



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

October 26, 2006

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
05000302/2006004

Dear Mr. Young:

On September 30, 2006, 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 October 3, 2006, with you and 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 2.390 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,

IRA

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

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

Enclosure: Inspection Report 05000302/2006004
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

October 26, 2006

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2

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3

Report to D.E. Young from Joel T. Munday dated October 26, 2006

SUBJECT: CRYSTAL RIVER UNIT 3 - NRC INTEGRATED INSPECTION REPORT
05000302/2006004

Distribution w/encl:

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-302

License No.: DPR-72

Report No: 05000302/2006004

Licensee: Progress Energy Florida (Florida Power Corporation)

Facility Crystal River Unit 3

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

Dates: July 1, 2006 - September 30, 2006

Inspectors: T. Morrissey, Senior Resident Inspector
R. Reyes, Resident Inspector

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

Enclosure

SUMMARY OF FINDINGS

IR 05000302/2006-004; 07/01/2006 - 09/30/2006; Crystal River Unit 3; Routine Integrated Report.

The report covered a three month period of inspection by the resident inspectors. 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. NRC-Identified and Self-Revealing Findings

None

B. Licensee-identified Violations

None

Enclosure

REPORT DETAILS

Summary of Plant Status:

Crystal River Unit 3 began the inspection period at 100 percent power. On July 3, the operators reduced power to approximately 84 percent due to an unexpected trip of one of four non-safety related circulating water pumps (CWP-1D). The unit was returned to full power operation on July 5. The unit operated at essentially full power until August 19 when the unit was shutdown to mode 5 (cold shutdown) to repair a main feedwater leak. The unit was restarted on August 23 and was returned to full power on August 24. The unit remained at essentially full power until September 30 when power was manually reduced to approximately 57 percent when one of the two condensate pumps lost control power due to an electrical fault. Power was raised to approximately 68 percent later that day.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection

Impending Adverse Weather: Tropical Storm Ernesto

a. Inspection Scope

On August 28 and 29, the inspectors reviewed the licensee's storm preparations for Tropical Storm Ernesto which approached the state of Florida. The licensee implemented Emergency Management Procedure EM-220, Violent Weather, for the tropical storm. The inspectors checked that the licensee maintained the ability to protect vital systems and components from high winds and flooding associated with the storm. The inspectors toured the six plant areas listed below to check for any vulnerabilities, such as inadequate sealing of water tight penetrations or degraded barriers, that could affect systems important to safety. The inspectors verified that the licensee's violent weather committee had been established and that actions required by procedure EM-220 were completed. The inspectors monitored control room activities and attended violent weather committee meetings.

- Emergency feedwater pump EFP-3 building
- North berm area and intake canal area
- Sea water room
- Alternate AC emergency diesel generator building
- Makeup pump areas
- A and B emergency diesel generator (EGDG) rooms

b. Findings

No findings of significance were identified. Winds above tropical storm strength were not experienced on-site.

Enclosure

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed walkdowns of the critical portions of the selected trains to verify correct system alignment. The inspectors reviewed plant documents to determine the correct system and power alignments, and the required positions of select valves and breakers. The inspectors verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact mitigating system availability. The inspectors verified the following five partial system alignments in system walkdowns using the listed documents:

- July 18 and 19, emergency core cooling system (ECCS) train B (decay heat closed cycle cooling (DC), decay heat removal (DHR), and building spray (BS)) using procedures OP-404, Decay Heat Removal System, and OP-405, Reactor Building Spray System, during a planned ECCS train A outage
- On July 26, feed water pump FWP-7, using procedure OP-605, Feedwater System, during the time the 1A EGDG was unavailable due to planned testing
- August 2, emergency feedwater pump EFP-3, using OP-450, Emergency Feedwater System, while emergency feed pump EFP-2 was unavailable due to planned maintenance
- On August 30, decay heat closed cycle cooling pump DCP-1B and raw water pump RWP-3B trains, using OP-408, Nuclear Services Cooling System and OP-404, Decay Heat Removal System, while feedwater pump FWP-7 was unavailable due to planned maintenance
- September 19, raw water pump RWP-3A and decay heat closed cycle cooling DCP-1A trains, using OP-408, Nuclear Services Cooling System, and OP-404, Decay Heat Removal System, while the B ECCS train was out of service for maintenance

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors conducted one detailed walkdown/review of the alignment and condition of accessible portions of all trains of the nuclear services and decay heat cooling (RW) system. The inspectors utilized licensee procedures, as well as licensing and design basis documents to verify that the system (i.e., pump, valve, and electrical) alignment was correct. During the walkdown, the inspectors also verified that: valves, pumps and heat exchangers did not exhibit leakage that would impact their function; major portions of the system and components were correctly labeled; hangers and supports were

installed and functional; and essential support systems were operational. The online/outage leak lists, equipment performance priority list, degraded equipment log were reviewed to determine if the identified deficiencies impacted the systems functions. In addition, the inspectors reviewed the system health report with the system engineer, reviewed open work orders and nuclear condition reports (NCRs) to verify that the licensee had appropriately characterized and prioritized equipment problems and alignment issues in the corrective action program. Additional documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Fire Protection Walkdowns

a. Inspection Scope

The inspectors walked down accessible portions of the plant to assess the licensee's implementation of the fire protection program. The inspectors checked that the areas were free of transient combustible material and other ignition sources. Also, fire detection and suppression capabilities, fire barriers, and compensatory measures for fire protection problems were verified. The inspectors checked fire suppression and detection equipment to determine whether conditions or deficiencies existed which could impair the function of the equipment. The inspectors selected the areas based on a review of the licensee's probabilistic risk assessment. The inspectors also reviewed the licensee's fire protection program to verify the requirements of Final Safety Analysis Report (FSAR) Section 9.8, Plant Fire Protection Program, were met. Documents reviewed are listed in the attachment. The inspectors toured the following nine areas important to reactor safety:

- A and B train decay heat removal and building spray system vaults
- Emergency feed pump EFP-1 and EFP-2 area
- Emergency feed pump EFP-3 building
- A and B train 250 Vdc vital batteries and associated battery charger rooms
- Instrument air compressor and tank areas, and condensate pump areas 95' elevation turbine building
- Feedwater pump FWP-7 area, 95' elevation turbine building
- Spent fuel heat exchanger and pump area
- A and B train raw water pump area
- C train EGDG building

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performancea. Inspection Scope

The inspectors reviewed inspection records, work documents, preventive maintenance procedures, and other documentation to ensure that heat exchanger deficiencies that could mask or degrade performance were identified. Inspection records for risk significant heat exchangers were reviewed which included performance for the two heat exchangers on decay heat closed cycle cooling (DC) and four heat exchangers on nuclear services closed cycle cooling (SW). The inspectors also reviewed general health of the DC, SW, and RW systems via review of inspection/test results; review of chemistry activities; review of DC, RW and SW corrective maintenance history; review of current system health reports; and discussions with the system engineer. The inspectors observed the as-found condition of the RW system side of the following four heat exchangers during routine and/or corrective maintenance activities: SWHE-1B, SWHE-1C, SWHE-1D and DCHE-1A to verify the licensee's program of cleaning the heat exchangers was effective. Selected NCRs were reviewed for potential common cause problems and problems which could affect system performance to confirm the licensee was entering problems into the corrective action program and initiating appropriate corrective actions. In addition, the inspectors conducted a walk down of most of the heat sink systems and major components. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator RequalificationObserved Simulator Evaluated Sessiona. Inspection Scope

On July 12, the inspectors observed licensed operators response and actions for the Crystal River Unit 3 licensed operator requalification LOR-1-22, Loss of all Feedwater. 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
- Implementation of EOPs
- Control board operation and manipulation, including operator actions
- Assessment of emergency classifications
- Oversight and direction provided by supervision, including ability to identify and notification of state authorities within the 15 minute requirement
- Effectiveness of the training oversight, evaluation, and critique

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectivenessa. Inspection Scope

The inspectors reviewed the licensee's effectiveness in performing routine maintenance activities. This review included an assessment of the licensee's practices pertaining to the identification, scope, and handling of degraded equipment conditions, as well as common cause failure evaluations and the resolution of historical equipment problems. For those systems, structures, and components within the scope of the maintenance rule per 10 CFR 50.65, the inspectors verified that reliability and unavailability were properly monitored, and that 10 CFR 50.65 (a)(1) and (a)(2) classifications were justified in light of the reviewed degraded equipment condition. Documents reviewed are listed in the attachment. The licensee's maintenance effectiveness was evaluated for the following one system and two degraded equipment conditions:

- Nuclear services closed cycle cooling water system (SW)
- Failure of condensate pump
- Anticipated transients without Scram (ATWS) system power supply repetitive functional failures

b. Findings

No findings of significance were identified.

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

The inspectors reviewed the risk impact associated with those activities listed below and verified the licensee's associated risk management actions. This review primarily focused on equipment determined to be risk significant within the maintenance rule. The inspectors also assessed the adequacy of the licensee's identification and resolution of problems associated with risk management including emergent work activities. The licensee's implementation of compliance procedure CP-253, Power Operation Risk Assessment, was verified in each of the following six work week assessments.

- Work Week 06W28, risk assessment for operations in condition yellow due to the A train ECCS out of service for planned maintenance
- Work Week 06W30, risk assessment for operations with an unavailable emergency feed pump EFP-2, and entering yellow risk condition on August 02, per AI-500 Appendix 7, control of equipment & system status, due to low grid

voltage

- Work Week 06W32, weekly risk assessment for operations with planned cross-train work on the B control complex chiller and emergent cleaning of two service water heat exchangers
- Work Week 06W34, risk assessment for operations with feedwater pump FWP-7 unavailable due to planned maintenance activities
- Work Week 06W35, risk assessment for operation during the week with individually out of service EGDG-1B, EGDG-1A and EFIC room air handling fan due to planned maintenance activities
- Work Week 06W36, risk assessment for operation with emergency feed water pump EFP-3 and EFP-1 unavailable due to planned maintenance activities

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following five NCRs to verify that the operability of systems important to safety was properly established, that the affected components or systems remained capable of performing their intended safety function, and that no unrecognized increase in plant or public risk occurred. The inspectors determined if operability of systems or components important to safety was consistent with technical specifications, the FSAR, 10 CFR Part 50 requirements, and when applicable, NRC Inspection Manual, Part 9900, Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." The inspectors reviewed licensee 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-CAP-200, corrective action program.

- 201317, Air handling fan AHF-1A elevated motor windings temperature
- 201609, SWHE-1A 66 percent tube blockage
- 201143, Feedwater leak from piping to OTSG A
- 204386, As-found EGDG-1B voltages outside acceptance criteria
- 206351, New diesel fuel received for A and B EGDGs did not meet program requirements

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors witnessed and/or reviewed post-maintenance test procedures and/or test activities, as appropriate, for selected risk significant systems to verify whether: (1) testing was adequate for the maintenance performed; (2) acceptance criteria were clear, and adequately demonstrated operational readiness consistent with design and licensing basis documents; (3) test instrumentation had current calibrations, range, and accuracy consistent with the application; (4) tests were performed as written with applicable prerequisites satisfied, and (5) equipment was returned to the status required to perform its safety function. The seven post-maintenance tests reviewed are listed below:

- Surveillance Procedure SP-340A, RWP-3A, DCP-1A and Valve Surveillance, performed on July 19, after performing maintenance on the ECCS Train A per WO 855403-01
- SP-340B, DHP-1A, BSP-1A and Valve Surveillance, performed on July 19, after performing maintenance on the ECCS Train A per WO 852235-01
- SP-349B, EFP-2 and Valve Surveillance, performed on August 3, after performing maintenance on emergency feed valves EFV-11 and EFV-32 per WOs 676282 and 807403
- SP-375B, CHP-1B and Valve Surveillance, and leak inspection instructions on WO 866184, performed on August 14, after performing maintenance on the control complex B chiller
- SP-354B, Monthly Functional Test of the Emergency Diesel Generator EGDG-1B, (partial) after replacing manual voltage control rheostat per WO 875482
- SP-349C, EFP-3 and Valve Surveillance, performed on Sept 14, after performing maintenance on EFV-14 and EFV-33 per WOs 814780 and 814768
- SP-340E, DHP-1B, BSP-1B and Valve Surveillance, performed on September 20, after performing maintenance on decay heat pump DHP-1B per WO 535146

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities

Outage to Repair Main Feedwater Leak

a. Inspection Scope

On August 19, the unit was shutdown to mode 5 to repair a feedwater leak on the piping to once through steam generator (OTSG A). The inspectors attended the licensee's outage schedule safety review meeting to verify that the licensee considered risk in developing the outage schedule. During the outage, the inspectors observed and monitored licensee controls over the outage activities listed below. Documents

reviewed are listed in the attachment.

- Outage risk assessment monitoring
- Controls associated with shutdown cooling, reactivity management, electrical power alignments, and containment closure and integrity
- Implementation of equipment clearance activities
- Reactor mode changes
- Reactor heatup and repressurization
- Containment cleanup and closeout inspection
- Reactor power ascension

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed and/or reviewed the surveillance tests listed below to verify that technical specification surveillance requirements were followed and that test acceptance criteria were properly specified. The inspectors verified that proper test conditions were established as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria had been met. Additionally, the inspectors also verified that equipment was properly returned to service and that proper testing was specified and conducted to ensure that the equipment could perform its intended safety function following maintenance or as part of surveillance testing. The following six activities were observed/reviewed:

In-Service Test:

- SP-349C, EFP-3 and Valve Surveillance

Surveillance Tests:

- SP-110C, C Channel Reactor Protection System Functional Testing
- SP-181, Containment Air Lock Test, Penetration Hatch and Equipment Hatch Interlock Test
- SP-430, Containment Air Locks Seal Leakage Test
- SP-354B, Monthly Functional Test of the Emergency Diesel Generator EGDG-1B
- SP-412, ECCS and Containment Spray System Leak Rate Test (B Train only)

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed and reviewed one emergency response activity to verify the licensee was properly classifying emergency events, making the required notifications, and appropriate protective action recommendations. The inspectors assessed the licensee's ability to classify emergent situations and make timely notification to State and Federal officials in accordance with 10 CFR Part 50.72. Emergency activities were verified to be in accordance with the Crystal River Radiological Emergency Response Plan, Section 8.0, Emergency Classification System, and 10 CFR Part 50, Appendix E. Additionally, the inspectors verified that adequate licensee critiques were conducted in order to identify performance weaknesses and necessary improvements.

- On July 12, licensed operator requalification LOR-1-22, Loss of all Feedwater

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors checked the accuracy of the performance indicators listed below. Performance indicator data submitted from July 2004 through June 2006, was compared for consistency to data obtained through the review of chemistry department records, monthly operating reports, and control room records. Surveillance procedures SP-317, Reactor Coolant System Water Inventory Balance, and SP-702A, Reactor Coolant Dose Equivalent I-131 were reviewed.

- Reactor coolant system activity
- Reactor coolant system leakage

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

.1 Daily Screening of Items Entered Into the Corrective Action Program

a. Inspection Scope

As required by inspection procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished by attending daily plant status meetings, interviewing plant operators and applicable system engineers, and accessing the licensee's computerized database.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review

a. Inspection Scope

The inspectors selected NCRs 196164 and 188885 for a detailed review. In addition the inspectors reviewed the operator workaround program to verify the licensee is identifying workarounds at an appropriate threshold and is entering them in the corrective action program. The inspectors performed an evaluation of the potential cumulative effect of all outstanding operator workarounds. The NCRs were initiated to evaluate 1) on May 31, 2006, as-found voltage for EGDG-1B was below the acceptance criteria during SP-354B, monthly functional test of the emergency diesel generator EGDG-1B, and 2) corroded piping and supports on piping to RWP-3A. The inspectors checked that the issue had been completely and accurately identified in the licensee's CAP, and that safety concerns were properly classified and prioritized for resolution, apparent cause determinations were sufficiently thorough, and appropriate corrective actions were implemented in a manner consistent with safety and compliance with plant technical specifications and 10 CFR 50. The inspectors also evaluated the NCR using the requirements of the licensee's CAP as delineated in corrective action procedure CAP-NGGC-200, Corrective Action Program.

b. Findings and Observations

No findings of significance were identified.

NCR 196164 documented finding EGDG-1B voltage outside of the acceptance criteria during a routine monthly (May 2006) surveillance. The licensee initially determined that the voltage was low due to incorrect setting of the local manual Rheostat. A second NCR (196165) addressed the fact that the operator failed to inform the control room supervisor (CRS) of the out of specification as-found values. The second NCR specified an enhancement to discuss with the operator involved, the need to inform the

CRS when unexpected conditions arise. In August, the as-found voltage for EGDG-1B was again found outside the acceptance criteria during the monthly surveillance (NCR 204386). The Rheostat was subsequently replaced. The inspectors determined that since April 2006, there were three additional instances when the voltages for EGDG-1B were found outside of the acceptance criteria. Each time the voltages were adjusted by the surveillance procedure however, NCRs were not written. After discussions with the licensee, NCR 206491 was written to address the failure to write NCRs. The licensee re-evaluated the emergency diesel generator loading calculation and determined the as-found low voltages did not affect EGDG-1B operability. The inspectors noted that NCR 196164 was inappropriately classified as priority 5 for trending only. A more thorough review would have determined that the as-found voltages were outside the acceptable range during the previous two monthly surveillances and was due to equipment degradation.

The inspectors identified that the licensee had not thoroughly documented the seismic evaluation of corroded pipe supports that had been found on decay heat closed cycle cooling water (DC) piping to RWP-3A motor cooler. Two NCRs describing similar issues relating to corrosion on DC pipe and its supports had been written. NCR 188885 was written to evaluate corrosion identified on the piping. NCR 188942 was written to evaluate corroded pipe supports on the same piping. NCR 188942 referenced an evaluation documented in NCR 188885. The evaluation described the technical basis for concluding that the pipe had adequate wall thickness to maintain a leak free pressure boundary. However, the inspectors noted that the evaluation did not address the corrosion on the pipe supports that had been identified in NCR 188942. After reviewing this issue with the licensee, engineering determined that the evaluation had been completed but that the documentation had not been added to the NCR as had been planned. NCR 188885 was reopened and updated to address the corroded pipe supports. The inspectors did not identify any operability or regulatory issues.

The inspectors determined that, in general, the licensee was identifying workarounds at an appropriate threshold and is entering them in the corrective action program for resolution. The inspectors did find one degraded component, feedwater valve FWV-217 (non-safety auxiliary feedwater discharge valve to B steam generator) that required manual actions for approximately one week that was not screened as an operator workaround. Since this valve was used in emergency operating procedures, the manual actions would have classified it as a Category 1 operator workaround under the licensee's program. All compensatory actions necessary for a Category 1 workaround were in place, however it was not screened as a workaround. The licensee initiated NCR 206113 to address this issue.

40A3 Followup of Events and Notices of Enforcement Discretion

a. Inspection Scope

For the five non-routine plant evolutions described below, the inspectors reviewed the operating crew's performance, operator logs, control board indications, and the plant computer data to verify that operator response was in accordance with the associated

plant procedures.

- July 5, power escalation from 84 to 90 percent in accordance with OP-204, Power Operations
- August 2, operator actions associated with entry into AP-730, Grid Instability
- August 19, reactor shutdown in accordance with OP-209A, Plant Shutdown and Cooldown
- August 23, reactor and plant startup in accordance with OP-210, Reactor Startup and OP-203, Plant Startup
- September 30, power reduction to 57 percent in accordance with AP-510, Rapid Power Reduction

b. Findings

No findings of significance were identified.

4OA5 Other

(Closed) NRC Temporary Instruction (TI) 2515/165: Operational Readiness of Offsite Power and Impact on Plant Risk

The inspectors reviewed licensee procedures and controls and interviewed operations and maintenance personnel to verify these documents contained specific attributes delineated in the TI to ensure the operational readiness of offsite power systems in accordance with plant Technical Specifications; the design requirements provided in 10 CFR 50, Appendix A, General Design Criterion 17, "Electric Power Systems;" and the impact of maintenance on plant risk in accordance with 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." Documents reviewed are listed in the Attachment. Appropriate documentation of the results of this inspection was provided to NRC headquarters staff for further analysis, as required by the TI. This completes the Region II inspection TI requirements for the Crystal River Nuclear Plant.

4OA6 Meetings

Exit Meeting Summary

On October 03, 2006, the resident inspectors presented the inspection results to Mr. D. Young, Site Vice President and other members of licensee management, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

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R. Hons, Manager, Training
J. Franke, Plant General Manager
J. Hays, Manager, Outage and Scheduling
J. Holt, Manager, Operations
P. Infanger, Supervisor, Licensing
M. Rigsby, Superintendent, Radiation Protection
D. Roderick, Director Site Operations
J. Stephenson, Supervisor, Emergency Preparedness
T. Hobbs, Manager, Nuclear Assessment
D. Young, Vice President, Crystal River Nuclear Plant

NRC personnel:

J. Munday, Chief, Reactor Projects Branch 3, NRC Region II

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

2515/165	TI	Operational Readiness of Offsite Power and Impact on Plant Risk (Section 40A5)
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LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

OP-408, Nuclear Services Cooling System

Section 1R05: Fire Protection

Procedures

AI-2205A, Pre Fire Plan - Control Complex
AI-2205B, Pre Fire Plan - Turbine Building
AI-2205C, Pre Fire Plan - Auxiliary Building
AI-2205F, Pre Fire Plan - Miscellaneous Buildings and Components
SP-804, Surveillance of Plant Fire Brigade Equipment

Section 1R07: Heat Sink Performance

Maintenance Work Orders (* observed actual as-found inspection)

533738, SWHE-1B pick/shoot/clean 05/01/2006
548226, SWHE-1A pick/shoot/clean 07/11/2005
783731, DCHE-1A pick/shoot/clean 07/18/2006*
783732, DCHE-1B pick/shoot/clean 04/04/2006
827163, SWHE-1C pick/shoot/clean 05/30/2006
838424, SWHE-1B pick/shoot/clean 06/27/2006
848932, SWHE-1D pick/shoot/clean 07/10/2006*
866162, SWHE-1B pick/shoot/clean 07/31/2006*
874934, SWHE-1D pick/shoot/clean 06/29/2006
885917, SWHE-1C pick/shoot/clean 07/28/2006*
692659, A flume and pit video inspection and cleaning 07/18/2006*
764638, B flume and pit video inspection and cleaning 04/05/2006

Completed Tests

PT-922, Service Water Heat Exchanger Thermal Performance Testing completed 05/11/2004
Calculation PGT-2005-1123, DH DCHE Thermal Performance Test completed 10/30/2005

Nuclear Condition Reports

146760, no definitive guidance on placing RWV-150 in service
149219, SWHE-1D found with 268 tubes plugged
153839, L shaped loose part found in DCHE-1B
160353, small area of missing lining found in DCHE-1B inlet
164021, through wall leakage found on SWHE-1B
166957, decay heat closed cycle cooling system has high copper concentration
201609, SWHE-1A blockage 66 percent

Miscellaneous

System health reports dated June 2006
Chemistry data base and chemistry trends for DC and SW Systems
CP-160, Closed Cycle Water Systems Chemistry Program Guidelines

Section 1R12: Maintenance Effectiveness

Nuclear Condition Reports

185229, SW system leakage elevated
163099, SWV-151 closed limit switch not making up
123632, repeated functional failure in SW system
195121, small pin hole leak in SWHE-1C shell
167430, SWV-41 stroke time unsat
132695, AHF-1A motor winding temperature reads high

201317, AHF-1A elevated motor winding temperature
186661, SW system exceeded MR FF limit
149918, minor flow blockage possible in AHF-1A motor cooler
158381, condensate system exceeded MR performance criteria
174440, CDP-1B Tripped causing a loss of oil and smoke in the area
178612, failure of the ATWS UPS resulted in a repetitive MRFF
177364, both UPS units in ATWS failed 1 hour surveillance
108593, AT-1-JX, ATWS UPS failed surveillance

Maintenance Work Orders

WO 744380, adjust limit switch

Miscellaneous

SW system health reports dated December 2005 and June 2006
open maintenance work order database (August 10, 2006)
calculation M94-0048, minimum required SWT-1 nitrogen overpressure
SW design basis document 6/11
PM-275 general preventative maintenance work

Section 1R20: Refueling and Outage Activities

Procedures

AI-504, guidelines for cold shutdown and refueling
WCP-102, outage risk assessment
OP-203, plant startup
OP-210, reactor startup