UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

October 18, 2007

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 05000302/2007004

Dear Mr. Young:

On September 30, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Crystal River Unit 3. The enclosed integrated inspection report documents the inspection results, which were discussed on October 1, 2007, 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,

/RA/

Steven J. Vias, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 05000302/2007004
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

October 18, 2007

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Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing &
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SIGNATURE	SJV	TXM1	RJR1				
NAME	SVias	TMorrissey	RReyes				
DATE	10/18/2007	10/18/2007	10/18/2007				
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OFFICIAL RECORD COPY DOCUMENT NAME: C:\FileNet\ML072910494.wpd

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Letter to Dale E. Young from Steven J. Vias, dated October 18, 2007.

SUBJECT: CRYSTAL RIVER UNIT 3 - NRC INTEGRATED INSPECTION REPORT 05000302/2007004

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-302
License No.:	DPR-72
Report No:	05000302/2007004
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, 2007 - September 30, 2007
Inspectors:	T. Morrissey, Senior Resident Inspector R. Reyes, Resident Inspector
Approved by:	Steven J. Vias, Chief Reactor Projects Branch 3 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000302/2007-004; 07/01/2007 - 09/30/2007; Crystal River Unit 3; Routine Integrated Report.

The report covered a 3-month period of inspection by the resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, “Reactor Oversight Process,” Revision 4, dated December 2006.

A. NRC-Identified Findings and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-identified Violations

None

REPORT DETAILS

Summary of Plant Status:

The unit operated at essentially 100 percent power during the quarter.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

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 four partial system alignments in system walkdowns using the listed documents:

- Nuclear service water (SW) pumps SWP-1B and SWP-1C systems, using Operating Procedure OP-408, Nuclear Services Cooling System, while SWP-1A was out of service for planned maintenance;

- Control complex chilled water system (CHHE-1A), using OP-409, Plant Ventilation System, while chiller CHHE-1B was out of service for planned maintenance;

- Makeup (MU) system pumps MUP-1A, MUP-1B, and MUP-1C, using Operating Procedure OP-402, Makeup and Purification System, and raw water (RW) pumps RWP-2A, RWP-2B, RWP-3A, and RWP-3B, using OP-408, Nuclear Services Cooling System, while the alternate AC emergency diesel generator (EGDG-1C) and feedwater pump (FWP-7) were both out of service for maintenance; and

- “A” train decay heat closed cycle cooling (DC) and decay heat removal (DHR) systems, using OP-404, Decay Heat Removal System, while the B train emergency core cooling system (ECCS) 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 the emergency diesel generator EGDG-1B and its associated 4160V engineered safeguards (ES) Bus 3B. The inspectors utilized licensee procedures, as well as licensing and design documents to verify that the system (i.e., pump, valve, and electrical) alignment was correct. During the walkdown, the inspectors also verified that: the pumps, valves and piping associated with the diesel did not exhibit leakage that would impact its function, major portions of the systems and components were correctly labeled, hangers and supports were installed and functional; and essential support systems were operational. In addition, pending design and equipment issues were reviewed to determine if the identified deficiencies impacted the systems functions. A review of open nuclear condition reports (NCRs) was performed to verify that the licensee had appropriately characterized and prioritized equipment problems for resolution in corrective action program. 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:

- Emergency feed pump (EFP-3) building
- Intermediate building 95' elevation, EFP-1 and EFP-2 areas
- Emergency feed tank (EFT-2) building and the alternate AC emergency diesel generator EGDG-1C building
- FWP-7 area
- Cable spreading room

- Makeup pump cubicles
- Control complex chiller room
- Auxiliary building 95' level sea water room
- Control complex B train ES 4160 V switchgear room

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

Resident Inspector Quarterly Review

a. Inspection Scope

On August 8, 2007, the inspectors observed one separate licensed operating training activity associated with a loss of decay heat removal during shutdown conditions. The inspectors observed a classroom training session associated with a loss of reactor coolant system coolant (lesson OPS-5-114) and operator response and actions for the Crystal River, Unit 3 simulator training session, LOR-1-05. The simulator session involved a loss of the operating decay removal pump and required the crew to use plant abnormal procedure AP-404, Loss of Decay Heat Removal.

The inspectors specifically evaluated the following attributes related to 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
- Correct use and implementation of off-normal procedures; and emergency plan implementing procedures
- Control board operation and manipulation, including operator actions
- Oversight and direction provided by supervision, including ability to identify and implement appropriate technical specification actions, regulatory reporting requirements, and emergency plan classification and notification
- Crew overall performance and interactions

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. 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 inspectors conducted this inspection for three degraded equipment conditions listed below.

- NCR 227266, Repetitive maintenance rule functional failure of RC-1-LIR3
- NCR 221234, Maintenance rule functional failure of boric acid water storage tank (BWST) level indicator DH-37-LT
- NCR 186375, Control complex chiller CHHE-1A trip

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. 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 seven work week assessments:

- Work Week 07W27, Risk assessment for preventative maintenance on service water pump SWP-1A, testing of emergency diesel generator EGDG-1A and emergent work to replace a main steam pressure transmitter and a failed A train reactor protection system reactor coolant system high pressure bistable;

- Work Week 07W29, Risk assessment for preventative maintenance on control complex chiller CHHE-1B, preventative maintenance and testing of emergency diesel generator EGDG-1B, and emergent battery cell replacement on ES battery DPBA-1B;

- Work Week 07W30, Risk assessment for maintenance performed on feedwater pump FWP-9 and testing of FWP-7, and preventive maintenance on emergency diesel generator EGDG-1C;

- Work Week 07W32, Risk assessment for emergency feedwater pump EFP-3 maintenance outage, and emergent issues associated with emergency feed valve (EFV-55), and EFP-3 crank case pressure switch DL-37-PS;

- Work Week 07W33, Risk assessment for operations with B emergency core cooling train (DC, RW and DHR) out of service for scheduled maintenance (Yellow risk condition);

- Work Week 07W35, Risk assessment for maintenance on makeup pump MUP-1B, routine testing of emergency diesel generator EGDG-1A and corrective maintenance on emergency feedwater pump EFP-3; and

- Work Week 07W36, Risk assessment for operations with A emergency cool cooling train (DC, RW and DHR) out of service for scheduled maintenance (Yellow risk condition).

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following seven 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.

- NRC 213617, Engineered safeguards loads are not evaluated for EGDG operating frequencies other than 60 Hertz

- NCR 238440, CR3 Low flow analysis power operated relief valve (PORV) closure value different from plant value

- NCR 239342, Anti-rotation devises are bent on emergency feedwater valves EFV-11 and EFV-14

- NCR 240381, RW pit manway has rust and spalling

- NCR 243181, Emergency feed pump EFP-3 high crankcase pressure alarm at engine start

- NCR 237842, Emergency diesel generator EGDG-1B fuel-oil pressure low out of specification

- NCR 247738, Part 21 potential defective circuit card installed in ES emergency diesel generator voltage control circuit

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 six post-maintenance tests reviewed are listed below:

- Surveillance Procedure (SP)-344A, RWP-2A, SWP-1A and Valve Surveillance, after performing maintenance on service water pump SWP-1A per work orders (WOs) 804902 and 1035290;

- Surveillance Procedure SP-110A, “A” Channel Reactor Protection System Functional Test (partial), after performing emergent work replacing a reactor coolant system high pressure bistable in reactor protection system channel A per WO 1089059;

- Surveillance Procedure SP-349C, EFP-3 and Valve Surveillance, after performing maintenance on emergency feed pump EFP-3 per WO 1054756;

- Surveillance Procedure SP-344B, RWP-2B, SWP-1B and Valve Surveillance, and SP-340E, DHP-1B, BSP-1B and Valve Surveillance, after performing maintenance on the B ECCS train per WOs 1027049, 744594, 885123, 831227 and 1058638;

- Surveillance Procedure SP-344A, RWP-2A, SWP-1A and Valve Surveillance, and SP-340E, DHP-1A, BSP-1A and Valve Surveillance, after performing maintenance on the A ECCS train per WOs 1016359, 101359, 697505, 756488 and 1082829; and

- Surveillance Procedure SP-349B, EFP-2 and Valve Surveillance, after performing valve maintenance per WOs 853662 and 856067.

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 five activities were observed/reviewed:

In-Service Test:

- SP-334A, Spent Fuel Pump SFP-1A Quarterly Surveillance

Surveillance Tests:

- SP-130, Engineered Safeguards Monthly Functional Test
- SP-457A, ECCS Response to a Safety Injection Test Signal (Mode 1-3)
- SP-101, Moderator Temperature Coefficient Determination at 300 PPM Boron

Reactor Coolant System Leak Detection Test:

- SP-317, RC System Water Inventory Balance

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors evaluated one temporary modification and the associated 10 CFR 50.59 screening against the system design basis documentation and FSAR to verify the modification did not adversely affect the safety functions of important safety systems. Additionally, the inspectors reviewed licensee procedure EGR-NGGC-0005, Engineering Change, to assess if the modification was properly developed and implemented.

- WO 1095194, Jumper in spare cell on vital battery DPBA-1B in accordance with maintenance procedure MP-401, battery maintenance

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

Initiating Events and Mitigating systems Cornerstones

a. Inspection Scope

The inspectors checked the accuracy of the performance indicators listed below. Performance indicator data submitted from October 2006 through June 2007, was compared for consistency to data obtained through the review of engineering department records, control room logs, and licensee event reports. Performance indicator definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 4, were used to check the reporting for each data element. The inspectors checked that any deficiencies affecting the licensee's performance indicator program were entered into the corrective action program (CAP) and appropriately resolved.

- Safety System Functional Failures

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

.1 Daily Review

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 reviewed the operator workaround program to verify the licensee is identifying workarounds at an appropriate threshold and is entering them in a correction action program. The inspectors performed an evaluation of the potential cumulative effect of all outstanding operator workarounds. Documents reviewed are listed in the attachment.

b. Findings and Observations

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

On October 1, 2007, the resident inspectors presented the inspection results to Mr. D. Young, Site Vice President and other members of licensee management. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
M. Annacone, Plant General Manager
W. Brewer, Manager, Maintenance
S. Cahill, Manager, Engineering
P. Dixon, Manager, Nuclear Assessment
J. Franke, Director of Site Operations
R. Hons, Manager, Training
I. Wilson, Manager, Outage and Scheduling
J. Holt, Manager, Operations
D. Herrin (Acting), Supervisor, Licensing
M. Rigsby, Superintendent, Radiation Protection
J. Stephenson, Supervisor, Emergency Preparedness
D. Young, Vice President, Crystal River Nuclear Plant

NRC personnel:
S. Vias, Chief, Reactor Projects Branch 3, NRC Region II

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

None

LIST OF DOCUMENTS REVIEWED

Section 1R05: Fire Protection

Procedures
AI-2200, Guidelines for Handling Use and Control of Transient Combustibles
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

Section 1R12: Maintenance Effectiveness

SE07-0052 Maintenance Rule RCS Instrument Performance Monitoring

Nuclear Condition Reports

231293 CHHE-1A tripped on high condenser pressure
221306 Safety related transmitter failed due to water damage
198642 DH-37-LI reads zero
221602 Safety related transmitter failed due to water damage

222513 RC-1-LI3 Does not appear to be working correctly

Miscellaneous
Maintenance Rule data base for control complex chiller
System Health Report decay heat removal system

Section 4OA2: Problem Identification and Resolution

Nuclear Condition Reports

218670 AHF-1C can not be started in “Slow” from the MCB
227445 RWP-2A is binding
210706 Removal of ICS from track can cause a change in plant output