



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
245 PEACHTREE CENTER AVENUE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

April 19, 2012

Mr. Jon A. Franke, Vice President  
Crystal River Nuclear Plant (NA1B)  
15760 West Power Line Street  
Crystal River, FL 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 – NRC INTEGRATED INSPECTION REPORT  
05000302/2012002

Dear Mr. Franke:

On March 31, 2012, 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 10, 2012, with you 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 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 the 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/*

Daniel W. Rich, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000302/2012002  
w/Attachment: Supplemental Information

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Letter to Jon A. Franke from Daniel W. Rich dated April 19, 2012

SUBJECT: CRYSTAL RIVER UNIT 3 – NRC INTEGRATED INSPECTION REPORT  
05000302/2012002

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RidsNrrPMCrystal River Resource

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 50-302

License No.: DPR-72

Report No.: 05000302/2012002

Licensee: Progress Energy (Florida Power Corporation)

Facility: Crystal River Unit 3

Location: Crystal River, FL

Dates: January 1, 2012 – March 31, 2012

Inspectors: T. Morrissey, Senior Resident Inspector  
N. Childs, Resident Inspector  
J. Laughlin, Emergency Preparedness Inspector NSIR  
(Section 1EP4)

Approved by: D. Rich, Branch Chief,  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000302/2011002; 01/01/2012-03/31/2012; Crystal River Unit 3; Routine Integrated Report.

The report covered a three 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 & Self-Revealing Findings

No findings were identified

B. Licensee Identified Violations

None

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## REPORT DETAILS

### Summary of Plant Status:

Crystal River Unit 3 began the inspection period in “No Mode” with the full core off-loaded to the spent fuel pool. The unit remained in this condition for the remainder of the inspection period.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity Emergency Preparedness

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

During the period listed below, the inspectors verified that the licensee implemented Administrative Instruction AI-513, Seasonal Weather Preparations, Sections 4.2 (Freezing Weather) and 4.3 (Freezing Weather Monitoring). The inspectors walked down portions of both trains of the emergency diesel generator (EGDG) system, the alternate AC diesel generator system, the auxiliary building sea water room, and both trains of the spent fuel pool cooling system to check for any unidentified susceptibilities to cold weather. Condition reports (CRs) were reviewed to check that the licensee was identifying and correcting cold weather protection issues. This completed one sample for a site specific weather related condition.

- January 4-5 with a low temperature of 23°F

##### b. Findings

No findings were identified.

#### 1R04 Equipment Alignment

##### .1 Partial Equipment Walkdowns

##### a. Inspection Scope

The inspectors performed walkdowns of the critical portions of 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 through system walkdowns. Documents used to facilitate the system walkdowns are listed in the attachment.

- Emergency diesel generators EGDG-1B and EGDG-1C while EGDG-1A was out of service for a planned extended outage
- “A” train decay heat removal (DHR), raw water (RW), and decay heat closed cycle cooling (DC) systems while “B” train emergency core cooling system (ECCS) was out of service for a planned outage

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- “B” train DHR, DC and RW systems while both trains of the service water (SW) system were out of service for planned maintenance
- “B” train spent fuel cooling system, 480V engineered safeguards (ES) Bus 3B, and ES motor control center (MCC) 3B1 while the “A” train spent fuel cooling system was out of service for planned maintenance

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Fire Area 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 five areas important to safety:

- Reactor Building
- EGDG-1B control and engine rooms
- A and B engineered safeguards (ES) 4160V switchgear rooms
- Sea water room 95 foot elevation auxiliary building
- Emergency feedwater pump (EFP-1 and EFP-2) area

b. Findings

No findings were identified.

.2 Annual Fire Drill

a. Inspection Scope

On February 15 and on February 22 the inspectors observed two separate licensee fire brigade responses to a simulated fire. The first drill involved a fire in the emergency feed water pump EFP-3 building. The second drill involved an oil fire associated with a control complex chiller. The inspectors checked the brigade’s communications, ability to

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set up and execute fire operations, and their use of fire-fighting equipment. The inspectors verified compensatory actions were in place to ensure that additional alarms which may be received during the drill were addressed. Additionally, the inspectors verified that the licensee considered the aspects as described below when the brigade conducted the firefighting activities and during the post drill critique. The inspectors attended each drill's post-drill critique to verify that the licensee's drill acceptance criteria were met and that any discrepancies were discussed and resolved. Administrative instruction AI-2205, Administration of CR-3 Fire Brigade Organization and Duties of the Fire Brigade, was reviewed to ensure that acceptance criteria were evaluated and deficiencies were documented and corrected. In addition, the inspectors reviewed the storage, training, expectations for use and maintenance associated with the self-contained breathing apparatus (SCBA) program. This completed one sample representing observation of selected fire drills. Documents reviewed are listed in the attachment. The inspectors observed that:

- The brigade, including the fire team leader, had a minimum of five members.
- Members set out designated protective clothing and properly donned gear.
- SCBAs were available and properly used.
- Control room personnel verified fire location, dispatched fire brigade and sounded alarms. Emergency action levels were declared and notifications were completed.
- Fire brigade leader as well as the control room senior reactor operator had copies of the pre-fire plans.
- Brigade leader maintained control: members were briefed, discussed plan of attack, received individual assignments, and completed communications checks. Plan of attack discussions were consistent with pre-fire plans.
- Fire brigade arrived at the fire scene in a timely manner, taking the appropriate access route specified in the strategies and procedures.
- Control and command was set up near the fire scene and communications were established with the control room and the fire brigade members.
- Effectiveness of radio communication between the command post, control room, plant operators and fire brigade members.
- Fire hose lines reached all necessary fire hazard locations, were laid out without flow constrictions, and were simulated as being charged with water.
- The fire area was entered in a controlled manner following the two person rule.
- The fire brigade brought sufficient fire-fighting equipment to the scene to properly perform its fire-fighting duties.
- The fire brigade checked for fire victims and fire propagation into other areas.
- Effective smoke removal operations were simulated in accordance with the pre-fire plan.
- The fire-fighting plan strategies were utilized.
- The drill scenario was followed, and the drill acceptance criteria were met.
- All firefighting equipment was returned to a condition of readiness.

b. Findings

No findings were identified.

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## 1R06 Flood Protection Measures

### Internal Flood Protection

#### a. Inspection Scope

The Inspectors reviewed the FSAR, Chapter 2.4.2.4, Facilities Required for Flood Protection, and the design basis documents that depict protection for areas containing safety-related equipment to identify areas that may be affected by internal flooding. A walkdown of the "A" train DHR and building spray (BS) vault was conducted to ensure that flood protection measures were in accordance with design specifications. Specific plant attributes that were checked included structural integrity, sealing of penetrations, and operability of sump systems.

#### b. Findings

No findings were identified

## 1R11 Licensed Operator Regualification Program

#### a. Inspection Scope

On January 24 and on February 7 the inspectors observed and assessed two separate licensed operator crews' response and actions for licensed operator simulator evaluated session SES-163, that included an instrument failure that caused the reactor coolant system (RCS) power-operated relief valve (PORV) to open, a once through steam generator (OTSG) tube leak, and an OTSG tube rupture. The plant degraded to a point where the crew entered an Unusual Event emergency declaration followed by an Alert emergency declaration. The inspectors observed the operators' use of the following procedures: emergency operating procedures EOP-02, Vital System Status Verification, and EOP-06, Steam Generator Tube Rupture; and abnormal procedure AP-250, Radiation Monitor Actuation.

The operators' actions were verified to be in accordance with the procedures mentioned above. Event classification and notifications were verified to be in accordance with emergency management procedure EM-202, Duties of the Emergency Coordinator. The simulator instrumentation and controls were verified to closely parallel those in the actual control room. The inspectors attended the crew critique and evaluation to verify the licensee had entered any adverse conditions into the corrective action program. The inspectors evaluated the following attributes related to crew performance:

- clarity and formality of communication
- ability to take timely action to safely control the unit
- prioritization, interpretation, and verification of alarms
- correct use and implementation of abnormal, emergency operating, and emergency plan implementing procedures
- control board operation and manipulation, including high-risk operator actions

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- 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
- overall crew performance and interactions

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the licensee's effectiveness in performing routine maintenance activities. The review included 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 (MR) per 10 CFR 50.65 (a)(1) and (a)(2), inspectors verified that classifications were justified in light of the reviewed degraded equipment condition. The documents reviewed are listed in the attachment. The inspectors conducted this inspection for the following two condition reports:

- CR 447910, Service Water Valve SWV-81 Functional Failure
- CR 480757, SWV-354 Failed to Stroke During Post-maintenance Testing

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments

a. Inspection Scope

The inspectors reviewed one CR to verify that functionality of the system important to safety was properly established, that the affected components or system remained capable of performing its intended design functions, and that no unrecognized increase in plant or public risk occurred. The inspectors assessed whether the functionality assessment of the system and its components was consistent with the improved technical specifications (ITS), 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 CRs and procedures to verify that operability and functionality issues were being identified at an appropriate threshold and documented in the corrective action program, consistent with 10 CFR 50, Appendix B requirements as well as licensee corrective action procedure CAP-NGGC-0200, Condition Identification and Screening Process. Additional documents reviewed are listed in the attachment.

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- CR 504214, Raw Water Sluice Gate (RWG-3) Corrosion

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors either observed or reviewed post-maintenance test results 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 five post-maintenance tests reviewed are listed below:

- Surveillance procedure SP-334A, SFP-1A Quarterly Surveillance, after performing planned maintenance per work order (WO) 2023328
- SP-375B, CHP-1B and Valve Surveillance, after performing planned maintenance per WO 1705298
- SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A (fast start), after performing planned maintenance per WOs 1849613 and 1854177
- SP-340D, RWP-3A, DCP-1B and Valve Surveillance and SP-340E, DHP-1A, BSP-1A and Valve Surveillance, after performing planned maintenance per WOs 1938345, 1854179 and 1990577
- Operating Procedure OP-409, Plant Ventilation System, after performing planned maintenance on control complex chiller CHHE-1B per WO 2050054

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities

Steam Generator Replacement Refueling Outage (RFO16)

a. Inspection Scope

On September 26, 2009, the unit was shutdown for a planned steam generator replacement refueling outage. The previous quarter's NRC inspection activities in this area were documented in NRC integrated inspection report 05000302/2011005. During this quarter, the inspectors observed and monitored licensee controls over the refueling outage activities listed below. Documents reviewed are listed in the attachment.

- outage related risk assessment monitoring
- controls associated with reactivity management of the spent fuel pool (SFP)
- controls associated with electrical and mechanical alignments for those systems used to support spent fuel pool cooling
- implementation of equipment clearances
- foreign material exclusion controls associated with the SFP during containment repair activities
- work controls associated with the protection of SFP cooling and support systems from maintenance activities

b. Findings

No findings were identified

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed surveillance tests and reviewed the test results for the six surveillance tests listed below to verify that ITS 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 verified that equipment was properly returned to service and that proper testing was specified and conducted to ensure the equipment could perform its intended safety function following maintenance or as part of surveillance testing.

In-Service Test:

- SP- 344A, RWP-2A, SWP-1A and Valve Surveillance

Surveillance Test:

- SP-354C, Functional Test of the Alternate AC Diesel Generator EGDG-1C
- SP-907A, Monthly Functional Test of 4160V ES Bus "A" Undervoltage and Degraded Bus Relaying
- Performance test PT-911, PPIP-1 Performance Test (fresh water low flow test)
- SP-522, Station Batteries Inspection and Battery Charger Load Test (DPBC-1A and DPBC-1E)
- SP-912B, Functional Test of 4160V ES Bus "B" Undervoltage and Degraded Grid Relaying

b. Findings

No findings were identified.

#### 1EP4 Emergency Action Level and Emergency Plan Changes

##### a. Inspection Scope

The NSIR headquarters staff performed an in-office review of changes to Emergency Plan Implementing Procedure EMG-NGGC-0002, Offsite Dose Assessment, Revision 2 under NRC ADAMS accession number ML12009A080.

The licensee transmitted the EPIP revision to the NRC pursuant to the requirements of 10 CFR 50, Appendix E, Section V, "Implementing Procedures." The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

##### b. Findings

No findings were identified.

#### 1EP6 Drill Evaluation

##### a. Inspection Scope

The inspectors observed 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.

- January 24 licensed operator simulator evaluated session, SES-163, which included an instrument failure that caused the RCS PORV to open, a OTSG tube leak, and a OTSG tube rupture

##### b. Findings

No findings were identified.

#### 4. OTHER ACTIVITIES

##### 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 equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program (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 were identified.

###### .2 Annual Sample Review

###### a. Inspection Scope

The inspectors selected CR 506777, Failure of Raw Water Pump (RWP) Discharge Check Valve RWV-36 to Close on Demand, for review due to the repetitive nature of the valve failure. RWV-36 has experienced five failures to fully close since December 1998. On January 3, 2012, while performing raw water pump surveillance testing, RWP-1 was observed to be rotating backwards after it was secured, indicating that its discharge valve RWV-36 was not fully closed. RWP-1 is one of three raw water pumps on a common discharge header. Failure of RWV-36 to fully close resulted in a reduction of seawater cooling to the nuclear services seawater heat exchangers due to short-cycling seawater back to the inlet flume via RWP-1. This ultimately causes a reduction in the heat removal capability of the RW system.

The inspectors verified that the issues had been completely and accurately identified in the licensee's corrective action program, safety concerns were properly classified and prioritized for resolution, the cause evaluation was sufficiently thorough, and appropriate corrective actions were initiated. The inspectors also evaluated the CR using the requirements of the licensee's CAP as delineated in corrective action procedure CAP-NGGC-0200, Condition Identification and Screening Process. Additional documents reviewed are listed in the attachment.

###### b. Findings and Observations

No findings were identified. The inspectors reviewed the condition reports and associated evaluations for recent and past failures of RWV-36. The inspectors verified that the licensee's evaluations adequately addressed minimum RW flow requirements

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and that, even though the RW heat removal capability was reduced, the RW safety functions were not adversely impacted as a result of the failures. Therefore, no violations of regulatory requirements were identified.

An evaluation performed in 2009 determined the cause of the repetitive failures to be excessive wear of the check valve internals due to check valve flutter. The licensee ultimately determined that the check valve design was not appropriate for the application. After reviewing the previous failure evaluations, the inspectors concluded that identification of the true cause of the failures was masked by other deficiencies identified during prior equipment failure investigations. For example, in the November 2000 failure investigation, the cause of the failure was attributed to a manufacturing error. Internal inspection of the valve also identified wear of the internals, but the investigation concluded that the manufacturing error was the most significant contributor to the valve failure. There was no further investigation into other causes of the internal wear. A similar situation occurred during the March 2008 failure investigation. The inspectors noted that it was not until the equipment failure investigation in 2009 that the cause for the repetitive wear was explored more deeply.

The licensee's 2009 failure evaluation determined the cause of the repetitive failures to be an inadequate check valve design for the application resulting in check valve flutter, internal wear, and subsequent valve failure. Corrective actions prior to 2009 were to perform more frequent preventive maintenance (PM) activities and modify the valve internals to increase the wear resistance (i.e., upgrade the bushing to a stellite material). These actions did not prevent recurrence of the valve failures. The 2009 evaluation initiated a long-term corrective action to replace the valve with a design less susceptible to check valve flutter. The inspectors noted that the action to complete the valve modification package had seven due date extensions between 2009 and 2011, which was primarily due to competing plant priorities and a lack of resources available to complete the modification package. The inspectors verified that the due date extensions were in accordance with the licensee's procedural requirements.

Several weeks after the January 3, 2012, failure of RWV-36, an internal inspection of the valve was performed to determine the cause of the failure. The same type of wear was observed that had been encountered in previous valve failures. The inspectors reviewed the licensee evaluation of the 2012 failure, which stated that the maintenance procedure used during the PM activity specified less than adequate acceptance criteria for early identification of valve degradation. However, the evaluation recognized that the primary corrective action to resolve the issue was replacement of the valve with a new design as identified in 2009. The inspectors noted that the valve replacement is currently scheduled to be implemented in late 2012.

The inspectors verified that an extent of condition review was adequately performed to ensure that other potential vulnerabilities were identified. The licensee determined there were valves of the same type installed in the raw water (RW), service water (SW), and spent fuel pool (SFP) systems that were susceptible to a similar failure, although they did not have a history of similar failures. The inspectors verified that the licensee was tracking resolution of the identified vulnerabilities in the corrective action program.

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### .3 Annual Sample Review

#### a. Inspection Scope

The inspectors selected CR 508427, Repetitive Fire Door Latch Failures, for review to determine whether licensee corrective actions were appropriate to resolve the problem. The licensee's investigation determined the cause for the repeat failures of the three fire doors to be equipment failure due to excessive usage. Last quarter, the inspectors found problems with two of the three doors. The licensee initiated CR 508427 after the inspectors discussed their observations with the licensee. The inspectors checked that the issues were completely and accurately identified in the licensee's corrective action program, safety concerns were properly classified and prioritized for resolution, cause determination was sufficiently thorough, and appropriate corrective actions were initiated. The inspectors also evaluated the CR using the requirements of the licensee's CAP as delineated in corrective action procedure CAP-NGGC-0200, Condition Identification and Screening Process. Additional documents reviewed are listed in the attachment.

#### b. Findings and Observations

No findings were identified. The licensee's corrective actions included the replacement of one of the fire doors. The replacement of this door had previously been scheduled. The licensee will monitor the second door for three months. After three months, the licensee will either replace the latch components or initiate actions to replace the door if the trend worsens. The third door, which was replaced in 2007 will be monitored for 6 months. The licensee will determine the need for additional corrective actions if the trend worsens. The inspectors noted that the licensee's preventative maintenance (PM) frequency for fire doors is on an annual basis. The inspectors determined that the licensee had not considered a more frequent PM schedule for high traffic usage fire doors. After discussing this observation with the licensee, the licensee stated that adjusting PM frequency for high traffic usage fire door may be considered if the doors continue to have problems.

### .4 Semi-Annual Trend Review

#### a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in section 4OA2.1 above, plant status reviews, plant tours, and licensee trending efforts. The inspectors' review nominally considered the six month period of October 2011 through March 2012 although some examples expanded beyond those dates when the scope of the issue warranted. The review also included issues documented in various departmental CAP performance assessment & trend reports for the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2011, the March

2012 Plant Health Committee Site Focus List, daily operator log entries, and maintenance rule (MR) reports. Corrective actions associated with a sample of the issues identified in the licensee's corrective action program were reviewed for adequacy.

b. Findings and Observations

No findings were identified. The inspectors evaluated the licensee's trend methodology and observed that the licensee had performed adequate trending reviews and appropriately addressed identified trends within the CAP. The inspectors did not identify any new trends.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Finding

No findings were identified.

.2 Steam Generator Replacement Project and Containment Repair (IP 50001)

a. Inspection Scope

During this quarter, the licensee performed limited field work associated with containment building wall repair. Major field work activities are not expected to start until later this year. Containment stability is continuously being monitored utilizing installed acoustic and displacement sensors. The licensee, as necessary, also performs impulse response scans of the containment walls to determine if there is any degradation of the walls. The data from the sensors and scans is periodically monitored by the inspectors to verify containment stability.

b. Findings

No findings were identified.

40A6 Exit

Exit Meeting Summary

On April 10, 2012, the resident inspectors presented the inspection results to Mr. J. Franke, 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

Enclosure

## KEY POINTS OF CONTACT

### Licensee personnel:

J. Franke, Vice President, Crystal River Nuclear Plant  
T. Hobbs, Plant General Manager  
J. Huegel, Manager, Maintenance  
B. Wunderly, Director, Engineering  
R. Wiemann, Manager, Nuclear Oversight  
P. Dixon, Manager, Training  
M. Kelly, (Interim) Manager, Operations  
D. Westcott, Supervisor, Licensing  
B. Atkins, Superintendent, Radiation Protection  
C. Poliseno, Supervisor, Emergency Preparedness  
D. Demontfort (Interim), Manager, Outage and Scheduling  
M. Van Sicklen, Superintendent, Operations Training

### NRC personnel:

D. Rich, Branch Chief, Division of Reactor Projects

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Closed

None

### Discussed

None

## LIST OF DOCUMENTS REVIEWED

### **Section 1R04: Equipment Alignment**

#### Procedures

OP-404, Decay Heat Removal System  
OP-406, Spent Fuel Cooling System  
OP-408, Nuclear Services Cooling System  
OP-700A, 6900, 4160 and 480 Volt AC Buses  
OP-700B, 480 Volt AC Motor Control Centers  
OP-707, Operation of the Emergency Diesel Generators  
OP-707C, Operation of the Alternate AC Diesel Generator

### **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-2205D, Pre-Fire Plan – Intermediate Building  
AI-2205E, Pre-Fire Plan – Reactor Building  
AI -2205F, Pre Fire Plan – Miscellaneous Buildings and Components  
AP-880, Fire Protection  
HPP-500, Respiratory Protection Program  
HPP-502, Respiratory Equipment Inspection and Maintenance  
SP-804, Surveillance of Plant Fire Brigade Equipment  
TRN-NGGC-0010, Fitness-for-Duty, Plant Access, Radiation Worker, and Respiratory Protection Training

### **Section 1R12: Maintenance Effectiveness**

#### Work Orders

1328993, Troubleshoot SWV-354 Not Stroking from Main Control Board

#### Condition Reports

481737, SWV-354 Control Relay Inoperable Due to High Resistance Contacts  
507160, SWV-677 Relief Valve Opened and Failed to Reseat

#### Other

Third quarter 2011 service water system health report

### **Section 1R15: Operability Determinations and Functionality Assessments**

#### Condition Reports

504630, Enhanced Design Basis Document (EDBD) Statement Regarding RWG-3 is Incorrect

Other

FSAR Chapter 9, Section 9.5.2.1, Nuclear Services Cooling Water Function  
EDBD 6/12, Raw Water System

**Section 1R19: Post Maintenance Testing**

Other

Operations Evolution Order #2012-01-001, SFP-1A 5-Point Pump Curve Test

**Section 1R20: Refueling and Outage Activities**

Procedures

AI-504, Guidelines for Cold Shutdown and Refueling  
WCP-102, Outage Risk Assessment

**Section 1R22: Surveillance Testing**

Procedures

PM-141, Battery Charger Preventive Maintenance Setpoint Adjustments (DPBC-1A through 1F)

Work Orders

1519380-01, DPBC-1A Station Charger Load Test (August 2010 performance)  
1519380-03, DPBC-1E Station Charger Load Test (September 2010 performance)  
1802085, DPBC-1E, Clean, Calibrate, and Check Setpoints  
1825478, DPBC-1A Cleaning, Calibration and Setpoint Checks

**Section 4OA2: Problem Identification and Resolution**

Procedures

CAP-NGGC-0205, Condition Evaluation and Corrective Action Process

Condition Reports

40869, RWV-36 Valve Dimension Discrepancy  
40966, RWP-1 Discharge Check Valve RWV-36 Failed to Close  
268696, RWV-36 Failed as found Inspection for the two year PM  
316682, RWP-1 Secured and Rotating Backwards

Work Orders

1889462, Annual Fire Door Inspection and Repair

Other

Engineering Change (EC) 74541, Modify Design of RWV-36 to Reduce Excessive Wear  
PM-175, Fire Door Maintenance