



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

Report Nos.: 50-250/88-07 and 50-251/88-07

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: February 25, 1988 through March 25, 1988

|              |   |                |
|--------------|---|----------------|
| Inspectors:  | <u><i>[Signature]</i></u>               | <u>4/22/88</u> |
|              | D. R. Brewer, Senior Resident Inspector | Date Signed    |
|              | <u><i>[Signature]</i></u>               | <u>4/22/88</u> |
|              | T. F. McElhinney, Resident Inspector    | Date Signed    |
|              | <u><i>[Signature]</i></u>               | <u>4/22/88</u> |
|              | G. A. Schnebli, Resident Inspector      | Date Signed    |
| Approved by: | <u><i>[Signature]</i></u>               | <u>4/22/88</u> |
|              | R. V. Crlenjak, Section Chief           | Date Signed    |
|              | Division of Reactor Projects            |                |

SUMMARY

Scope: This routine, unannounced inspection entailed direct inspection at the site, including backshift inspection, in the areas of annual and monthly surveillance, maintenance observations and reviews, engineered safety features, operational safety, followup on previously identified items and plant events.

Results: One violation with three examples for failure to meet the requirements of TS 6.8.1 was identified (250,251/88-07-01).

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

J. S. Odom, Vice President  
\*C. J. Baker, Plant Manager-Nuclear  
L. W. Pearce, Operations Superintendent  
\*J. W. Kappes, Maintenance Superintendent  
\*P. W. Hughes, Health Physics Supervisor  
R. A. Longtemps, Mechanical Maintenance Department Supervisor  
T. A. Finn, Training Supervisor  
J. D. Webb, Operations - Maintenance Coordinator  
W. R. Williams, Assistant Superintendent Planned Maintenance  
D. Tomaszewski, Instrument and Control (I&C) Department Supervisor  
J. C. Strong, Electrical Department Supervisor  
L. W. Bladow, Quality Assurance (QA) Superintendent  
\*T. Abbatiello, Supervisory Engineer, QA  
\*R. J. Earl, Quality Control (QC) Supervisor  
\*J. A. Labarraque, Technical Department Supervisor  
\*R. G. Mende, Operations Supervisor  
\*J. Arias, Regulation and Compliance Supervisor  
\*P. Harpel, Plant Supervisor-Nuclear  
V. A. Kaminskas, Reactor Engineering Supervisor  
R. D. Hart, Regulation and Compliance Engineer  
\*G. Solomon, Regulation and Compliance Engineer  
\*M. O. Kulp, Project Engineer JPE

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

\*Attended exit interview on March 25, 1988

### 2. Exit Interview

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 March 25, 1988. The areas requiring management attention were reviewed. No proprietary information was provided to the inspectors during the reporting period.

One violation was identified: Three examples of failure to meet TS 6.8.1, in that a vent valve for the AFW Nitrogen Backup System was found open when required to be closed; on three separate occasions the isolation valve for a pressure indicator on the 4B BATP was found open contrary to a clearance order; and the ICW inlet valve to the A CCW HEX was found only partially open when required to be fully open following the removal of a clearance order (Paragraph 9), (250,251/88-07-01).



Note: An alphabetical tabulation of acronyms used in this report is listed in paragraph 11.

3. Unresolved Items (URI)

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations of requirements or deviations from commitments. No unresolved items were identified in this report.

4. Followup on Unresolved Items (URIs), Inspector Followup Items (IFIs), - Inspection and Enforcement Information Notices (IENs), IE Bulletins (IEBs) (information only), IE Circulars (IECs), and NRC Requests (92701/92703/92717).

(Closed) URI (250,251/86-39-04). Adequacy and Timeliness of Licensee's Small Bore Piping Verification and Correction Program. In the original report the inspector identified various piping discrepancies which resulted in piping not being installed in accordance with approved procedures. The licensee had committed, as a result of Inspection Report 250,251/85-40, to performing a walkdown of all two inch and smaller piping associated with safety related systems (FPL letters L-86-29 and L-86-238). This item was opened to determine the adequacy and timeliness of that program.

The inspector reviewed Bechtel Procedure 5177-499-G-001, Rev. 2, for the walkdown of small piping and instrument tubing, Turkey Point Units 3 and 4, and FPL letter L-87-73 dated February 17, 1987, which outlined the proposed schedule for completion of the program. Additionally discussions were held with various licensee and Bechtel contractor personnel. The following status was provided.

The walkdown program to identify deficiencies on the original selected systems scoped in Appendix E to Bechtel Procedure 5177-499-G-001, Rev. 2, was resumed in December 1986 and has been completed. The licensee recently decided to add three new systems (Area Radiation Monitoring, Process Radiation Monitoring, and Normal Containment Cooling) to the program and the walkdowns have just been started.

As a result of these walkdowns, 125 Maintenance Deficiency Reports (MDRs) were generated and are being closed out by ongoing work under outstanding PWOs. All MDRs necessary to support piping functionality have been closed.

Additionally, as the result of these walkdowns, 195 Nonconformance Reports (NCRs) were generated. The licensee reviewed each NCR for effects on functionality and completed all work necessary for functionality prior to August 1987. The remainder are being planned for future work. A schedule is being developed to accomplish this work. As of March 18, 1988, 112 of

the original NCRs have been closed. Functionality for the purposes of this effort was defined as maintaining operability during a safe shutdown earthquake.

System engineers are tasked with performing walkdowns on a weekly basis on at least one of their assigned systems. Although various discrepancies were noted during these walkdowns, no new items were identified that were not already identified by the Bechtel Contractor walkdowns.

The inspector feels that the licensee has taken adequate steps toward proper verification and correction of small bore piping problems. This item is closed.

(Closed) URI (250/86-25-04). Temporary Changes to Procedure POP-0800.112. The inspectors identified that apparent unauthorized Temporary Changes had been made to Preoperational Procedure (POP) 0800.112, Unit 3 AFW Flow Control Valve Stability Test, in that several procedural steps were not performed when the testing was performed on April 9, 1986. The omissions included not recording the time required to achieve required flow rates and not observing required flows on installed Flowmeters. These intentional omissions were not approved by the required two members of plant management or by the PNSC or Plant Manager-Nuclear within 14 days as required by section 6.8 of the TS.

The inspector reviewed the licensee's response to this item dated July 1, 1986 (CTRAC 86-661) and held discussions with various licensee employees. The following determinations were made:

Although a test deficiency existed when Train 1 Flow Control Valve, CV-3-2816, flow oscillations were observed, or Startup Field Report (SFR) was generated and testing terminated. The SFR was dispositioned by engineering with a recommendation that the test be reperformed. The licensee did not consider this as a temporary change to the procedure and an On The Spot Change (OTSC) was not considered necessary. Subsequent to this, maintenance was performed on the valve control circuits and the preoperational test reperformed on Train 1 on April 16, 1986, with unsatisfactory results. The Auto Control unit was then calibrated and retested per POP 0800.112 on April 21, 1986, with satisfactory results.

Train 2 Flow Indicator, FI-3-1401B, exhibited erratic operation but was not considered a problem because the associated flow control valve showed little or no valve movement after 90 seconds. Total flow measurement was made by use of a redundant flow indicator. The faulty flow indicator was replaced by maintenance and retested per Operations Surveillance Procedure 3-OSP-75.2. The licensee did not consider this as a temporary change since other means was available to obtain flow readings.



Although this event does not constitute a violation, it should be noted that it is the staff's position that section 6.8 of the TSs are applicable to all site procedures including preoperational procedures. More specifically, the requirements of sections 6.8.2 and 6.8.3 shall be implemented for all changes to plant procedures. This item is closed.

(Closed) IFI 251/84-27-04. During event followup inspection associated with LER 251-84-012, Moderator Temperature Coefficient TS, the inspectors noted apparent inconsistencies in reporting out of specification boron sample results to the control room. This item was opened to further review the licensee's program of reporting sample results to the control room.

The inspector reviewed licensee inter-office memorandums dated January 14, 1983, which stated laboratory policy for out of specification conditions, dated August 7, 1986, which restated the Nuclear Chemistry Department responsibilities to ensure timely reporting of sample analysis results. The latest memorandum was issued after the event occurred and contained a background summary including details of the failure to report the out of specification boron concentration, which served as additional training to plant chemists.

The inspector determined, from discussions with various operations supervisory personnel, there had been no problems in reporting of sample analysis results since this event occurred.

The inspector feels that the licensee has taken adequate steps to prevent recurrence of this problem, which appears to have been an isolated case. This item is closed.

5. Followup of Items of Noncompliance (92702)

(Closed) Violation (251/84-30-01). TS LCO exceeded on Intake Cooling System. The inspectors identified that a TS LCO was exceeded where the appropriate action statement was not satisfied within the allowed time limit. This resulted in a degraded condition and sufficient information had existed which should have alerted the licensee that the unit was in an action statement condition.

The inspector reviewed the licensee's corrective action including related items which are included in the licensee's Program for Improved Operation as describe in FPL letters L-85-155 dated April 15, 1985, L-84-265 dated September 28, 1984, and L-84-275 dated October 3, 1984, and found it acceptable for the purpose of closing this violation.

The inspector determined that Administrative Procedure (AP) 0103.4, In-Plant Equipment Clearance Orders and Operating Procedure 0204.2, Periodic Tests, Checks, and Operating Evolutions, were revised to provide

specific requirements for documentation of review for TS applicability of clearances prior to issuance, and for daily review of all outstanding clearances to ensure the log is being maintained properly. Additionally, provisions are made for independent verification of equipment removal/restoration when required.

The inspectors also determined that AP 0103.2, Responsibilities of Operator and Shift Technicians on Shift and Maintenance of Operations Logs and Records, was revised to provide specific requirements for log entries and notification of Operations Supervisor-Nuclear of entry into any LCO and to provide new turnover requirements for very short periods of relief/absence from the watch station.

Additionally, the inspector determined that the licensee conducted training to increase awareness by nuclear personnel to duties of performance of assigned tasks and areas of responsibility. This item is closed.

(Closed) Violation (250,251/85-13-04). Failure to meet 10 CFR 50, Appendix B, Criterion VII for Packing, Shipping, Receiving, Storage and Handling. The inspectors had identified that licensee receipt inspection procedures did not provide for verification that Hafnium Poison Inserts were clean and free from damage as required by ANSI N45.2.2-1872.

The inspector reviewed the licensee's response, dated June 21, 1985, and revised response dated March 14, 1986, which outlined the root cause and proposed corrective actions.

The inspector determined that Quality Procedures, QP-37, Evaluation and Control of Contractor Design for Nuclear Fuel, QP-4.4, Review of Procurement Documents for Items and Services other than spare parts and QP-7.1, Receipt Inspection of Materials, Parts and Components for Operating Plants, were reviewed to include requirements to provide fuel procurement and contract information to Plant Quality Control personnel and to delete the exception of applicability to Nuclear Fuel. Operating Procedure, OP-16009.11, On Site Unpacking, Inspection, and Manual Loading of Hafnium Vessel Flux Depression Assemblies, was revised to implement the requirements of ANSI N45.2.2-1972.

Additionally, selected QA personnel have been sent to the fuel supplier's fabrication facility to receive additional training and to evaluate ways to further improve plant receipt inspections. This item is closed.

6. Monthly and Annual Surveillance Observation (61726/61700)

The inspectors observed TS required surveillance testing and verified: That the test procedure conformed to the requirements of the TS, that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that LCOs were met, that test results met

acceptance criteria requirements and were reviewed by personnel other than the individual directing the test, that deficiencies were identified, as appropriate, and were properly reviewed and resolved by management personnel and that system restoration was adequate. For completed tests, the inspectors verified that testing frequencies were met and tests were performed by qualified individuals.

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

|                 |                                      |
|-----------------|--------------------------------------|
| 0-OSP-075.9     | AFW Overspeed Test                   |
| TP-362          | 4A CCW HEX Efficiency Test           |
| 3-OSP-049.1     | Reactor Protection System Logic Test |
| 3/4-OSP-206.6   | ECCS Monthly Valve Cycling           |
| 3/4-OSP-019.2   | ICW Flowpath Verification            |
| 3-SMI-074.1.2.3 | S/G A,B,C Blowdown                   |
|                 | Effluent Flow LOOP Analog Tests      |

No violations or deviations were identified within the areas inspected.

#### 7. Maintenance Observations (62703/62700)

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

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

- Repair of 4A Steam Generator Feed Pump Suction Line.



- O-PMM-022.1, Emergency Diesel Generator Monthly Preventive Maintenance for "A" Diesel.
- O-PMM-022.2, Emergency Diesel Generator Quarterly Preventive Maintenance for "A" Diesel.
- Repair of 3D Moisture Separator Reheater Weld Damage.
- Repair of 3BS Main Condenser Tube Rupture.

No violations or deviations were identified within the areas inspected.

8. Engineered Safety Features Walkdown (71710)

The inspectors performed an inspection designed to verify the operability of the Unit 3 and 4 Intake Cooling Water (ICW) systems by performing a walkdown of the equipment located primarily at the intake structure. 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.

The inspectors reviewed procedure 3/4-OSP-019.2, entitled Intake Cooling Water System Flowpath Verification, revision dated February 10, 1988, and operating diagram 5610-T-E-4065, Sheets 1 and 2, Revisions 32 and 38, Circulating Water and Intake Cooling Water System.

Conditions that were identified by the inspectors and brought to the attention of the licensee included:

- Valve 3-50-324 - missing valve position indicator.



- Valve 3-50-329 - missing valve position indicator.
- Valve 3-50-309 - grease leaking from actuator.
- ICW "B" Discharge Line - studs and nuts corroded, leak at first flange from wall in header pit area.
- Valve 4-50-307 - grease leaking from actuator.
- Valve 4-50-308 - grease leaking from actuator.
- Valve 4-50-309 - grease leaking from actuator.
- Valve 4-50-411 - bent handlever.

No violations or deviations were identified within the areas inspected.

#### 9. 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 that maintenance work orders had been submitted as required and that 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  
Unit 3 and 4 Component Cooling Water Pump Area  
Refueling Water Storage Tank Area  
Raw Water Storage Tank Area

a. Misalignment of the AFW N2 Backup System

On February 23, 1988, a Nuclear Turbine Operator (NTO) performing routine rounds found, normally closed valve 3-40-1688, (vent valve for Train 1, Bottle 1, AFW N2 Backup) lockwired in the open position. The operations staff immediately closed the vent valve and verified proper line up on the remainder of the system. The valve apparently became misaligned during performance of OP 0204.2, entitled Periodic Tests, Checks, and Operation Evolutions on February 21, 1988. Section 8.4.7 has the operator verify the Unit 3 Backup N2 Supply Station No. 1, Trains 1 and 2 On and Off-line bottle pressures. Step 6 of this procedure states:

Remove all wires and caps, and vent all existing gauge pressure through the Bottle Outlet PI Test Connections, then close the valves and recap.

The operator apparently failed to close valve 3-40-1688 in accordance with this step. This valve was then lockwired in the open position and the vent line was recapped as required, thus preventing the depressurization of the system. The valve is required to be lockwired by a Senior Reactor Operator (SRO), however this valve is not required to have independent verification for its position, therefore, the valve misalignment went unnoticed until February 23, 1988.

Technical Specification 6.8.1 requires that written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Appendix A of USNRC Regulatory Guide 1.33.

Regulatory Guide 1.33, Appendix A, Item 8.b.(1)r, specifies that specific procedures should be written for surveillance tests and inspection for the AFW System.

OP 0204.2 requires that valve 3-40-1688 be lockwired closed. The failure to close this valve is the first example of violation (250,251/88-07-01).

b. 4B BATP Seismically Unqualified PI

On November 6, 1987, clearance order 4-87-11-23 was issued to work the 4B BATP discharge Pressure Indicator (PI-104). Since the parts were not available to fix the PI, a temporary gauge was installed to



permit inservice testing of the pump. The temporary gauge did not have the necessary seismic qualification data, therefore, root valve 4-349 G was to be kept closed on this clearance. On January 26, 1988, a Temporary Lift for 4-349 G was issued in order to perform IST of the 4B B ATP. On February 11, 1988, 4-349 G was found open on the Temporary Lift. The operations department rehung the clearance and closed 4-349 G. On February 17, 1988, 4-349 G was again found open and clearance tag 4-87-11-23 was missing. The previous PI-104 gauge was lying on the floor next to the 4B B ATP and a different gauge was installed. Investigation into this incident revealed that the new gauge installed was also seismically unqualified. Operations and I&C departments did not know of any work being performed on PI-104. The operations department wrote a new clearance tag and closed the valve. On March 3, 1988, 4-349 G was again found to be temporarily lifted and open. A Temporary Lift was issued on February 29, 1988, for an operational check. The clearance was rehung and the valve was closed.

Regulatory Guide 1.33, Appendix A, Item 1. c, specifies that written procedures should be developed for equipment control.

AP 0103.4, entitled In-Plant Equipment Clearance Orders, revision dated February 2, 1988, Section 4.21, specifies that Temporary Lifts shall be used to perform testing evolutions that require rehanging the clearance upon the completion of the test. Section 8.7.3, further specified that a Temporary Lift should not be in effect for more than 24 hours.

Contrary to the above, on three occasions, clearance order 4-87-11-23 was not being maintained in that valve 4-349 G was found open. This is the second example of violation 250,251/88-07-01.

c. 4A CCW HEX Cleaning

On March 19, 1988, the 4A CCW HEX was taken out of service at 1130 to clean the tubes that ICW flows through. The HEX was taken out of service by clearance order 3-88-061. The HEX was cleaned and placed back in service later that night at 2145. On March 20, 1988, at 0935 the Technical Department commenced the 4A CCW HEX Efficiency Test in accordance with TP-362. During this test, test personnel noticed that ICW flow through the HEX was low. Further investigation revealed that the ICW inlet valve to the 4A CCW HEX (valve 4-371) was only partially (approximately one fourth) open. This caused reduced flow from the normal of approximately 5000 gpm to approximately 3700 gpm. The operations department promptly opened the valve fully and the ICW flow returned to normal. The reduced flow did not affect the overall operability of the system because the two operating HEXs were well within their limits for operability. Additionally, the LCO time limit for the 4A CCW HEX was not due to expire until 1130 that day, therefore, the time limit was not exceeded.

AP 0103.4, entitled In-Plant Equipment Clearance Orders, revision dated February 2, 1988, Section 8.3.12, provides instructions for clearance tag-out and removal. Clearance order 3-99-061 required that valve 4-371 be independently verified in the open position upon removal of the clearance tags. The failure to fully open this valve is the third example of violation 250,251/88-07-01. The licensee indicated that the operator and the person that independently verified the valve position thought the valve was fully open. This is a chain operated butterfly valve and apparently the chain became bound while the operator attempted to open the valve. The chain would not move any further in the open direction, therefore, both operators assumed the valve to be fully open. The valve does have a position indicator which can only be seen by walking on the Auxiliary Building roof and looking down through the grating which covers the CCW HEX room. The licensee indicated that the valve position indicators will be painted a different color from the valve actuator and the operators have been directed to use the position indicators as a method of verifying valve position.

#### 10. 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. The licensee plans to issue Licensee Event Report (LERs) on each event within 30 days following the date of occurrence.

On March 8, 1988, with Unit 3 at 100% power, a containment and control room ventilation isolation occurred while checking the setpoints on Unit 3 PRMS R-11, the Containment Radiation Particulate Monitor. All automatic system actions occurred as required and were verified by the licensee. Subsequent investigation by the licensee indicated that the isolation was caused by a burned out indicator light bulb in the high alarm push button circuit. Apparently, the light bulb burned out at the same time the operator depressed the high alarm push button. This is a "fail safe" design in the circuit in that system actuation will occur on loss of alarm indication.

On March 15, 1988, with Unit 3 and 4 at 100% power, loud banging noises were heard coming from 3D MSR. The unit was subsequently shutdown on March 16, 1988, and all four MSRs in Unit 3 were opened and inspected.

Welds securing the internal baffle plate to the MSR shells were found to be broken. The welds were repaired and the unit returned to power on March 23, 1988.

On March 18, 1988, with Unit 3 in Mode 3, an automatic initiation of the AFW occurred. The licensee was cooling down the plant with the steam generator atmospheric dumps and controlling S/G levels using the main feed bypass flow control valves. Blowdown was in progress on all three S/Gs to control chemistry. The unit RCO was in the process of performing 3-OSP-059.1, Source Range NI Operability Test. "B" steam generator level drifted low to the AFW automatic start setpoint of 15% (low-low level). All automatic actions of the system occurred as required. The "B" S/G level returned to normal operating level and the AFW system was secured and returned to a normal line up per the licensee's normal operating procedure. Subsequent discussions with the Unit 3 RCO indicated that his attention was focused on performing 3-OSP-059.1 and he did not realize the S/G level had drifted that low.

On March 24, 1988, Unit 3 was shutdown from 76% power due to a tube leak in the main condenser. At 1425, secondary conductivity showed a dramatic increase and all three steam generators immediately went into Action Level III (1700 umhos/cm). A rapid load reduction was initiated in accordance with 3-GOP-103 at 1440 and the unit entered Mode 3, at 1510, without problem. Actions were then commenced to place the unit in Mode 5 as recommended for Action Level III in ONOP 1568.1. The licensee later identified the ruptured tube and removed it for failure analysis testing. Initial indication for the rupture was fatigue induced failure, possibly caused by flow induced vibrations. The licensee has plugged the remaining section of the tube and will return the unit to service when the secondary plant chemistry is restored. The inspectors were in the control room at the time of the tube rupture and were able to witness the unit shutdown. The shutdown was conducted in a very professional manner and all personnel involved cooperated as a team.

No violations or deviations were identified within the areas inspected.

## 11. Acronyms and Abbreviations

|      |                                       |
|------|---------------------------------------|
| AP   | Administrative Procedure              |
| AFW  | Auxiliary Feedwater                   |
| a.m. | ante meridiem                         |
| ANSI | American National Standards Institute |
| AP   | Administrative Procedures             |
| BATP | Boric Acid Transfer Pump              |
| CFR  | Code of Federal Regulations           |
| CCW  | Component Cooling Water               |
| FPL  | Florida Power & Light                 |
| GOP  | General Operating Procedure           |

|      |                                     |
|------|-------------------------------------|
| HEX  | Heat Exchanger                      |
| ICW  | Intake Cooling Water                |
| IEB  | Inspection and Enforcement Bulletin |
| IFI  | Inspector Followup Item             |
| LCO  | Limiting Condition for Operation    |
| LER  | Licensee Event Report               |
| LIV  | Licensee Identified Violation       |
| MDR  | Maintenance Deficiency Report       |
| MP   | Maintenance Procedure               |
| MS   | Main Steam                          |
| MSR  | Moisture Separator Reheater         |
| NI   | Nuclear Instrumentation             |
| NCR  | Non-conformance Report              |
| NRC  | Nuclear Regulatory Commission       |
| NTO  | Nuclear Turbine Operator            |
| ONOP | Off Normal Operating Procedure      |
| OP   | Operating Procedure                 |
| OSP  | Operation Surveillance Procedure    |
| OTSC | On The Spot Change                  |
| PCM  | Plant Change Modification           |
| p.m. | post meridiem                       |
| PMM  | Preventive Maintenance - Mechanical |
| PNSC | Plant Nuclear Safety Committee      |
| POP  | Preoperational Procedure            |
| PSN  | Plant Supervisor Nuclear            |
| QA   | Quality Assurance                   |
| QC   | Quality Control                     |
| RCO  | Reactor Control Operator            |
| SRO  | Senior Reactor Operator             |
| TP   | Temporary Procedure                 |
| TS   | Technical Specification             |
| TSA  | Temporary System Alteration         |
| URI  | Unresolved Item                     |

