



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
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ATLANTA, GEORGIA 30303-8931

April 21, 2003

Mr. Dale E. Young, Vice President  
Crystal River Nuclear Plant (NA1B)  
ATTN: Supervisor, Licensing &  
Regulatory Programs  
15760 West Power Line Street  
Crystal River, FL 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - NRC INTEGRATED INSPECTION REPORT  
50-302/03-03

Dear Mr. Young:

On April 5, 2003, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Crystal River Unit 3. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 14, 2003, with Mr. Roderick 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.

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

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

Sincerely,

*/RA/*

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

Docket No.: 50-302  
License No.: DPR-72

Enclosure: (See page 2)

Enclosure: Inspection Report 50-302/03-03  
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-302

License No.: DPR-72

Report No.: 50-302/03-03

Licensee: Florida Power Corporation

Facility: Crystal River Unit 3

Location: 15760 West Power Line Street  
Crystal River, FL 34428-6708

Dates: January 5, 2003 - April 5, 2003

Inspectors: S. Stewart, Senior Resident Inspector  
R. Reyes, Resident Inspector  
M. Scott, Engineering Inspector (1R12.2)

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000302/2003-003; Florida Power Corporation; 01/05/2003 - 04/05/2003; Crystal River Unit 3; routine integrated report.

The report covered a three month period of inspection by resident inspectors and announced inspections by a region based reactor inspector. No findings of significance were identified. 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 and Self-Revealing Findings

No findings of significance were identified.

B. Licensee Identified Violations

None

## REPORT DETAILS

### Summary of Plant Status

Crystal River 3 operated at full power during the inspection period.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity [Reactor-R]

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

On January 24, 2003 and March 31, 2003, the inspectors checked the licensee's implementation of Administrative Instruction AI-513, Seasonal Weather Preparations, Cold Weather Protection, to assure that vital systems and components were protected from freezing. During the cold weather periods, the inspectors discussed cold weather preparations with plant operators and walked down portions of the following systems or components to verify the cold weather mitigation strategies were implemented. These systems were selected because their safety related functions could be affected by freezing weather. No emergency management procedure EM-220, Violent Weather, entry conditions were identified during the inspection period. Nuclear condition reports were reviewed to verify that the licensee was identifying and correcting adverse weather protection issues.

- Fire Service Pump Building and Fire Service Tanks
- Emergency Feedwater Pump 3 Building
- Borated Water Storage Tank and associated piping

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment

##### .1 Partial Equipment Walkdowns

##### a. Inspection Scope

The inspectors performed the following partial system walkdowns during this inspection period. The inspectors reviewed the alignment of the selected risk-significant systems to evaluate the readiness of the redundant trains while one train was out of service for maintenance. The inspectors checked switch and valve positions using the alignments specified in the listed operating procedures and checked electrical power lined up to critical components. The inspectors reviewed applicable sections of the Crystal River 3 Final Safety Analysis Report to obtain design and operating requirements. Nuclear condition reports were reviewed to verify that the licensee was identifying and correcting component alignment issues.

- Control Complex Chiller CHHE-1A using operating procedure OP-409, Plant Ventilation System, when Chiller CHHE-1B was out of service on March 10, 2003, for refurbishment per work order 367287
- Decay Heat Closed Cycle Cooling Pump DCP-1B using operating procedure OP-404, Decay Heat Removal System, and drawing FD-302-631, Decay Heat Closed Cycle Cooling while DCP-1A was out of service on January 6, 2003, for bearing oil drain, flush and refill per work order 342034
- Reactor Building Spray System using operating procedure OP-405, Building Spray, on February 11, 2003, when reactor building air handling unit AHF-1C was out of service for preventive maintenance per work order WO 277331
- Emergency Feedwater Pump EFP-2 using operating procedure OP-450, Emergency Feedwater System, on January 8, 2003, when EFP-3 was out of service for preventive maintenance, including instrument and switch calibrations using Work Orders 308376, 309976, and 309980

b. Findings

No findings of significance were identified.

- .2 Complete System Walkdown: The inspectors conducted a detailed review of the alignment and condition of the Decay Heat Closed Cycle Cooling System. The inspectors used the procedures and other documents listed below, as well as applicable chapters of the Final Safety Analysis Report (FSAR), to verify proper system alignment:

- OP-404, Decay Heat Removal System
- EOP-08, Loss Of Coolant Accident Cooldown
- Decay Heat Closed Cycle Cooling System drawings PI-305-835, 836, 837 (hangar walkdowns)
- Surveillance procedure SP-340D, Raw Water Pump RWP-3B and Decay Heat Closed Cycle Cooling Pump DCP-1B Test (January 13, 2003)

The detailed review also verified electrical power lineups, component labeling, and proper hanger and support installations. When pumps were operated, checks were done to ensure that vibration was not excessive, pump leakoff was not excessive, and bearing oilers were at the proper level. The walkdowns also included evaluation of system piping and supports against the following considerations:

- Piping and pipe supports did not show evidence of water hammer.
- Oil reservoir levels indicated normal.
- Snubbers did not indicate any observable hydraulic fluid leakage.
- Component foundations were not degraded

A review of outstanding maintenance work orders and nuclear condition reports was performed to verify that deficiencies did not significantly affect the decay heat closed cycle cooling system function. The inspectors discussed with operations management equipment alignment issues to verify that problems were being identified and appropriately resolved.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Quarterly Inspection

a. Inspection Scope

The inspectors walked down the following risk-significant plant areas to verify that control of transient combustibles and ignition sources were consistent with the licensee's Fire Protection Plan and 10 CFR Part 50, Appendix R. The inspectors also evaluated the material condition, operational lineup, and operational effectiveness of fire protection systems and assessed material condition of fire barriers used to contain fire damage. The inspections were completed using the standards of the Crystal River Fire Protection Plan; 10 CFR Part 50, Appendix R; the Florida Power Corporation Analysis of Safe Shutdown Equipment; and the Final Safety Analysis Report. The inspectors checked performance of SP-800, Monthly Fire Extinguisher Inspection, to monitor the operational condition of fire protection equipment. On January 15, the inspectors accompanied a licensee fire protection engineer on a tour of accessible plant fire areas during performance of surveillance procedure SP-809, Weekly Fire Protection Walkdown. As applicable, the inspectors checked that compensatory measures for degraded fire system components were implemented. The inspectors observed weekly performance of fire alarm checks done in accordance with surveillance procedure SP-323, Evacuation and Fire Alarm Demonstration.

- Emergency Feedwater Initiation and Control rooms
- Emergency Feedwater Pump EFP-3 building
- Accessible areas of the plant turbine building
- Emergency diesel generator rooms
- 95 foot elevation of the Intermediate Building
- A and B Decay Heat and Building Spray Pump Areas
- A and B Battery rooms, Inverter rooms, and Battery Charger rooms
- Fire Pump Area and building
- Control Complex, 145' elevation

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill

a. Inspection Scope

On January 22, 2003, the inspectors observed licensee fire brigade respond to a simulated fire in the Emergency Diesel Generator, EGDG-1B, room. The inspectors checked the brigade's communications, ability to set-up and execute fire operations, and their use of fire fighting equipment. The inspectors attended the post-drill critique to



check that the licensee's drill acceptance criteria were met and that any discrepancies were discussed and resolved. In addition to drill observations, Administrative Instruction AI-2205, Fire Drill Planning and Evaluation Reports dated January 17, January 22, January 23, February 5, February 12, and March 9, 2003, were checked to assure that planned drills were conducted, acceptance criteria were evaluated, and deficiencies were documented in the corrective action program.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

On January 28, 2003, the inspectors observed licensed operator actions on the plant specific simulator to Simulator Evaluated Session, SES-12, Loss of AC Power and Loss of Emergency Feedwater. The session involved crew response to the failure of safety equipment during a simulated plant transient. The inspectors specifically evaluated the following attributes related to operating crew performance.

- Clarity and formality of communication including crew briefings
- Ability to take timely action to safely control the unit
- Prioritization, interpretation, and verification of alarms including a reactor trip alarm
- Correct use and implementation of emergency operating procedure EOP-2, Vital System Status Verification, and emergency operating procedure EOP-4, Inadequate Heat Transfer
- Control board operation and manipulation, including high-risk operator actions such as throttling of high pressure injection
- Oversight and direction provided by supervision, including ability to identify and implement appropriate technical specification actions
- Implementation of regulatory reporting requirements, and a simulated emergency plan "Alert" declaration in accordance with the Radiological Emergency Response Plan
- Effectiveness of the post training critique

b. Findings

No findings of significance were identified.

## 1R12 Maintenance Effectiveness

### .1 Routine Inspection

#### a. Inspection Scope

The inspectors reviewed the planned maintenance activities listed below to evaluate the licensee's implementation of the maintenance rule (10CFR50.65). The inspectors checked that licensee personnel monitored unavailability of equipment important to safety and trended key performance parameters. For the equipment problems described in the nuclear condition reports (NCRs) listed below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (10CFR50.65) with respect to the characterization of failures, the appropriateness of the associated a(1) or a(2) classifications, and the appropriateness of either the a(2) performance criteria or the a(1) goals and corrective actions. The inspectors checked if the licensee maintained safety functions when important equipment was out of service for maintenance. The inspectors also periodically reviewed the licensee's implementation of 10 CFR 50, Appendix B and technical specification requirements regarding safety system problems. The inspectors routinely checked that the licensee promptly entered problems with plant equipment into the corrective action program or the corrective maintenance program. The inspectors checked that the licensee monitored work practices and documented work problems in the corrective action program.

- NCR 80869, Increased wear products have been observed in service water pump SWP-1B south pump bearing
- NCR 70640 and NCR 61322, Air handling fan AHF-19B in control complex ventilation system (AH-XK) failed to start. The assessment included review of licensee 10 CFR 50.65 a(1) evaluation letter, SE02-0137, dated October 29, 2002, and Abnormal Procedure AP-250, Radiation Monitor Actuation.

#### b. Findings

No findings of significance were identified.

### .2 Biennial Inspection

#### a. Inspection Scope

The inspectors reviewed the licensee's Maintenance Rule periodic assessment, "Crystal River 3 Maintenance Rule Periodic Assessment [Report]," Revision 1, dated January 16, 2003, while on-site the week of February 10, 2003. The report was issued to satisfy paragraph (a)(3) of 10 CFR 50.65, and covered the period March 31, 2000, through April 1, 2002, for the single unit. The inspection was to determine the effectiveness of the assessment and that it was issued in accordance with the time requirement of the Maintenance Rule (MR) and included evaluation of: balancing reliability and unavailability, (a)(1) activities, (a)(2) activities, and use of industry operating experience. To verify compliance with 10 CFR 50.65, the inspectors reviewed selected MR activities covered by the assessment period for the following risk significant systems: Reactor Coolant, Control Complex Chiller, Control Complex Ventilation, Vital Bus, Radiation

Monitoring, Nuclear Service and Decay Heat Seawater, and the lower risk Instrument Air System. Specific procedures and documents reviewed are listed in the attachment to this report.

During the inspection, the inspectors reviewed selected plant work order data, the site guidance implementing procedure, walked down several systems' related problems, discussed and reviewed relevant corrective action issues, reviewed generic operations event data, and discussed issues with system engineers and the probabilistic risk staff. Operational event information was evaluated by the inspectors in its use in MR functions. The inspectors attended a MR Expert Panel Meeting and Equipment Performance Priority List meeting during the week. The inspectors selected work orders, a MR assessment, and other corrective action documents of systems recently removed from 10 CFR 50.65 a(1) status and those in a(2) status for some period to assess the justification for their status. The documents were compared to the site's MR program criteria, and the MR a(1) evaluations and rule related data bases.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following work week risk assessments to assess the effectiveness of the licensee's work management. The inspectors assessed operability of equipment using technical specifications, the Final Safety Analysis Report, licensee procedures, and regulatory information such as NRC Generic Letter 91-18, Revision 1, Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded And Nonconforming Conditions. The inspectors also reviewed maintenance schedules to check that overall risk was minimized through preservation of safety functions including decay heat removal capability, reactor coolant system inventory control, electric power availability, reactivity control, and primary containment control. The inspectors checked if licensee personnel were assuring that key safety functions were preserved by managing risk and assessing maintenance for risk prior to performance. The inspectors checked that upon identification of an unplanned situation, the resulting emergent work was evaluated by the licensee for risk and controlled as described in technical specifications, licensee Compliance Procedure CP-253, Power Operations Risk Assessment and Management, and Operations Instruction OI-7, Control of Equipment and System Status. The inspectors checked that risk significant emergent work was documented in the corrective action program and that risk management actions were promptly initiated.

- Work Week 03W02, Work Week Risk Assessment for Condition Yellow during planned B train Emergency Core Cooling System Outage on January 15, 2003, updated when Service Water Pump 1B was found to have particulates in the bearing lubrication oil and was removed from service (NCR 80869)

- Work Week 03W06 Work Week Risk Assessment for elevated risk Condition Orange for replacement of decay heat surge tank relief valve DCV-56 using work order 216373 on February 11, 2003, revised to troubleshoot main steam valve MSV-26, after the control signal was found to be cycling (NCR 84253)
- Work Week 03W09, Work Week Risk Assessment on March 3, 2003, updated when Battery Charger DPBC-1A supply breaker opened during testing (NCR 86366)
- Work Week 03W10 Work Week Risk Assessment for planned maintenance on Control Complex Chiller CHHE-1B on March 10, 2003, updated when Service Water Heat Exchanger 1B anode was found leaking during preventive checks per Work Order 354629.
- Work Week 03W12, Work Week Risk Assessment for emergency diesel generator EGDG-1A, removed from service for preventive maintenance on March 25, 2003, updated when service water pump SWP-1B was removed from service for oil flush (NCR 88519)
- Work Week 03W13, Work Week Risk Assessment (elevated risk Condition Yellow) for implementation of engineering change EC 51262 on raw water pump RWP-3A to reduce vibrations on April 3, 2003.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions

a. Inspection Scope

For the non-routine events described below, the inspectors observed control room operations, checked operator logs and plant computer data and interviewed personnel, to determine what occurred and how the operators performed. The inspectors checked that operator response was in accordance with plant procedures. As applicable, the inspectors observed operator pre-evolution briefings, including Infrequently Performed Test or Evolution (ITOE) briefing.

- On January 24, 2003, the inspectors observed the operator's response to a loss of reactor building cooling. The initiation of service water cooling of the reactor building was checked with operating procedure OP-417, Containment Operating Procedure, Section 4.12, Swapping Reactor Building Cooling and Ventilation.
- On February 20 and 21, 2003, the inspectors observed implementation of the plant power level upgrade to 2568 megawatts-thermal. The power level upgrade was checked with operating procedure OP-204-01, Power Level Upgrade.

b. Findings

No findings of significance were identified.

## 1R15 Operability Evaluations

### a. Inspection Scope

The inspectors reviewed the following degraded or nonconforming conditions to determine if operability of systems or components important to safety was consistent with technical specifications, the Final Safety Analysis Report, 10CFR Part 50 requirements, and when applicable, NRC Generic Letter 91-18, Revision 1, Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions. The inspectors monitored licensee nuclear condition reports (NCRs), work schedules, and engineering documents to check if operability issues were being identified at an appropriate threshold and documented in the corrective action program, consistent with 10 CFR 50, Appendix B requirements, and licensee procedure NGGC-200, Corrective Action Program. The inspectors checked that when plant problems were identified, the resulting change in plant risk was identified and managed. The following issues, including the related nuclear condition reports (NCRs), were specifically checked:

- NCR 86731, Failure of makeup system valve MUV-25 to indicate full open during surveillance
- NCR 80869, Increased wear particles found in bearing oil for service water pump SWP-1B
- NCR 81856, Flourogold plate missing on pipe hangar RWH-92
- NCR 84380, Foreign material found in reactor building (assessment of emergency sump operability)
- AR 69576, Raw Water Pump RWP-3A vibration data in alert range

### b. Findings

No findings of significance were identified.

## 1R16 Operator Workarounds

### a. Inspection Scope

#### Unit Load Demand (ULD)

The inspectors reviewed a nuclear condition report NCR 83780 describing an operator-workaround related to a change in load demand that occurred when transferring the ULD from manual to automatic. The inspectors reviewed the work around for this specific item and discussed it in detail with engineering and operations personnel. The inspectors checked the condition reports associated with this issue to verify that the corrective actions adequately addressed the operator workaround, and that the actions were completed or scheduled to be completed in a timely manner. Interim control room documentation that was provided to control room operators was checked for consistency to address the workaround.

### Cumulative Effects

The inspectors performed a semi-annual evaluation of the potential cumulative effects of all outstanding operator workarounds. At the time of the inspection, there were four total workarounds. The inspectors evaluated these issues for their cumulative effects and discussed these potential effects with control room supervision and operators. Furthermore, the inspectors reviewed the current degraded equipment logs, and walked down the control room boards and the auxiliary building equipment with operators to verify operator workarounds were being identified and properly entered into the corrective action program.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors observed licensee implementation of Engineering Change 49696, Increase Maximum Thermal Power from 2544 MegaWatts - thermal (MWt) to 2568 MWt in accordance with Crystal River Unit 3 License Amendment Number 205, dated December 4, 2002. The inspectors reviewed licensee Lesson Plan POY0001C, Power Level Upgrade EC49696; NRC Letter dated 12-4-02, Issuance of Amendment No. 205, to Facility Operating License No. DPR-72 for Crystal River Unit 3 (Power Uprate to 2568 MWt), and licensee operating procedure OP-204-01, Power Level Upgrade. The inspectors observed the installation of integrated control system modifications (hardware and software) and portions of various post-modification tests. The inspectors checked that portions of the modification installation important to plant safety were controlled by licensee personnel and were conducted in accordance with the operating procedure. The inspectors checked that special briefings for workers, management oversight, and formal communications were completed as planned. After the installation, when reactor power was increased to full power, the inspectors checked reactor operating parameters such as the rod insertion limits were within technical specification limits.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors observed or reviewed the following post-maintenance testing activities for risk significant systems to check the following (as applicable): (1) the effect of testing on the plant had been adequately addressed; (2) testing was adequate for the maintenance performed; (3) acceptance criteria were clear and demonstrated operational readiness; (4) test instrumentation was appropriate; (5) tests were

performed as written; and (6) equipment was returned to its operational status following testing. The inspectors evaluated the licensee activities against the technical specifications, the Final Safety Analysis Report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications. The inspectors routinely checked that post maintenance testing issues were resolved in the licensee's corrective action program.

- Surveillance procedure SP-206, Inservice Or Functional Pressure Test Of Class 2 & 3 Systems, and surveillance procedure SP-344B, SWP-1B And Valve Surveillance, following replacement of service water pump SWP-1B per work order 361928
- Preventive maintenance procedure PM-136, Control Complex Chillers CHHE-1A and 1B, following overhaul of Control Complex Chiller CHHE-1A per work order 367286
- Work Order 342034-02, Operate decay heat closed cycle cooling pump DCP-1A to verify no oil leakage after bearing drain, flush and refill under Work Order 342034-01
- Surveillance Procedure SP-208, "Visual Examination of Component Supports" and Leak Check during surveillance procedure SP-340D, RWP-3B, DCP-3B, and Valve Surveillance, following spool piece RW-72 replacement per Work Order 216828, Replace Pipe Spool Piece RW-72
- Surveillance Procedure SP-349A Emergency Feedwater Pump EFP-1 and Valve Alignment following bearing oiler replacement and oil flush per work orders WO 239633 and 284874
- Surveillance Procedure SP- 349B, Emergency Feedwater Pump EFP-2 and Valve Surveillance, test of discharge valve EFV-11 following preventive maintenance in accordance with Work Order 222183-03
- Surveillance procedure SP-311, Diesel Fuel Transfer Pump Surveillance, following replacement of diesel fuel oil transfer pump DFP-1A
- Surveillance procedure SP344A, RWP-2A And SWP-1A Valve Surveillance; and procedure MP-543, Air Operated Valve Diagnostic Testing, following a temporary modification to air operated valve SWV-355

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors checked the following surveillance tests for risk-significant systems or components, to assess compliance with technical specifications, 10 CFR Part 50, Appendix B, and licensee surveillance procedure (SP) requirements. The testing was also checked for consistency with the Final Safety Analysis Report. The inspectors checked if the testing demonstrated that the systems were ready to perform their intended safety functions. During the inspections, the inspectors verified that licensee personnel were documenting surveillance problems in the corrective action program in

accordance with 10 CFR Part 50, Appendix B, Criterion XVI, and licensee procedure CAP-NGGC-200, Corrective Action Program.

Inservice test (IST) activities were reviewed to ensure testing methods, acceptance criteria, and corrective actions were in accordance with the ASME Code, Section XI, and Florida Power Corporation ASME Section XI, Ten Year Inservice Testing Program, dated May 4, 1998.

- SP- 457A, Emergency Core Cooling System Response To A Safety Injection Test Signal
- SP- 349C, Emergency Feedwater Pump EFP-3 and Valve Surveillance (IST)
- SP- 354A, Monthly Test of Emergency Diesel Generator EGDG-1A
- SP- 349B, Emergency Feedwater Pump EFP-2 and Valve Surveillance (IST)
- SP- 907A, Monthly Functional Test Of 4160 ES Bus "A" Undervoltage and Degraded Grid Relaying

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

a. Inspection Scope

On February 13, 2003, the inspectors monitored the participation of an operating crew in the simulator during the following emergency preparedness drill of the site emergency response organization. During this drill the inspectors assessed operator actions in the control room simulator and emergency operations facility to verify whether emergency classifications and notifications were made in accordance with the Crystal River Radiological Emergency Response Plan, Section 8.0, Emergency Classification System, 10 CFR Part 50.72, and 10 CFR Part 50, Appendix E.

- Emergency Drill (LOR-1-09) which included fuel failure, steam generator tube rupture, and loss of offsite power resulting in an unmonitored release and declaration of site area emergency

b. Findings

No findings of significance were identified.



#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification

###### a. Inspection Scope

The inspectors checked licensee submittals for the performance indicators (PIs) listed below for the period January 1, 2002 through December 31, 2002 to verify the accuracy of the PI data reported during that period. Performance indicator definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 2, were used to check the reporting for each data element. The inspector checked licensee event reports (LERs), operator logs, daily plant status reports, nuclear condition reports (NCRs), and performance indicator data sheets to verify that the licensee had identified the cumulative safety system unavailabilities. The inspectors also checked the accuracy of the number of critical hours reported. In addition, the inspectors interviewed licensee personnel associated with performance indicator data collection, evaluation, and distribution. The inspectors checked that any deficiencies affecting the licensee's performance indicator program were entered into the corrective action program and appropriately resolved.

###### Reactor Safety Cornerstone

- Safety System Unavailability, Residual Heat Removal System
- Safety System Unavailability, Heat Removal (AFW)

###### b. Findings

No findings of significance were identified.

##### 4OA2 Problem Identification and Resolution

###### .1 Annual Sample Review

###### a. Inspection Scope

The inspectors selected the following nuclear condition report (NCR) for detailed review and discussion with the licensee. The NCR was examined to verify whether problem identification was timely, complete and accurate; safety concerns were properly classified and prioritized for resolution; technical issues were evaluated and dispositioned to address operability and reportability; root cause or apparent cause determinations were sufficiently thorough; extent of condition, generic implications, common causes, and previous history were adequately considered; and appropriate corrective actions (short and longterm) were implemented or planned in a manner consistent with safety and compliance with plant technical specifications and 10 CFR 50, Appendix B. The inspectors also evaluated the NCR using the requirements of the licensee's corrective action program as delineated in Corrective Action Procedure CAP-NGGC-0200, Corrective Action Program.

- NCR 70640, Air Handling Fan AHF-19B did not start on three occasions when demanded. The review included checks of related NCRs 61359 and 61322, as well as Engineering Memorandum SE02-0066, AHF-19B Overload Trips, dated May 29, 2002

b. Findings and Observations

There were no significant licensee performance issues identified by the inspectors regarding the nuclear condition report. The inspectors verified that the root/apparent cause evaluation and corrective actions were appropriate in relation to the safety significance of the problem.

4OA5 Other Activities

The inspector reviewed the World Association of Nuclear Operators (WANO) Peer Review of Crystal River Unit 3, dated May 2002. The final report was issued on January 2, 2003. The report did not identify any significant licensee performance issues that had not been previously addressed or reviewed by the NRC.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

The resident inspectors presented the inspection results to Mr. Roderick and other members of licensee management at the conclusion of the inspection on April 14, 2003. 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.

.2 Annual Assessment Meeting Summary

On March 20, 2003, the NRC's Chief of Reactor Project's Branch 3, Public Affairs Officer, and Resident staff assigned to the Crystal River 3 Nuclear Plant (CR3) met with Florida Power Corporation to discuss the NRC's Reactor Oversight Process (ROP) and the CR3 annual assessment of safety performance for the period of January 1, 2002 - December 31, 2002. The major topics addressed were: the NRC's assessment program, the results of the CR3 assessment, and NRC security activities. Attendees included Crystal River site management, members of site staff, two local officials and one member of the public.

This meeting was open to the public. The NRC's presentation material used for the discussion is available from the NRC's document system (ADAMS) as accession number ML031000167. The licensee's slides presented at the meeting are also available from the NRC's ADAMS as accession number ML031000178. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee personnel:**

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S. Bernhoft, Supervisor, System Engineering  
W. Brewer, Manager, Work Controls  
R. Davis, Manager, Training  
M. Folding, Security Manager  
J. Franke, Plant General Manager  
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R. Warden, Manager, Nuclear Assessment  
D. Young, Vice President, Crystal River Nuclear Plant

#### **NRC personnel:**

J. Munday, Chief, Reactor Projects Branch 3, NRC Region II  
W. Rodgers, Senior Reactor Analyst, NRC Region II  
R. Bernhard, Senior Reactor Analyst, NRC Region II

### **LIST OF DOCUMENTS REVIEWED**

#### **1R12 (Biennial) Documents Reviewed**

##### **Maintenance Rule - Corrective Action Program Documents**

##### **Precursor Card Report**

3-C98-5326, RWP-1 Discharge Check Failed to Fully Close, 12/03/98  
3-C00-3280, RWP-1 Discharge Check Failed to Close, 11/30/00  
3-C01-0322, Indications of Increased RCS Leakage, 02/03/01  
3-C00-1426, VBIT-1B Schedule Work Time of 20 Hours Exceeded, 5/10/00  
3-C00-1411, B Channel of VB Exceeded Performance Criteria, 10/2/01

**Action Request**

55714, Condition Report Closure Form, RW Leak Downstream of Weld RWV-131, 2/21/02  
62993, Hot Gas Bypass Valve in Incorrect Position, 6/18/02

**Condition Reports**

41798, IAP-3C High Temperature Alarms, 3/08/01  
46446, IAP-3C, Motor Cooler Fan Broke, 8/13/01

**Interoffice Correspondence**

SE01-0246, RC System Maintenance Rule Goals, December 27, 2001  
SE01-0075, Maintenance Rule Goals for the RC System, March 14, 2001

**Administrative Procedures**

ADM-NGGC-0101, Maintenance Rule Program, Rev. 14

**Operational Event Release Information**

OE 12386, RCS Instrument Tube Leak at Crystal River 3  
OE 15465, Inverter Problems  
OE 75814, NRC Information Notice 2002-29, Loss of Instrument Air  
OE 13121, HPI Nozzle Thermal Sleeve Cracks

**Work Orders**

31945501, IAHE-6C HTX Flow Restriction [to IAP-3C]  
32757601, IAHE-6B, HTX Flow Restriction  
31902701, 1AP-3C Control Power Switch Came Apart  
29276101, RMCC-1-CAB RMA Annunciator Fuse Repeatedly Blows  
30286801, RM-A6 Low Flow Annunciation not Received when Vacuum Pump Secured  
35863701, RM-A6 Inoperable, Count Rate Low  
21711301, Replace Piping Near RWV-131  
00049439, RWP-1 High Vibration

**Miscellaneous**

Plant Support Engineering, Quarterly Reports for 2001 and 2002  
Self Assessment Report 51588, Crystal River 3 Maintenance Rule Program a(3)  
Periodic Assessment and Self-Assessment, date 4/8/02 - 6/25/02