



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

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January 27, 2005

EA 06-027

Florida Power and Light Company
ATTN: Mr. J. A. Stall, Senior Vice President
Nuclear and Chief Nuclear Officer
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR PLANT - INTEGRATED INSPECTION REPORT
05000250/2005005 AND 05000251/2005005; PRELIMINARY WHITE FINDING

Dear Mr. Stall:

On December 31, 2005, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Turkey Point Units 3 and 4. The enclosed integrated inspection report documents the inspection findings which were discussed on January 12, 2006, with Mr. W. Webster and other members of your staff.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This letter and the enclosed supporting documentation discuss a finding that appears to have low to moderate safety significance (White). This finding was assessed based on the best available information, including influential assumptions, using the applicable Significance Determination Process (SDP) and was preliminarily determined to be a White finding (i.e., a finding with some increased importance to safety, which may require additional NRC inspection).

This finding is characterized as an Apparent Violation (AV) of NRC requirements and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/what-we-do/regulatory/enforcement/enforce-pol.html>.

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In this case, the B Auxiliary Feedwater Pump was inoperable due to an incorrectly installed bearing since September 10, 2003, resulting in an apparent violation of Technical Specification 3.7.1.2. In addition, your staff apparently failed to identify and correct the condition of the pump during this time period as required by 10 CFR 50 Appendix B, Criterion XVI, despite several indicators that the pump was degraded.

As indicated in the enclosed SDP Phase II and III Risk Analysis, the issue appears to have a low to moderate safety significance. The problem was discovered following a halted surveillance test and was corrected by your staff prior to returning the pump to service. Because you have already completed the necessary corrective actions the finding no longer presents an immediate safety concern.

Before we make a final decision on this matter, we are providing you an opportunity (1) to present to the NRC your perspectives on the facts and assumptions, used by the NRC to arrive at the finding and its significance, at a Regulatory Conference or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least one week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation and the NRC will issue a press release to announce the conference. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Mr. Joel T. Munday at (404) 562-4560 within seven days of the date of this letter to notify the NRC of your intentions regarding the regulatory conference for the preliminary White finding. If we have not heard from you within 10 days, we will continue with our significance determination and associated enforcement processes on this finding, and you will be advised by separate correspondence of the results of our deliberations on this matter.

Since the NRC has not made a final determination in this matter, no Notice of Violation is being issued for the inspection finding at this time. Additionally, please be advised that the number and characterization of the apparent violation may change as a result of further NRC review.

In addition, the enclosed report documents one NRC identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. Additionally, licensee identified violations, which were determined to be of very low safety significance and are listed in Section 4OA7 of this report. However, because of the very low safety significance of the issue, and because the issue was entered into your corrective action program, the NRC is treating the issue as a Non-Cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you wish to contest the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Turkey Point.

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, portions of its enclosure and your response (if any) 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). However, the NRC is continuing to review the appropriate classification of the SDP Phase 2 Risk Analysis (Attachment 2) and SDP Phase 3 Risk Analysis (Attachment 3) within our records management program, considering changes in our practices following the events of September 11, 2001. Using our interim guidance, the attached analyses have been marked as Proprietary Information or Sensitive Information in accordance with Section 2.390(d) of Title 10 of the Code of Federal Regulations and will not be placed in the PDR. Please control the document accordingly (i.e., treat the document as if you had determined that it contained trade secrets and commercial or financial information that you considered privileged or confidential). We will inform you if the classification of these documents change as a result of our ongoing assessments. ADAMS is accessible from the NRC web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Charles A. Casto, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000250/2005005 and 05000251/2005005

- w/Attachment: 1. Supplemental Information
2. Phase 2 SDP Risk Analysis (**PROPRIETARY INFORMATION**)
3. Phase 3 SDP Risk Analysis (**PROPRIETARY INFORMATION**)

cc w/encl: (See page 4)

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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: 05000250/2005005, 05000251/2005005

Licensee: Florida Power & Light Company (FP&L)

Facility: Turkey Point Nuclear Plant, Units 3 & 4

Location: 9760 S. W. 344th Street
Florida City, FL 33035

Dates: October 1, 2005 - December 31, 2005

Inspectors: S. Stewart, Senior Resident Inspector
T. Kolb, Resident Inspector
M. Maymi, Reactor Engineer (1RO15)
R. Aiello, Senior Examiner (1RO1)
R. Reyes, Resident Inspector, Crystal River 3 (1RO23)
R. Moore, Senior Reactor Inspector (4OA5)
S. Ninh, Senior Project Engineer

Approved by: Joel T. Munday, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000250/2005-005, 05000251/2005-005; 10/01/2005 - 12/31/2005; Turkey Point Nuclear Power Plant, Units 3 and 4; Problem Identification and Resolution.

The report covered a three month period of inspection by resident inspectors, a region based reactor engineer and senior examiner, and a region based senior project engineer. One Green finding, which was a non-cited violation (NCV), and one Preliminary White Finding, which was an apparent violation (AV), were identified. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process", Revision 3, dated July 2000.

A Inspector Identified & Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green: The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failure of the licensee to correct a repeated condition adverse to quality, that being problems with operator's adjustment of auxiliary feedwater speed control.

The finding was more than minor and affected the Mitigating Systems cornerstone because the licensee failed to correct a longstanding problem with manual setting of the auxiliary feedwater speed control knob resulting in repeated inoperabilities. The finding was determined to be of very low safety significance because no instances of loss of function or periods of sustained inoperability beyond technical specification limitations were identified. The finding affects the cross cutting area of Problem Identification and Resolution due to the failure to resolve a known condition adverse to quality related to the problems with manual setting of auxiliary feedwater speed control. (4OA2.2)

- TBD. An Apparent Violation (AV) of Technical Specification 3.7.1.2 was identified for an inoperable auxiliary feedwater pump with a contributing violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for failure of the licensee to promptly identify and correct a significant condition adverse to quality affecting the "B" turbine driven auxiliary feedwater (TDAFW) pump. Specifically, the "B" TDAFW pump exhibited high vibration during routine inservice tests following the replacement of the pump inboard journal bearing in September 2003. Periodic oil samples taken since 2003 were also abnormal

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and on occasion, the bearing was reported to have high temperature. Plant staff were aware of the continued high vibration but did not declare the pump inoperable and take corrective action. Subsequently, on November 7, 2005, a test of the "B" TDAFW pump was halted due to increasing vibrations above the inservice testing limit. The increased vibration was later determined by the licensee to be directly related to the pump inboard journal bearing that was installed incorrectly on September 10, 2003. The licensee entered this issue in the Corrective Action Program as condition report (CR) 2005-30750. (4OA3.3)

The finding was determined to be more than minor because the "B" TDAFW pump which is shared between Unit 3 and Unit 4, was inoperable more than 30 days. The Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capacity of systems that respond to initiating events to prevent undesirable consequences was affected by the finding. NRC Phase 1 and Phase 2 Significance Determination Process (SDP) analyses determined that this finding is potentially greater than Green because the "B" TDAFW pump was inoperable greater than 30 days and no operator recovery credit was identified. An SDP Phase 3 analysis was performed and concluded the issue was of low to moderate safety significance, White. This finding is also related to the cross-cutting area of problem identification and resolution due to the failure to promptly resolve a known condition adverse to quality. (4OA3)

B. Licensee Identified Violations

Four violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered in the licensee's corrective action program. The violations and corrective actions are listed in Section 4OA7 of this report.

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REPORT DETAILS

Summary of Plant Status:

Unit 3 began the period at full rated thermal power and operated at or near full power for the inspection period except for the following: Unit 3 tripped on October 15 due to a feedwater transient that started when a flow transmitter failed. The unit was restarted and returned to Mode 1 on October 19, but remained at reduced power due to failure of the 3B main feedwater pump. On October 24, Unit 3 was shutdown to Mode 3 because of grid instabilities due to Hurricane Wilma. The unit was returned to power operations on October 27. Following repair of the 3B main feedwater pump, Unit 3 returned to full power operation on November 2. On December 20, the unit was reduced to 60 percent power to repair minor leakage in the main condenser. The leak was repaired and the unit was returned to full power on December 22, 2005. On December 29, Unit 3 was shutdown to repair a small cooling water leak in the main generator exciter. The leak was repaired and the unit returned to power operation on December 31.

Unit 4 began the period at full rated thermal power and operated at or near full power for the inspection period except for the following: Unit 4 was shutdown to Mode 3 on October 24 because of grid instabilities due to Hurricane Wilma. Subsequently, Unit 4 remained shutdown due to secondary chemistry problems. On October 31, switchyard insulator salting caused loss of the Unit 4 startup transformer and on November 1, the unit was placed in Mode 5. Following restoration of offsite power and resolution of chemistry problems, the unit was restarted on November 12 and returned to full power operation on November 14.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

.1 Impending Adverse Weather: Hurricane Wilma

a. Inspection Scope

During the preparations and onset of Hurricane Wilma on October 23, 2005, the inspectors verified the status of licensee actions in accordance with off-normal procedure 0-ONOP-103.3, Severe Weather Preparations, and 0-EPIP-20106, Natural Emergencies. This verification included physical walkdowns of the portions of the plant protected area, control room observations, and discussions with responsible licensee personnel regarding preparations of systems and personnel for high winds and potential flooding. The inspectors specifically examined the following areas:

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- 4A Emergency Diesel Generator
- Plant Intake area
- Standby steam generator feedwater pump area

Prior to onset of the storm, regional specialists were dispatched to remain onsite and monitor licensee activities during the storm. The specialists monitored the Unusual Event declaration, dual unit shutdown, and storm mitigation, maintaining communications with NRC Region II. Control room indications and licensee response to severe weather were specifically observed as the storm passed. After the storm, resident inspectors returned to the site to monitor recovery activities.

b. Findings

No findings of significance were identified. Vital safety systems were not affected by the storm.

1R04 Equipment Alignment

1. Partial Equipment Walkdowns

a. Inspection Scope

The inspectors conducted three partial alignment verifications of the safety-related systems listed below. These inspections included reviews of the operability of a train of safety systems using plant lineup procedures, operating procedures, and piping and instrumentation drawings. The specified configurations were compared with observed equipment configurations to verify that the critical portions of the operable systems were correctly aligned.

- Unit 3, Charging and Letdown, in accordance with licensee procedure 3-OP-047, CVCS - Charging and Letdown, ECO 3-05-10-025 regarding the charging pump discharge flow element, and drawing 5613-M-3047, sh. 2
- Both Units 4160 volt electrical distribution on October 28 during plant recovery from dual unit shutdown using licensee electrical diagram 5610-T-E-1591
- Unit 3 auxiliary feedwater trains 1 and 2 when B auxiliary feedwater pump was out of service due to high bearing vibrations

b. Findings

No findings of significance were identified.

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The inspectors conducted one detailed walkdown/review of the alignment and condition of the Unit 4 Residual Heat Removal (RHR) system, which included both A and B RHR pumps and heat exchangers. The inspectors utilized licensee procedure 4-OP-050, Residual Heat Removal System, and drawing 5614-M-3050 (Residual Heat Removal System), as well as other licensing and design documents to verify that the system alignment was correct. During the walkdown, the inspectors verified that: valves and pumps were correctly aligned and did not exhibit leakage that would impact their function; that major portions of the system and components were correctly labeled; that selected hangers and supports were installed and functional; valves important to safety were locked as required by plant drawings and procedures; and that electrical support systems were properly aligned. A review of open corrective action reports and maintenance work requests using the system health report was also performed to verify that the licensee had appropriately characterized and prioritized equipment problems for resolution in the corrective action program. In addition, the inspectors reviewed the Updated Final Safety Analysis Report to check the ability of the system to perform its design function.

b. Findings

No findings of significance were identified.

1R05 Fire Protection**.1 Fire Area Walkdowns****a. Inspection Scope**

The inspectors toured the following nine plant areas to evaluate control of transient combustibles and ignition sources. The inspectors also checked material condition and operational status of fire protection systems including fire barriers used to prevent fire damage or fire propagation. The inspectors reviewed these activities against provisions in the licensee's Procedure 0-ADM-016, Fire Protection Plan, and 10 CFR Part 50, Appendix R. The licensee's fire impairment lists, updated on a daily basis were routinely reviewed. In addition, the inspectors reviewed the condition report database to verify that fire protection problems were being identified and appropriately resolved. The following areas were inspected:

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- Unit 4 West Electrical Penetration Room
- Unit 3 South Electrical Penetration Room
- Unit 4 Residual Heat Removal Room
- Unit 3A and 3B 4160 Switchgear Rooms
- Unit 3 Refuel Floor
- Unit 4 Emergency Diesel Generator Building
- Unit 3 Emergency Diesel Generator Building
- Main Control Room
- Unit 3 Charging Pump Room

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed activities in accordance with procedures 4-OSP-019.4, Unit 4 Component Cooling Water Heat Exchanger Performance Monitoring, and procedure 0-PMM-030.1, Component Cooling Water Heat Exchanger Cleaning, on December 21, 2005. The inspectors periodically checked the licensee monitoring of intake temperature versus system temperature limits to assure technical specification requirements were met and assessed the operational readiness of the cooling systems should they be needed for accident mitigation. The inspectors verified that the licensee conducted appropriate preventive maintenance to assure system readiness.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

On November 21, 2005, the inspectors observed and assessed licensed operator actions to a simulated set of transients and operating events done in the licensee's plant specific simulator. The licensee conducted Simulator Evaluated Scenario 750203100, which included a loss of 3P08 (3B Inverter), a trip of the 3A steam generator feedwater pump resulting in a runback, pressurizer safety valve 3-551C leakage, and a reactor trip and safety injection with failure of MOV 3-843 A/B valves to open, along with a failure of the turbine to trip. The inspectors observed the operator's use of Emergency Operating

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Procedure (EOP) E-0, Reactor Trip or Safety Injection; EOP E-1, Loss of Reactor or Secondary Coolant; and off-normal procedures, 3-ONOP-008, Loss of 120V Vital Instrument Panel 3P08, and 3-ONOP-089, Turbine Runback. The operator's actions were checked to be in accordance with licensee procedures. Event classifications (including Site Area Emergency) were checked for proper classification and prompt state notification. The simulator board configurations were compared with actual plant control board configurations concerning recent plant modifications. The inspectors specifically evaluated the following attributes related to operating crew performance:

- Clarity and formality of communication
- Ability to take timely action to safely control the unit
- Prioritization, interpretation, and verification of alarms
- Correct use and implementation of Off Normal and Emergency Operation Procedures and Emergency Plan Implementing Procedures
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by Operations supervision, including ability to identify and implement appropriate Technical Specification actions, regulatory reporting requirements, and emergency plan actions and notifications

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following equipment problems and associated condition reports to verify that the licensee's maintenance efforts met the requirements of 10 CFR 50.65 (Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants) and Administrative Procedure 0-ADM-728, Maintenance Rule Implementation. The inspectors' efforts focused on maintenance rule scoping, characterization of maintenance problems and failed components, risk significance, determination of (a)(1) classification, corrective actions, and the appropriateness of established performance goals and monitoring criteria. The inspectors also interviewed responsible engineers and observed some of the corrective maintenance activities. The inspectors checked that when operator actions were credited to prevent failures, the operator was dedicated at the location needed to accomplish the action in a timely manner, and that the action was governed by applicable procedures. Furthermore, the inspectors verified that equipment problems were being identified and entered into the corrective action program.

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- Work Order 35019306-01, Replace CR 2940 switches on breaker 4P210A for 4A residual heat removal pump and associated CR 2005-21545 for extended unavailability due to clearance problem
- CR 2005-29696, Unusual Event due to loss of Unit 4 startup transformer
- CR 2005-28117, Failure of Unit 3 feedwater regulating valve FCV-3-498

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Controla. Inspection Scope

The inspectors completed in-office reviews and control room inspections of the licensee's risk assessment of seven emergent or planned maintenance activities. The inspectors compared the licensee's risk assessment and risk management activities against the requirements of 10 CFR 50.65(a)(4); the recommendations of Nuclear Management and Resource Council 93-01, Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 3; and Procedures 0-ADM-068, Work Week Management and O-ADM-225, On Line Risk Assessment and Management. The inspectors also reviewed the effectiveness of the licensee's contingency actions to mitigate increased risk resulting from the degraded equipment. The inspectors evaluated the following risk assessments during the inspection:

- Unit 4, October 26, 2005, Risk Condition Yellow for motor inspections on intake cooling water (ICW) and component cooling water (CCW) pumps
- Unit 3, October 17, 2005, Risk Condition Orange for isolation of the charging header for weld leak repair to flow transmitter FT-3-122
- Unit 4, Mode 3 operations when draining the condensate and feedwater systems for chemistry control using licensee procedure 0-ADM-051, Outage Risk Assessment and Control
- Unit 3, November 8, 2005, power operations while testing 4B emergency diesel generator, conducting switchyard work, and removing auxiliary feedwater pump B from service due to high vibrations
- Unit 3, December 2, 2005, replacement of 3C steam generator steam flow switch
- Unit 3 and 4, December 15, 2005, operations during maintenance associated with the A auxiliary feedwater pump
- Unit 4, December 17, 2005, startup transformer removed from service earlier than expected for switchyard insulator cleaning, CR 2005-34862

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No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutionsa. Inspection Scope

For the six non-routine events described below, the inspectors either observed the activity or reviewed operator logs and computer data to determine that the evolution was conducted safely and in accordance with plant procedures. Specific checks were done to assess operator preparedness and performance in coping with non-routine events and transients.

- Unit 3 reactor trip and operator response on October 15, 2005
- Unit 3 startup and return to power operations on October 19, 2005
- Unusual Event declaration (October 23) and subsequent dual unit shutdown due to onset of Hurricane Wilma on October 24, 2005
- Return of Unit 3 to power operation on October 27, 2005
- Unusual Event declaration on October 31, 2005 due to loss of Unit 4 startup transformer
- Return of Unit 4 to power operation on November 12, 2005

b. Findings

No findings of significance were identified.

1R15 Operability Evaluationsa. Inspection Scope

The inspectors reviewed six interim disposition and operability determinations associated with the following condition reports to ensure that Technical Specification operability was properly supported and the system, structure, or component remained available to perform its safety function with no unrecognized increase in risk. The inspectors reviewed the updated Final Safety Analysis Report (FSAR), applicable supporting documents and procedures, and interviewed plant personnel to assess the adequacy of the interim condition report disposition.

- Unit 4 CR 2005-27461 Intake cooling water pump flange and baseplate corrosion
- Unit 4 CR 2005-29846 Pressurizer maximum spray water temperature differential exceeded. The inspectors reviewed the Technical Specification

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- 3.4.9.2 and Bases, and ASME Boiler and Pressure Vessel Code, Section III
- Unit 4 CR 2005-32226 4A EDG voltage regulator operating erratically
- Unit 3 CR 2005-28863 3B2 Battery Charger amps found low during performance of 0-SME-003.7, 125 VDC Station Battery Weekly Maintenance
- Unit 3 CR 2005-33226 3A Charging Pump Bolting 35029213
- Unit 3 and 4 CR 2005-34288 3A High Head Safety Injection pump high motor vibrations

b. Findings

No findings of significance were identified.

1R16 Operator Work Around.1 Cumulative Effectsf. Inspection Scope

The inspectors reviewed the cumulative effects of the operator workarounds that were in place on December 1, 2005, to verify that those effects could not increase an initiating event frequency, affect multiple mitigating systems, or affect the ability of operators to properly respond to plant transients and accidents. The following workarounds were reviewed:

- Unit 4 #3 Control Valve Oscillations
- Unit 4 HCV-4-758 and FCV-4-605 leaking during residual heat removal
- Unit 4 MOV 4-1409 and FCV 4-498 leaking affecting 4C steam generator level

b. Findings

No findings of significance were identified.

.2 Selected Operator Work Arounda. Inspection Scope

The inspectors reviewed the following Operator Work Around (OWA), to verify that this work around did not affect either the functional capability of the related system in responding to an initiating event, or the operators' ability to implement abnormal or emergency operating procedures.

- Unit 4 MOV 4-1409 and FCV 4-498 leaking by affecting 4C S/G level (CR 2005-

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31969 and CR 2005-31990)

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modification4. Inspection Scope

The inspectors reviewed the documentation for the following Plant Change and Modifications (PC/M) associated with Unit 3 and 4:

- C PC/M 03-048 (June 8, 2004) to remove the Unit 3 Turbine Runback function upon receipt of an Overpower or Overtemperature Delta-T signal
- C PC/M 05-059 (May 10, 2005) to replace Unit 4 Core Exit Thermocouples via In-core System Flux Thimbles at location H1 and M3

The inspectors reviewed the 10 CFR 50.59 screening and evaluation, fire protection review, environmental review, alara screening, and license renewal review. The inspectors reviewed all associated plant drawings and updated Final Safety Analysis Report documents impacted by these PC/M's and discussed the changes with plant staff.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testinga. Inspection Scope

For the six post maintenance tests listed below, the inspectors reviewed the test procedures 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. The inspectors verified that the requirements of Procedure 0-ADM-737, Post Maintenance Testing, were incorporated into test requirements. The inspectors reviewed the following work orders (WO) and/or surveillance procedures (OSP):

- C Unit 3 and 4, post maintenance testing conducted on October 6, 2005 on the A auxiliary feedwater pump replacement in accordance with work order 33021678-

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- 01, 0-OSP-075.11, Auxiliary Feedwater Inservice Test, and 0-ADM-737, Post Maintenance Testing
- C Unit 4, post maintenance testing conducted on November 11, 2005 for the C intake cooling water (ICW) check valve replacement in accordance with work order 35006946-01 and 0-ADM-737
 - C Unit 3 and 4, post maintenance testing conducted on November 11, 2005 on the B auxiliary feedwater pump in accordance with work order 35008593-01
 - C Unit 3, post maintenance testing conducted on December 2, 2005, for the 3A charging pump speed controller and packing replacement per work order 35029213 and work order 35029206
 - C Unit 4, post maintenance testing conducted on December 20, 2005, for thermal overload calibration per 0-PME-102.3, MOV Thermal Overload Protection Test and Calibration, in accordance with work order 35012168 for MOV 4-1405, Auxiliary Feedwater Pumps Steam Supply valve
 - Unit 4, post maintenance testing conducted on December 23, 1999 for the 4B safety related 125 VDC battery per work order 99002831-01, which included the performance of 0-SMF-003.15, Station Battery 60 Month Maintenance

b. Findings

No findings of significance were identified.

1R20 Unit 4 Outage Activities

During Mode 4 and 5 operations on Unit 4, the inspectors evaluated activities as described below, to verify the licensee considered risk in developing schedules, adhered to administrative risk reduction methodologies, and adhered to operating license and Technical Specification requirements that maintained defense-in-depth.

.1 Shutdown Activitiesa. Inspection Scope

The inspectors observed or reviewed portions of the Unit 4 cooldown to verify that Technical Specification cooldown restrictions were followed.

b. Findings

No findings of significance were identified. A licensee identified issue is documented in 4OA7 of this report.

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.2 Licensee Control of Outage Activities

a. Inspection Scope

During the outage, the inspectors observed the items or activities described below, to verify that the licensee maintained defense-in-depth commensurate with the outage risk-control plan for key safety functions and applicable Technical Specifications when taking equipment out of service.

- Electrical Power
- Residual Heat Removal (RHR)

The inspectors also reviewed the licensee's responses to emergent work and unexpected conditions, to verify that control-room operators were cognizant of the plant configuration.

b. Findings

No findings of significance were identified. A licensee identified issue is documented in 4OA7 of this report.

.3 Monitoring of Heatup and Startup Activities

a. Inspection Scope

The inspectors reviewed activities during reactor restart and power escalation to verify that reactor parameters were within safety limits and that the startup evolutions were done in accordance with pre-approved procedures and plans.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors either reviewed or witnessed the following three surveillance tests to verify that the tests met the Technical Specifications, the UFSAR, the licensee's procedural requirements and demonstrated the systems were capable of performing their intended safety functions and their operational readiness. In addition, the inspectors evaluated the effect of the testing activities on the plant to ensure that

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conditions were adequately addressed by the licensee staff and that after completion of the testing activities, equipment was returned to the positions/status required for the system to perform its safety function. The tests reviewed included one inservice test (IST) and one leakrate determination.

- 3-OSP-023.1, Diesel Generator Operability Test conducted on October 20, 2005
- 4-OSP-050.2, Residual Heat Removal System Inservice Test conducted on November 20, 2005. This was an IST surveillance
- 4-OSP-41.1, Reactor Coolant System Leakrate Calculation

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the five temporary modifications listed below to ensure that the modification did not adversely affect the operation of the system. The inspectors screened temporary plant modifications for systems that were ranked high in risk for departures from design basis and for inadvertent changes that could challenge the systems to fulfill their safety function. On closed temporary modifications, the inspectors verified that appropriate post maintenance testing had been completed after the modification had been removed and the system restored to normal. Condition reports, CR 2005-23433 and 2005-23486, and FPL Quality Assurance Audit QAO-PTN-05-04, Configuration Management were reviewed by the inspectors. The inspectors conducted plant tours and discussed system status with engineering and operations personnel to check for the existence of temporary modifications that had not been appropriately identified and evaluated.

- TSA 3-04-013-029 Temporary power to the 3CD Diesel Instrument Air Compressor jacket water heater, heat tracing and battery charger
- TSA 3-05-075-012 Lift power leads to the 'A' Auxiliary Feed Water Pump turbine lube oil temperature controller TC-6537A
- TSA 3-05-041-001 Increase annunciator F 1/1, RCP Motor / Shaft High Vibration, input from 3C RCP Bently Nevada Shaft Vibration vertical and horizontal monitors alarm setpoint from 5.0 mils to 9.0 mils

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- TSA 4-05-074-023 Lift wires on FT-4-476 loop to prevent injection of noise, and all bi-stables within channel IV protection Loops to be reset
- TSA 4-05-013-017 Provide temporary power, via a Power Panel fed from Mcgreggor substation, for the 4CD Instrument Air Compressor

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

Inspection Scope

On December 6, 2005 the inspectors observed the licensee simulator based emergency preparedness drill. Results of the drill are used by the licensee as inputs into the Drill/Exercise Performance and Emergency Response Organization Drill Participation Performance Indicators. The drill involved an unusual event declaration for loss of all plant annunciators for greater than 15 minutes, and an Alert declaration for a simulated fire that affected safety equipment, including intake cooling water pumps. The inspectors observed the licensee's event classification in accordance with licensee procedure 0-EPIP-20101, Duties of the Emergency Coordinator. Notification of the state warning point of the simulated events was also observed. At the conclusion of the drill, the inspectors discussed the drill with plant staff and noted that drill improvement items were documented in the corrective actions program.

b. Findings

No findings of significance were identified.

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4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution.1 Daily Reviewa. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a screening of items entered daily into the licensee's corrective action program. This review was accomplished by reviewing daily printed summaries of condition reports and by reviewing the licensee's electronic condition report database. Additionally, the reactor coolant system unidentified leakage was checked on a daily basis to verify no substantive or unexplained changes.

b. Findings

No findings of significance were identified

.2 Annual Sample Reviewa. Inspection Scope

The inspectors selected two condition reports identified below for a detailed review and discussion with the licensee. The condition reports describe circumstances in which the auxiliary feedwater pump governor speed control knobs were improperly operated resulting in a degraded auxiliary feedwater capability. In multiple cases, the speed control knob became loose and disengaged. In the most recent case, the knob was improperly set following testing, causing a train of auxiliary feedwater protection to be degraded/inoperable for about 6 hours. The condition reports were reviewed to ensure that an appropriate evaluation was performed and appropriate corrective actions were specified and prioritized. Other attributes checked included disposition of operability, resolution of the problem including cause determination and corrective actions. The inspectors evaluated the condition reports in accordance with the requirements of the licensee's corrective actions process as specified in NAP-204, Condition Reporting. Additional condition reports reviewed included CR 2005-33569, C auxiliary feedwater pump inoperable (B and C AFW pump control knobs in the minimum position); CR 2005-8073, C auxiliary feedwater pump governor knob (became loose and disengaged); and CR 2003-1453, B auxiliary feedwater pump governor speed control knob found free to turn.

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- CR 2005-18866, C Auxiliary Feedwater governor Adjust Knob Fell Off
- CR 2005-33550, Failure of C Auxiliary Feedwater Pump to reach 5900 rpm when started

b. Findings

Introduction: The inspectors identified a Green Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failure of FPL to assure that a condition adverse to quality, involving a repeat problem with manual mis-operation of auxiliary feedwater pump speed control, was promptly corrected.

Description: During surveillance testing on December 5, 2005, the C turbine driven auxiliary feedwater pump failed to achieve the specified 5900 rpm, when started and only reached a maximum speed of 1000 rpm. The failed test was caused by improper setting by operators of the speed control knob during testing earlier that day. After the test, the licensee found the B auxiliary feedwater pump governor control switch was also improperly set, again due to operators and earlier testing on the same day. The inspector had observed that this speed control knob had fallen off during manual over-adjustment on repeated occasions: June 27, 2005, following an auxiliary feedwater actuation associated with a reactor trip; and March 18, 2005, during recovery from testing. Problems with control of the auxiliary feedwater turbine speed control was a long standing issue, documented in 2003 when the B pump knob was found free to rotate because manual mis-operation following testing caused a loose ring assembly, and earlier problems discussed in NRC Information Notice 86-14, PWR Auxiliary Feedwater Pump Turbine Control Problems. Other than reconnecting the knob, no corrective actions from the earlier events were implemented to assure that manual manipulation of the switch did not result in a degraded auxiliary feedwater system. During periods when the speed control knob(s) were out of position, there was an increased plant risk because the affected pump(s) would not have accomplished their safety function.

Analysis: The licensee's failure to correct repeated problems with the same root cause, that being mis-operation of the auxiliary feedwater pump speed control knob, affecting multiple pumps and resulting in recurring pump inoperability, was a performance deficiency. The finding was more than minor because it affected the Mitigating System cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences (i.e. loss of heat sink). The finding was screened using NRC Manual Chapter 0609, Appendix A, Attachment 1, Significance Determination Process Screening Worksheet. The Mitigating Systems cornerstone was affected and because the inoperabilities in each case were limited to one pump or train and were of short duration (less than the technical specification action requirements), the finding screened as Green. In all cases reviewed by the inspectors, the redundant

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train remained available when the mis-operation occurred and no loss of function was identified. No Phase 2 assessment was required because the inoperabilities were less than 24 hours in duration and external events were not required to be analyzed. The finding affects the cross cutting area of Problem Identification and Resolution due to the repeated failure to correct/resolve a known condition adverse to quality.

Enforcement: 10 CFR 50. Appendix B, Criterion XVI, requires, in part, that for significant conditions adverse to quality, measures shall assure that corrective action is taken to preclude repetition. Contrary to the above, after repeated problems with assuring proper speed control for the auxiliary feedwater pump turbines, on March 18, 2005 and June 27, 2005, and prior occasions, measures were not adequate to prevent repetition on December 5, 2005, when the speed controls for the B and C auxiliary feedwater pumps were improperly positioned by an operator. On the earlier occasions, the control knob either fell off due to manual mis-operation by operators, or was found free-wheeling due to failure of the friction device caused by manual mis-operation. When identified, the licensee restored the knob to its correct position and documented the problem in the corrective actions program as CR 2005-33550 and CR 2005-33569. The violation existed during periods when the licensee did not assure that the speed control knob was properly set. Not all manipulations of the speed control resulted in equipment inoperabilities, and in no case was a loss of function identified. Because the finding is of very low safety significance, Green, and had been entered into the corrective action program, the violation is being treated as a Non-Cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 50-250/2005-005-02 and 50-251/2005-005-01, Failure to Correct Repeated Problems with Auxiliary Feedwater Pump Manual Speed Control.

.3 Semi-Annual Trend Review

Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors reviewed the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector corrective actions item screening discussed in section 4OA2.1 above, plant status reviews, plant tours, document reviews, and licensee trending efforts. The inspectors' review nominally considered the six month period of June 2005 through December 2005. The review also included issues documented outside the normal CAP in Chief Nuclear Officer's Indicator Report, dated November 14, 2005. Corrective actions associated with a sample of the issues identified in the licensee's corrective actions program were reviewed for adequacy.

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Assessment and Observations

No findings of significance were identified. However, the inspectors, in reviewing licensee performance over the last six months, noted a number of occasions when licensee personnel missed surveillance intervals that are in place to assure equipment reliability such that margins of safety are maintained. On November 3, 2005, the inspectors identified that the licensee missed technical specification surveillance 4.8.1.1.2.c, for checking Unit 4 emergency diesel generator fuel oil for accumulated water after operation for greater than one hour. When identified to the licensee, the fuel oil was checked, no water was observed, and the issue was documented in the corrective action program as CR 2005-30252. On August 22, 2005, the licensee identified that engineered safeguards instrument channel checks for flow transmitters FT-4-485 and FT-4-495 had been missed for about 35 hours (NRC Inspection Report 50-250/2005-004 and 50-251/2005-004, Section 4OA7.2). The missed surveillance was completed satisfactorily and documented in the corrective actions program as CR 2005-22985. The NRC has previously identified a missed reactor coolant inventory balance, required by licensee procedures that implement technical specification 4.4.6.2.1.c, as documented in NRC Report 50-250/2005-003 and 50-251/2005-003, Section 1R22, Surveillance Testing. The inspectors observed that the licensee routinely had a number of technical specification surveillances in the grace period prior to completion.

The inspectors also identified a trend in untimely or incomplete submittals of licensee event reports. The inspectors in this report dispositioned in LER 05000250/2005-001, the failure of the licensee to report in the LER, the method of discovery for a procedural error (not logging an out-of-service component in the Equipment Out-of-Service logbook). The inspectors also dispositioned the late submittal (more than 60 days after discovery) of Licensee Event Report 05000251/2005-003 for an incorrectly wired relay. NRC Inspection Report 50-250 and 50-251/2005-004 dispositioned the late submittal of an LER for a missed surveillance in Licensee Event Report 05000250/2005-003. Also, LER 50-250/2005-004, which described the failure of an emergency containment filter fan was submitted 76 days after the event and this late submittal was a minor violation.

4OA3 Event Followup

.1 (Closed) Licensee Event Report 05000250/2005-001: Mode Increase While in Technical Specification Shutdown Action Statement

On January 1, 2005, Unit 3 entered Technical Specification Mode 2 (startup) while a Technical Specification Limiting Condition for Operation (LCO) was not met. Specifically, while a reactor startup was being conducted, control-room operators declared the 3A ICW header inoperable, entered Technical Specification 3.7.3, and began backwashing the 3A intake cooling water basket strainer. Before restoring the

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cooling water header, the unit entered Mode 2, where it is required to have three intake cooling water pumps and two intake cooling water headers operable. Technical Specification 3.0.4 prohibits entry into an operational mode (reactor startup) when the conditions for a limiting condition for operation are not met. The licensee determined the cause of the event to be operator error, in that the control-room operator who performed the backwash evolution did not adequately coordinate activities with operators conducting the reactor startup. When identified by licensee personnel during review of plant status, the issue was documented in the corrective action program and precautions were added to the applicable procedures to prevent recurrence. The finding was more than minor because it had a credible impact on safety when one train of mitigating equipment was inadvertently removed from service during mode increase operations. The issue screened as Green, using NRC Manual Chapter 0609, Appendix A, Attachment 1, because there was no loss of mitigating function and the one train of mitigating equipment was affected for less than 24 hours. The inspectors reviewed the LER and CR 2005-21, which documented this event in the licensee's corrective action program, to verify that the corrective actions had been implemented. This licensee identified finding involved a violation of Technical Specification 3.0.4 and the enforcement aspect is discussed in Section 40A7.4. The failure of the licensee to report in the LER the method of discovery for the procedural error (not logging an out-of-service component in the Equipment Out-of-Service logbook), was considered a violation of Minor significance. The LER is closed.

.2 (Closed) Licensee Event Report 05000251/2005-003: Incorrectly Wired P-10 Relay Renders One of Two Inputs to P-7 Interlock Inoperable for a Single Train of At-Power Reactor Trips

On June 3, 2005, the licensee identified that wiring in the B train of the reactor trip system was incorrect, rendering a portion of the circuitry in one of the two redundant trains of protection inoperable. The mis-wiring prevented certain reactor trips from being enabled by nuclear instrument inputs, however redundant turbine first stage input remained available and no instances of operation without full reactor protection were identified. The cause of the mis-wiring was inadequate post-maintenance testing of work on the circuitry in 1997. When identified by the licensee during maintenance, the circuitry was correctly wired and tested, and post maintenance testing procedures were revised to assure that all contacts are tested/verified when relay maintenance is performed. The issue was entered into the corrective action program as CR 2005-16436. Because the redundant turbine first stage pressure input to the protection channel was always available, no instances of operation with a degraded reactor trip capability were identified and the incorrect wiring constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section VI of the NRC Enforcement Policy. The late submittal of the LER was a violation of minor significance. The LER is closed.

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ATTACHMENTS 2 AND 3 CONTAIN PROPRIETARY INFORMATION**.3 The "B" Turbine Driven Auxiliary Feedwater (TDAFW) Pump Failed Inservice Test on November 7, 2005.****a. Inspection Scope**

The "B" TDAFW pump exhibited high vibration (greater than inservice testing limits) on the inboard radial bearing on November 7, 2005. The inspectors evaluated the licensee's actions related to the high vibrations as well as reviewed historical inservice test data and oil sample analyses. The inspectors also discussed the occurrence with plant engineers to examine the circumstances surrounding the problem.

b. Findings

Introduction: An Apparent Violation (AV) of Technical Specification 3.7.1.2 was identified for an inoperable auxiliary feedwater pump with a contributing violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for failure of the licensee to promptly identify and correct a significant condition adverse to quality affecting the "B" turbine driven auxiliary feedwater (TDAFW) pump. Specifically, the "B" TDAFW pump exhibited high vibration during routine inservice tests following the replacement of the pump inboard journal bearing in September 2003. Periodic oil samples taken since 2003 were also abnormal and on occasion, the bearing was reported to have high temperature. Plant staff were aware of the continued high vibration but did not declare the pump inoperable and take corrective action. Subsequently, on November 7, 2005, a test of the "B" TDAFW pump was halted due to increasing vibration above the inservice testing limit. The increased vibration was later determined by the licensee to be directly related to the pump inboard journal bearing that was installed incorrectly on September 10, 2003.

Description: During testing on November 7, 2005, the "B" TDAFW pump inboard journal bearing exhibited high vibration and was hot to the touch. The vibration reading was recorded as 0.8 in/sec and the test was promptly halted. The next day, a licensee inspection identified uneven tooth wear on the pump coupling and evidence of grease caking. Further inspection of the inboard journal bearing found that the bearing was installed incorrectly. This incorrect installation which occurred during the September 10, 2003 pump replacement, caused inadequate lubrication to the bearing and caused flaking of the babbit.

Based on review of the "B" TDAFW pump historical vibration data, the inspectors found that inboard vertical vibration was .30 in/sec in September 2003, which was higher than .15 in/sec prior to pump bearing replacement. Subsequently the inboard vertical vibration trended high until September 13, 2004, when the pump inboard vertical vibration reading was at .38 in./sec and in the Alert range (>.32 in/sec and <.70 in/sec).

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More frequent tests were performed (11/18/2004 - .375 in/sec, 12/6/2004 - .441 in/sec, 1/10/2005 - .404 in/sec, 1/31/2005 - .405), and vibration remained in the Alert range until February 24, 2005, when the licensee initiated actions which included pump coupling alignment, tightening of the pump base bolting, and filtration of turbine/pump oil reservoir. However, this maintenance was not effective in that the inboard vertical vibration reading remained high at .305 in/sec. Subsequent tests were performed (3/22/2005 - .48 in/sec, 3/28/2005 - .44 in/sec; 5/23/2005 - .45 in/sec, 8/15/2005 - .47 in/sec, 09/12/2005 - .52 in/sec) and the pump inboard vertical vibration readings remained high until November 7, 2005, when the pump exceeded the inservice test operability limit of 0.7 in/sec with a reading of 0.8 in/sec. The inspectors noted that during surveillance runs, the turbine is operated for a nominal 30 minutes. The inspectors reviewed testing data and determined that the oil samples for past periods showed degradation (for example Abnormal on Dec 6, 2004), and bearing temperatures were recorded as elevated during post trip operation on March 22, 2005.

Analysis: The inspectors determined that installing the B AFW pump which was inoperable due to the radial bearing not being properly aligned, was a performance deficiency which existed for greater than the allowed TS outage time. Further, the licensee not having discovered the improper installation, which was evident in degrading vibration, abnormal oil samples, and a hot-to-touch bearing during pump operation, was a contributing corrective actions effectiveness issue. The vibration increased to a sufficient magnitude to cause operators to halt pump operation on November 7, 2005 and perform an investigation that revealed improper installation of the pump radial bearing. The finding was determined to be more than minor because failure of the licensee to promptly identify and correct conditions adverse to quality resulted in an unreliable train of auxiliary feedwater, which is a mitigating system shared by both units. NRC Phase 1 and Phase 2 Significance Determination Process analyses determined that this finding is greater than Green because the "B" TDAFW pump was not capable of performing its function for its mission time (24 hours) from September 10, 2003 when the bearing was incorrectly installed, until November 8, 2005, when it was corrected. Additionally for the NRC evaluation, the pump failure was assumed to be non-recoverable since repairs would have required significant equipment disassembly. An SDP Phase 3 analysis was performed and concluded the issue to be of low to moderate safety significance, Preliminary White. This potential finding is also related to the cross-cutting area of problem identification and resolution due to the failure to promptly resolve a known condition adverse to quality.

Enforcement: Technical Specification 3.7.1.2 requires two independent auxiliary feedwater trains including 3 pumps during plant operation. Action statement 3 states, in part, that with a single auxiliary feedwater pump inoperable, within 4 hours, verify operability of two independent auxiliary feedwater trains and restore the inoperable pump to operable status within 30 days, or place the affected units in at least Hot

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Standby within the next 6 hours. 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that measures shall be established to assure that conditions adverse to quality, are promptly identified and corrected.

Contrary to the above, the licensee failed to restore the inoperable "B" auxiliary feedwater pump within 30 days, and did not place the unit in at least Hot Standby during this time. In this case, the B auxiliary feedwater pump was placed in service on September 10, 2003, in an inoperable condition due to a misaligned radial bearing, and the inoperable condition was not identified until November 7, 2005. In addition, the licensee failed to identify and correct the condition during this time, even though pump bearing vibration levels and oil samples provided indication of the significant adverse condition. This apparent violation is identified as AV 05000250, 251/2005005-02, AFW Pump B out of Service Greater than TS Allowed Due to Incorrect Bearing Installation. The licensee entered this issue in the Corrective Action Program as condition report (CR) 2005-30750.

40A5 Other Activities

(Closed) Unresolved Item (URI) 05000250,251/2002006-01: Adequacy of SBO Strategy/Analysis and Loss of AC Power EOPs

During the Safety System Design and Performance Capability Inspection (SSDPC), NRC Inspection Report (IR) 05000250, 251/02-06, the inspectors observed that the licensee's coping strategy for station blackout (SBO) changed in 1998 from the original SBO coping strategy, approved in 1990, of maintaining the plant in hot standby for 8 hours and supplying reactor coolant pump (RCP) seal cooling, to a strategy of reactor coolant system cooldown without RCP seal cooling. This item was reviewed in a follow-up inspection documented in NRC IR 05000250, 251/03-07. During the SSDPC and follow-up inspection, the inspectors were unable to verify that changes made to the emergency operating procedures, based on the revised coping strategy, did not adversely impact the licensee's ability to mitigate an SBO. This unresolved item remained open pending NRC technical review of a revised station blackout (SBO) thermo-hydraulic analysis performed by the licensee.

The NRC's technical review of the licensee's evaluation concluded that the licensee's thermo-analysis was acceptable. This item is closed.

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The resident inspectors presented the inspection results to Mr. Webster and other members of licensee management at the conclusion of the inspection on January 12, 2005. Additionally, the licensee was informed of the Preliminary White Apparent Violation on January 27, 2005. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. The licensee did not identify any proprietary information.

40A7 Licensee Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as NCVs:

- .1 Technical Specification 3.4.9.2.c requires that pressurizer - spray water differential temperature shall be limited to a maximum of 320 degrees or restore the temperature to within the limits within 30 minutes. Contrary to the above, on November 1, 2005, during plant cooldown, the pressurizer - spray water differential temperature was 360 degrees and not restored to within limits for six hours. The issue was identified by the licensee during a post-cooldown review of plant parameters. When identified, the licensee entered the occurrence in their corrective actions program and completed an engineering evaluation. The issue was more than minor, having affected the barrier integrity cornerstone that assures the integrity of the reactor coolant system. The issue screened as Green using NRC Manual Chapter 0609, Appendix A, Attachment 1 after the structural integrity of the pressurizer was evaluated and the transient was found to have been within engineering design limits. The issue is in the licensee corrective action program as CR 2005-29846.
- .2 Technical Specification 6.8.1.a, requires that the written procedures of NRC Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, be implemented. The regulatory guide, Attachment A, Section 1, includes procedures for Equipment Control (Tagging). FPL implements this requirement, in part, with procedure 0-ADM-212, In-Plant Equipment Clearance Orders, which states in Step 4.18.1, Danger Tag, that "the position of the component may not be altered in any way". Contrary to the above, on November 17, 2005, FPL failed to implement 0-ADM-212, when the position of danger tagged component C343C (B boric acid storage tank sample valve) was altered when a technician operated a valve that was danger tagged shut with tag 0-05-002-00001. When identified, the issue was documented in the corrective action program and a human performance review was initiated. There were no immediate safety

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consequences. The performance deficiency was more than minor because operation of a danger tagged valve on a system covered in technical specifications (TS 3.1.2.1) was considered a precursor to a significant event, that being mis-operation of a danger tagged valve that affects nuclear safety. The issue screened as Green using NRC Manual Chapter 0609, Appendix A, Attachment 1, because in this case, operation of the valve did not result in any safety system inoperabilities or plant transients. The issue is in the licensee corrective action program as CR 2005-31725.

- .3 Technical Specification 3.4.1.3 requires that in operational Mode 4, with no reactor coolant pumps in operation, residual heat removal loops A and B shall be operable and at least one of the loops shall be in operation. Further, both residual heat removal pumps may be deenergized for up to one hour provided there are no boron dilution activities and saturation margin is maintained. Contrary to the above, on November 1, 2005, with Turkey Point Unit 4 in Mode 4 and no reactor coolant pumps in operation, both residual heat removal pumps were stopped for more than one hour (two hours and five minutes). The issue was more than minor, affecting the Initiating Events Cornerstone, because with no forced circulation in the reactor, thermal stratification of the reactor coolant system could occur that may cause reactivity changes outside the capability of operator recognition and control, should a boron dilution occur. The issue screened as Green, using NRC Manual Chapter 0609, Appendix A, Attachment 1, as a transient initiator contributor, because no boron dilution occurred and all mitigating systems remained available. When identified, the licensee documented the problem in the corrective action program as CR 2005-29796.
- .4 Technical Specification 3.0.4 requires, in part, that entry into an operational mode shall not be made when the conditions for the Limiting Condition for Operations are not met. Contrary to the above, on January 1, 2005, Turkey Point Unit 3 entered operational Mode 2 (Startup) from Mode 3 (Hot Standby) while the conditions for Limiting Condition for Operation 3.7.3, were not met when one train of intake cooling water was inoperable due to basket strainer backwash. The violation existed for 52 minutes. The finding was more than minor because it had a credible impact on safety when one train of mitigating equipment was inadvertently removed from service during mode increase operations. The issue screened as Green, using NRC Manual Chapter 0609, Appendix A, Attachment 1, because there was no loss of mitigating function and the one train of mitigating equipment was affected for less than 24 hours. When identified by licensee personnel during review of plant status, the issue was documented in the corrective action program and precautions were added to the applicable procedures to prevent recurrence. The issue is in the licensee corrective action program as CR 2005-21.

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SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

S. Greenlee, Engineering Manager
T. Jones, Site Vice-President
M. Moore, Corrective Actions Supervisor
M. Murray, Emergency Preparedness Supervisor
M. Navin, Operations Manager
K. O'Hare, Radiation Protection and Safety Manager
W. Parker, Licensing Manager
M. Pearce, Plant General Manager
D. Poirier, Maintenance Manager
W. Prevatt, Work Controls Manager
W. Webster, Senior Vice President, Operations

NRC personnel:

B. Desai, Acting Projects Branch Chief, Region II
J. Polickoski, Reactor Engineer, Region II
W. Travers, Region II Administrator

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000250/ 2005005-02 and 05000251/2005005-02	AV	AFW Pump B out of Service Greater than TS Allowed Due to Incorrect Bearing Installation (4OA3.3)
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Opened and Closed

05000250/2005005-01 and 05000251/2005005-01	NCV	Failure to Correct Repeated Problems with Auxiliary Feedwater Pump Manual Speed Control (4OA2.2)
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ATTACHMENTS 2 AND 3 CONTAIN PROPRIETARY INFORMATION

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Closed

05000250/2005-001	LER	Mode Increase While in Technical Specification Shutdown Action Statement (4OA3.1)
05000251/2005-003	LER	Incorrectly Wired P-10 Relay Renders One of Two Inputs to P-7 Interlock Inoperable for a Single Train of At-Power Reactor Trips (4OA3.2)
05000250,251/20020 06-01	URI	Strategy/Analysis and Loss of AC Power EOPs Adequacy of SBO (4OA5)

LIST OF DOCUMENTS REVIEWED

Section 4OA5, Other

Response to Task Interface Agreement - TIA 2003-03, Regarding Turkey Point Nuclear Plant, Units 3 and 4, Station Blackout Coping Analysis, (TAC Nos. MB8728 and MB 8729), dated 9/12/05
NRC Report No. 50-250,251/02-06
NRC Report No. 50-250,251/03-07
UFSAR dated 9/29/05

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