2000-03, 50-251/2000-03

Licensee: Florida Power & Light Company (FPL)

Facility: Turkey Point Nuclear Plant, Units 3 & 4

Location: 9760 S. W. 344<sup>th</sup> Street

Florida City, FL 33035

Dates: April 2, 2000 - July 1, 2000

Inspectors: C. Patterson, Senior Resident Inspector

J. R. Reyes, Resident Inspector

Approved by: L. Wert, Chief

Reactor Projects Branch 3 Division of Reactor Projects

# SUMMARY OF FINDINGS

IR 05000250-00-03, IR 05000251-00-03, on 04/02-07/01/2000; Florida Power & Light; Turkey Point Nuclear Plant; Units 3 & 4. Integrated Inspection Report.

The inspection was conducted by the resident inspectors. No findings were identified during the inspection. The significance of issues is indicated by their color (green, white, yellow, red) and would have been determined by the Significance Determination Process (see attachment, NRC's Revised Reactor Oversight Process).

#### **Report Details**

# Summary of Plant Status:

Unit 3 operated continuously during this report period and has been online since November 18, 1999. Power was reduced to 50 percent on May 27, 2000 for about 12 hours to repair a feedwater pump casing leak. On June 16, 2000, power was reduced to 40 percent for turbine valve testing and heat exchanger cleaning. The unit was returned to full power on June 18, 2000.

Unit 4 operated continuously during this report period and has been online since January 27, 2000. Power was reduced to 40 percent on May 8, 2000, for turbine valve testing and heat exchanger cleaning. The unit was returned to full power on May 10, 2000.

# 1. Reactor Safety

**Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity (Reactor - R)** 

#### 1R04 Equipment Alignment

#### a. Inspection Scope

The inspectors verified, by partial walkdown inspections, the alignment of three redundant trains/systems when the other train/system was out-of-service. The inspectors reviewed the licensee's flow path verification procedure, Updated Final Safety Analysis Report (UFSAR) system description, and system drawings to determine the system was correctly lined up. A complete system walkdown was performed of one system to determine correct system alignment. During the complete walkdown, the inspectors verified valves were positioned correctly, electrical power were available, support systems were operational and major components were correctly labeled. Also, the inspectors sampled the licensee's corrective action program records and evaluated the resolutions to verify that the licensee is identifying equipment alignment problems at an appropriate threshold. Condition reports 99-1419 and 00-1004 were reviewed.

#### Partial Walkdowns:

- 3B train Residual Heat Removal system when the 3A train was out of service for a pump motor inspection.
- 3B Emergency Diesel Generator (EDG) when the 3A EDG was out of service for surveillance testing.
- Unit 3 backup nitrogen supply to the other two Main Steam Isolation Valves (MSIVs) during work on one MSIV nitrogen supply.

# Complete Walkdown:

Unit 3 and Unit 4 Intake Cooling Water System.

# b. <u>Issues and Findings</u>

No findings were identified.

#### 1R05 Fire Protection

#### a. Inspection Scope

The inspectors toured eight areas important to reactor safety to observe the fire protection detection and suppression equipment operational status, control of transient combustibles, and material conditions. The material condition and operational status of fire barriers were also examined. The inspectors reviewed procedures 0-ADM-016.3, Fire Protection Impairments, 0-ADM-016, Fire Protection Program, and 0-ADM-016.1, Transient Combustible and Flammable Substances Program, and verified compliance with procedural requirements. The following areas were inspected:

- Units 3 and 4 Emergency Diesel Generator rooms
- Units 3 and 4 Main and Auxiliary Transformers
- Units 3 and 4 Turbine Lube oil
- Unit 4 Component Cooling water pump room
- Cable Spreading Room

# b. <u>Issues and Findings</u>

No findings were identified.

#### R11 Licensed Operator Requalification

#### a. Inspection Scope

The inspectors observed licensed operator training on the control room simulator during an accident scenario to assess licensed operator performance and effectiveness of the training critique. The inspectors observed crew performance for a steam generator tube rupture scenario using procedure ONOP-071.2, Steam Generator Tube Leakage. This procedure was used until a transition to the Emergency Operating Procedures was made. The inspectors reviewed communications, use of procedures, and consistency of control room board indications between the simulator and the control room. An inspector attended the critique and verified that discrepancies were appropriately addressed.

#### b. Issues and Findings

#### 1R12 Maintenance Rule Implementation

#### a. Inspection Scope

The inspectors assessed the effectiveness of the licensee's maintenance efforts that apply to structures, systems, and components scoped into the maintenance rule, and verified compliance with procedural requirements specified in procedure 0-ADM-728, Maintenance Rule Implementation. The inspector reviewed the characterization of failures, safety significance classifications, and the appropriateness of performance criteria and corrective actions. Six performance problems were inspected. The equipment problems reviewed were:

- Unit 3 steam jet air ejectors radiation monitors (RD-3-15)
- Unit 3 diesel instrument air compressor
- 3B intake cooling water (ICW) header
- ICW strainer isolation valve 3/4-4883
- ICW manual strainer isolation valve 4-832
- A Auxiliary feedwater pump trip & throttle valve

#### b. <u>Issues and Findings</u>

No findings were identified.

#### 1R13 Maintenance Risk Assessment and Emergent Work Evaluation

#### a. Inspection Scope

The inspectors reviewed the following emergent work items, as described in the referenced condition reports (CRs) or work orders (WOs). The inspectors verified that the emergent work activities were adequately planned and controlled, as described in 0-ADM-210, On-Line Maintenance/Work Coordination. The inspector verified that, as appropriate, contingencies were in place to reduce risk, minimize time spent in increased risk configurations, and to avoid initiating events .

- Fire Main Hydrant Repair, PIV 21, WO 00-02-005
- Auxiliary Feedwater Oscillations, CR 00-0083
- 3B Main Steam Isolation Valves out of service because of Nitrogen backup supply, CR 00-0971
- Motor-Operated Valve -4-832 Valve Leaking Through, CR 00-0897
- South Dade Meteorological Tower, CR 00-1168
- Unit 3 Temperature Reference Spikes, CR 00-0961

# b. Observations and Findings

No findings were identified.

# 1R14 Personnel Performance During Non-routine Plant Evolutions and Events

#### a. <u>Inspection Scope</u>

The inspectors reviewed operator response during planned and unplanned evolutions and transients to verify proper performance and that identified problems were entered into the corrective action program.

The inspectors observed Unit 4 control room operators and supervisors perform procedure 4-OSP-089, Main Turbine Valve Operability Test, and verified compliance with procedure 0-ADM-217, Conduct of Infrequently Performed Tests or Evolutions. The inspector verified that appropriate actions were completed when unexpected valve performance occurred. The inspectors verified the testing was satisfactorily completed.

The inspectors observed a Unit 3 power reduction for turbine valve testing and heat exchanger cleaning on June 17, 2000. During testing of an intercept valve, a larger power charge was experienced than was expected. The inspector verified that the testing was stopped and the plant was stabilized. The inspectors verified that the unexpected power changes were entered into the corrective action program.

The inspectors also reviewed operator response to multiple alarms that occurred during a heavy rain storm. Ground isolation procedures and storm drainage system response were discussed with management.

# b. <u>Issue and Findings</u>

No findings were identified.

#### 1R15 Operability Evaluations

#### a. Inspection Scope

The inspectors reviewed the selected operability evaluations affecting mitigating systems and barrier integrity to determine that operability was adequately justified and no unrecognized increase in risk had occurred. The inspectors verified procedural requirements as described in 0-ADM-518, Condition Reports (CRs) were met. The evaluations reviewed were:

CR 00-0711	Unit 3 Containment Penetration 65A
CR 00-0693	Back Seating of Emergency Core Cooling System Valves
CR 00-0757	Auxiliary Feedwater System Support Plate
CR 00-1061	4A EDG Low Turbocharger Lube Oil Pressure
CR 00-1018	Auxiliary Feedwater Trip & Turbine Valve Failed To Close
CR 00-1030	Use of Manual Compensatory Actions for Automatic
CR 00-1103	Emergency Load Sequencer
	CR 00-0693 CR 00-0757 CR 00-1061 CR 00-1018 CR 00-1030

# b. Issues and Findings

#### 1R17 Permanent Plant Modifications

#### a. Inspection Scope

The inspectors reviewed Plant/Change Modification 99-040, Unit 3 Main Steam Isolation Valve (MSIV) Nitrogen Backup Low Pressure Alarm Setpoint Changes, and observed the Instrument and Controls personnel perform the new setpoint calibration on the pressure switches. The inspectors verified that the modification did not degrade the performance capability of the MSIVs. Additionally, the inspectors observed the modification activities performed online and verified they did not place the unit in an unsafe condition.

# b. <u>Issues and Findings</u>

No findings were identified.

#### 1R19 Post Maintenance Testing

#### a. Inspection Scope

For the post-maintenance tests listed below, the inspectors reviewed the test procedure and either witnessed the testing and/or reviewed test records to determine whether the scope of testing adequately verified that the work performed was correctly completed and demonstrated that the affected equipment was functional and operable.

- 3-OSP-050.2, Residual Heat Removal System Inservice Test following 18-month pump motor inspection
- 3-OP-013, Instrument Air System test following Unit 3 air compressor diesel engine work would not stop on demand
- WO-3000644501, Fire Water Jockey Pump could not maintain required discharge pressure
- WO-99013842, Electric Driven Fire Pump high vibration, change bearings and impeller
- 4-OP-300.1, Alterating Shutdown Panel 4C264 Operability Test after speed controller calibration
- 0-PME-057.1 following Normal Containment Cooler motor overhaul

#### b. <u>Issues and Findings</u>

No findings were identified.

#### 1R22 Surveillance Testing

#### a. <u>Inspection Scope</u>

The inspectors verified by witnessing surveillance tests and/or reviewing test data, that selected structures, systems, and components (SSCs) met the Technical Specifications,

the UFSAR, and licensee procedure requirements and that the testing demonstrated that the SSCs were capable of performing their intended safety functions. The inspectors verified that; acceptance criteria were clear and consistent with licensing basis documents, the testing was performed in correct sequence, and equipment was properly restored so that the SSCs could perform their safety functions. The inspectors observed/reviewed the following surveillances:

•	3-OP-075.2	Auxiliary Feedwater Train 2 Operability Verification
•	0-OP-025.1	Control Room Emergency Ventilation System Operability Test
•	3-OP-063.1	Safeguards Actuation System Logic Test
•	3-OP-023.1	Diesel Generator Operability Test (3A EDG)
•	4-OP-056.1	Emergency Containment Filter Fans Operating Test
•	3-OP-013.3	Diesel Instrument Air Compressor Operability Test
•	4-OP-047.1	Charging Pump/Valves Inservice Test
•	4-OP-300.1	Alternate Shutdown Panel 4C264 Operability Test

#### b. <u>Issues and Findings</u>

No findings were identified.

# 1R23 Temporary Plant Modifications

#### a. <u>Inspection Scope</u>

The inspectors reviewed a temporary modification to verify that the modification did not affect the safety function of risk significant systems, the modification was installed as required by plant documents, and the 10 CFR 50.59 screening evaluation appropriately considered UFSAR information. The inspector reviewed the installed modification against drawings and verified the impact on plant procedures had been evaluated.

Plant Change/Modification 99-042 - Instrument Air Dryer Replacement

# b. <u>Issues and Findings</u>

#### **Cornerstone: Emergency Preparedness (EP)**

#### 1EP6 Drill Evaluation

#### a. Inspection Scope

The inspectors observed performance of a quarterly drill in both the Technical Support Center and control room simulator. The inspectors verified that classification of the emergency was conducted in accordance with the licensee's emergency plan. The exercise was conducted on June 27, 2000, and simulated a steam generator tube leak followed by a tube rupture. The inspectors attended the drill critique to verify that deficiencies were appropriately addressed.

# b. <u>Issues and Findings</u>

No findings were identified.

# 4. OTHER ACTIVITIES (OA)

# 4OA6 Meetings

# .1 Exit Meeting Summary

The resident inspectors presented the inspection results to Mr. R. Hovey and other members of licensee management at the conclusion of the inspection on July 6, 2000. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

# .2 Plant Performance Review Meeting

On June 28, 2000, the Region II Division of Reactor Projects Branch Chief conducted the Plant Performance Review (PPR) meeting for the period February 1, 1999 to January 31, 2000. The Division of Reactor Projects Branch Chief discussed the results of the PPR as described in the PPR letter dated March 31, 2000.

#### .3 Reactor Oversight Process Meeting

On June 28, 2000, a meeting with the public and local officials was held to present an overview of the NRC's new Reactor Oversight Process.

#### PARTIAL LIST OF PERSONS CONTACTED

#### <u>Licensee</u>

- S. Franzone, Licensing Manager
- G. Hollinger, Work Control Manager
- R. Hovey, Site Vice-President
- D. Jernigan, Plant General Manager
- T. Jones, Operations Manager
- J. Kirkpatrick, Protection Services Manager
- M. Lacal, Training Manager
- D. Lowens, Quality Assurance Manager
- R. Rose, Maintenance Manager
- E. Thompson, License Renewal Project Manager
- D. Tomaszewski, Site Engineering Manager
- J. Trejo, Health Physics/Chemistry Supervisor
- A. Zielonka, System Engineering Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

None

# NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

# Reactor Safety

# Radiation Safety

# **Safeguards**

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational
  - Public
- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and

increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.