



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

July 16, 2008

Mr. Dale E. Young  
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  
05000302/2008003

Dear Mr. Young:

On June 30, 2008, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Crystal River Unit 3 facility. The enclosed integrated inspection report documents the inspection findings which were discussed on July 07, 2008, with Mr. M. Annacone and other members of your staff.

The inspection examined activities conducted under your license as they related 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 items 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 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/**

Marvin D. Sykes, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000302/2008003  
w/Attachment: Supplemental Information

July 16, 2008

Mr. Dale E. Young  
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  
05000302/2008003

Dear Mr. Young:

On June 30, 2008, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Crystal River Unit 3 facility. The enclosed integrated inspection report documents the inspection findings which were discussed on July 07, 2008, with Mr. M. Annacone and other members of your staff.

The inspection examined activities conducted under your license as they related 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 items 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 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/

Marvin D. Sykes, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000302/2008003  
w/Attachment: Supplemental Information

☒ PUBLICLY AVAILABLE      ☐ NON-PUBLICLY AVAILABL      ☐ SENSITIVE      ☒ NON-SENSITIVE  
ADAMS: ☐ Yes      ACCESSION NUMBER: \_\_\_\_\_      ☒ SUNSI REVIEW COMPLETE

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP			
SIGNATURE	TXM1 via email	RJR1 via email	SON	MDS			
NAME	TMorrissey	RReyes	SNinh	MSykes			
DATE	07/16/2008	07/16/2008	07/09/2008	07/16/2008	7/ /2008	7/ /2008	7/ /2008
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY

DOCUMENT NAME: I:\RPB3\CRYSTAL\REPORTS\2008\IR-08-03 (2).DOC

cc w/encls.:

Jon A. Franke  
Director Site Operations  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Michael J. Annacone  
Plant General Manager  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Phyllis Dixon  
Manager  
Nuclear Assessment  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Stephen J. Cahill  
Engineering Manager  
Crystal River Nuclear Plant (NA2C)  
Electronic Mail Distribution

Daniel J. Roderick  
Vice President  
Nuclear Projects and Construction  
Crystal River Nuclear Plant  
Electronic Mail Distribution

David M. Varner  
Manager  
Support Services – Nuclear Projects  
and Construction  
Crystal River Nuclear Plant  
Electronic Mail Distribution

R. Alexander Glenn  
Associate General Counsel  
(MAC - BT15A)  
Florida Power Corporation  
Electronic Mail Distribution

Steven R. Carr  
Associate General Counsel  
Legal Department  
Progress Energy Service Company, LLC  
P.O. Box 1551  
Raleigh, NC 27602-1551

Senior Resident Inspector  
Florida Power Corporation  
Crystal River Nuclear Generating Plant  
U.S. NRC  
6745 N Tallahassee Rd  
Crystal River, FL 34428

William A. Passetti  
Chief  
Florida Bureau of Radiation Control  
Department of Health  
Electronic Mail Distribution

Craig Fugate  
Director  
Division of Emergency Preparedness  
Department of Community Affairs  
Electronic Mail Distribution

Chairman  
Board of County Commissioners  
Citrus County  
110 N. Apopka Avenue  
Inverness, FL 36250

Attorney General  
Department of Legal Affairs  
The Capitol PL-01  
Tallahassee, FL 32399-1050

Letter to Dale E. Young from Marvin D. Sykes dated July 16, 2008

SUBJECT: CRYSTAL RIVER UNIT 3 – NRC INTEGRATED INSPECTION REPORT  
05000302/2008003

Distribution w/encl:

C. Evans, RII EICS (Part 72 Only)

L. Slack, RII EICS

OE Mail

RIDSNRRDIRS

PUBLIC

F. Saba, NRR

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-302

License Nos.: DPR-72

Report No: 05000302/2008003

Licensee: Progress Energy (Florida Power Corporation)

Facility: Crystal River Unit 3

Location: Crystal River, FL

Dates: April 1, 2008 – June 30, 2008

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

Approved by: M. Sykes, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000302/2008003; 04/01/2008 – 06/30/2008; Crystal River Unit 3; Routine Integrated Report.

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

A. Inspector Identified & Self-Revealing Findings

No findings of significance were identified

B. Licensee Identified Violations

None

Enclosure

## REPORT DETAILS

### Summary of Plant Status:

The unit began the inspection period at 100 percent rated thermal power (RTP). On May 20<sup>th</sup> power was manually reduced to approximately 49 percent RTP to allow troubleshooting and repair of the feedwater pump FWP-2A control system. After repairs were completed, power was raised on May 23<sup>rd</sup> and the unit reached 100 percent RTP on May 24<sup>th</sup>. The unit operated at essentially 100 percent RTP for the remainder of the quarter.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection

##### .1 Adverse Weather Protection: Hurricane Season Preparation

###### a. Inspection Scope

The inspectors reviewed the licensee's hurricane season preparations using the licensee's Emergency Management Procedure EM-220, Violent Weather. The inspectors checked that the licensee maintained the ability to protect vital systems and components from high winds and flooding associated with hurricanes. Additionally, the inspectors toured the five plant areas listed below to check for any vulnerabilities, such as inadequate sealing of water tight penetrations, or degraded barriers that could affect the associated systems. The inspectors verified that the licensee's violent weather committee had been established and that an initial preparatory walkdown had been completed. Documents reviewed are listed in the attachment. Nuclear condition reports (NCRs) were reviewed to verify that the licensee was identifying and correcting adverse weather protection issues.

- A and B emergency diesel generator rooms
- Control complex flood walls and doors
- South berm area and intake canal area
- Turbine building flood walls and doors
- Auxiliary building sea water room

###### b. Findings

No findings of significance were identified.

Enclosure

.2 Adverse Weather Protection: External Flooding

a. Inspection Scope

The inspectors performed an inspection of the external flood protection features for Crystal River, Unit 3. The inspectors reviewed the Final Safety Analysis Report (FSAR), Chapter 2.4.2.4 Facilities Required for Flood Protection that depicted the design flood levels and protection areas containing safety-related equipment to identify areas that may be affected by external flooding. The inspectors conducted a general site walkdown of all external areas of the plant including the turbine building, auxiliary building, and berm to ensure that flood protection measures were erected in accordance with design specifications. Procedure EM-220, Violent Weather, was checked to verify that adequate measures were planned or established to protect against external flooding due to hurricanes. Specific plant attributes that were checked included structural integrity, sealing of penetrations below the design flood line, and adequacy of watertight doors between flood areas. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.3 Adverse Weather Protection: Offsite and Alternate AC Power System Readiness

a. Inspection Scope

The inspectors evaluated the summer readiness of both the off-site and on-site alternate AC power systems. The inspectors walked down the safety-related emergency diesel generators (EGDG-1A, 1B), non-safety-related emergency diesel generator (EGDG-1C), and the safety-related diesel driven emergency feedwater pump (EFP-3) to verify they would be available during a loss of off-site power event. The inspectors verified that licensee and transmission system operator procedures contained communication protocols addressing the exchange of appropriate information when issues arise that could impact the offsite power system. Specifically, the inspectors verified the protocols addressed: Licensee actions to be taken when informed by the transmission operator that a postulated loss of the largest on-line unit on the 230kv grid would result in a degraded voltage condition; compensatory actions necessary if it was not possible to predict off-site power post-trip voltage; required re-assessment of plant risk based on maintenance activities which could affect grid reliability; and required communications between Crystal River Unit 3 and the transmission operator when changes at the plant could impact the transmission system or when the capability of the transmission system to provide off-site power is challenged. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

Enclosure



## 1R04 Equipment Alignment

### Partial Equipment 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 three partial system alignments in system walkdowns using the listed documents.

- Emergency diesel generator EGDG-1B using Operating Procedure OP-707, Operation of the ES Emergency Diesel Generators, while EGDG-1A and EGDG-1C were out of service for maintenance.
- Auxiliary feed water pump FWP-7; Raw Water Pumps RWP-2A, RWP 3A, RWP-3B; and Service Water Pump SWP-1A, using OP-605, Feedwater System, and OP-408, Nuclear Services Cooling System, while EGDG-1B was out of service for planned maintenance.
- Emergency diesel generator EGDG-1C, which was being credited as the alternate AC power source, using OP-707C, Operation of the Alternate AC Diesel Generator; and EGDG-1B after being restored from its 2-year engine maintenance, using OP-707, Operation of the ES Emergency Diesel Generators. Both diesel standby alignments were inspected, while EGDG-1A was out of service for its 2-year engine maintenance.

#### b. Findings

No findings of significance were identified.

## 1R05 Fire Protection

### 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

Enclosure

review of the licensee's risk assessment of scheduled work activities. The inspectors also reviewed the licensee's fire protection program to verify the requirements of 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 reactor safety:

- Emergency feed pump EFP-3 building
- A and B ES 480V AC switchgear rooms
- B emergency diesel generator and local control room
- Emergency feed water pump EFP-1 and EFP-2 area
- Spent fuel pump and heat exchanger area

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

Internal Flooding

a. Inspection Scope

The inspectors reviewed FSAR, Chapter 2.4.2.4, Facilities Required for Flood Protection that depicted protection for areas containing safety-related equipment to identify areas that may be affected by internal flooding. A walkdown of the 119' elevation of the intermediate building containing main feedwater and main steam systems 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 of significance were identified.

1R07 Heat Sink Performance

Annual Review

a. Inspection Scope

The inspectors observed maintenance personnel perform heat exchanger inspections and operability assessments for the two listed heat exchangers. The inspector observed as-found conditions when the heat exchangers were opened for inspection and tube cleaning to verify the heat exchangers were in an acceptable condition to perform their design function. The inspector also monitored tube replacement and expansion joint maintenance activities on service water heat exchanger SWHE-1A to verify the as-left condition of the heat exchanger.

Enclosure

The documents reviewed are listed in the attachment.

- Service water heat exchanger SWHE-1A
- Decay heat closed cycle heat exchanger DCHE-1B

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program

Resident Inspector Quarterly Review

a. Inspection Scope

On May 27<sup>th</sup>, the inspectors observed and assessed licensed operator crew response and actions for the Crystal River Unit 3 licensed operator simulator evaluated session SES-29a, loss of reactor coolant and 4160V ES bus fault. The inspectors observed the operator's use of abnormal operating procedures: AP-520, Loss of RCS Coolant or Pressure and AP-880, Fire Protection; and emergency operating procedures: EOP-02, Vital System Status Verification and EOP-03, Inadequate Subcooling Margin. The operator's actions were verified to be in accordance with licensee's procedures. Event classification and notifications were verified to be in accordance with EM-202, Duties of the Emergency Coordinator. The simulator instrumentation and controls were verified to closely parallel those contained in the actual control room. The inspectors specifically evaluated the following attributes related to operating crew performance:

- Clarity and formality of communication
- Ability to take timely action to safely control the unit
- Prioritization, interpretation, and verification of alarms
- Correct use and implementation of off-normal and emergency operation procedures; and emergency plan implementing procedures
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by 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. The 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. The inspectors verified that the licensee was appropriately identifying and documenting maintenance rule issues in the corrective action program. Documents reviewed are listed in the attachment. The licensee's maintenance effectiveness was evaluated for the following two issues:

- Raw water system performance
- NCR 204967, FWV-217 failed to stroke during testing of FWP-7

### 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 five work week assessments.

- Work Week, 08W14, Risk assessment for operations with non-safety emergency diesel generator EGDG-1C and service water pump SWP-1C removed from service for planned maintenance.
- Work Week, 08W15, Risk assessment for operations with EGDG-1A and EGDG-1C out of service for planned maintenance and testing.
- Work Week, 08W17, Risk assessment for operations in Yellow risk configuration while performing planned maintenance activities on the decay heat closed cycle heat exchanger DCHE-1B.

Enclosure

- Work Week, 08W21, Risk assessment for operations with make-up pump MUP-1C removed from service, make-up valves MUV-2 and MUV-3 planned maintenance, and planned maintenance on the service water heat exchanger SWHE-1D.
- Work Week, 08W25, Risk assessment for operations with control complex chiller CHHE-1B, instrument air compressor IAP-3A, and EGDG-1B out of service for planned work/surveillance activities; and emergent work on service water heat exchanger SWHE-1B.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

The inspectors reviewed the following five NCRs to verify 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.

- NCR 277645, service water heat exchanger SWHE-1A raw water leak
- NCR 274793, extent of condition of emergency diesel generator EGDG-1C governor failure
- NCR 265570, RWV-24 excessive vibration
- NCR 277367, DCT-1A, DCT-1B vacuum breakers not per design
- NCR 282778, service water suction header corrosion

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

Enclosure

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:

- SP- 354C, Functional Test of the Alternate AC Diesel Generator EGDG-1C; and MP-117, Emergency Diesel Generator Governor and Servo-Booster Maintenance, after performing maintenance per work order (WO) 1145254
- MP-499, Emergency Diesel Generator Engine Inspection / Maintenance, and SP-354B, Monthly Functional Test of the Emergency Diesel Generator EGDG-1B, after performing the 2-year engine maintenance per WO 798616
- SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A, after completing the 2-year engine maintenance per WO 854963
- OP-504, Integrated Control System, after performing maintenance and calibration of ICS reactor control module (IC-469-RC) per WO 1371186
- SP-348A, Auxiliary Feedwater Pump (FWP-7) Testing, after performing planned maintenance on FWP-7 per WO 987829
- SP-340F, Make-up pump MUP-1C and Valve Surveillance, after performing planned maintenance on the make-up pump MUP-1C per WO 746646

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, no equipment preconditioning activities occurred, and 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 that the equipment could perform its intended safety function following maintenance or surveillance testing. The following six activities were observed/reviewed:

In-Service Test:

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

Surveillance Tests:

- SP-416A, Emergency Feedwater Automatic Actuation
- SP-907A, Monthly Functional Test of 4160V ES "B" Undervoltage and Degraded Grid Relays
- SP-344A, RWP-2A, SWP-1A and Valve Surveillance (partial performance for increase frequency surveillance of RWP-2A)

Enclosure

- SP-130, Engineered Safeguards Monthly Functional Test
- SP-110D, "D" Channel Reactor Protection System Functional Testing

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

Emergency Preparedness Drill

a. Inspection Scope

The inspectors observed and reviewed two emergency response activities 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 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.

- April 23, licensee emergency response facility drill involving a fire, loss of containment and a loss of reactor coolant scenario and other complicating events
- May 27, licensed operator simulator evaluated session SES-29a, loss of reactor coolant and 4160V ES bus fault

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 two performance indicators listed below. Performance indicator data submitted from April 2007 through March 2008 was compared for consistency to data obtained through the review of chemistry department records, monthly operating reports, and control room records. Performance indicator definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 5, were used to check the reporting for each data element.

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 Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a screening of items entered daily into the licensee's corrective action program (CAP). This review was accomplished by reviewing daily printed summaries of condition reports and/or by reviewing the licensee's electronic condition report database.

b. Findings

No findings of significance were identified.

.2 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 January 2008 through June 2008. The review also included issues documented in the licensee's Equipment Performance Priority List dated June 23<sup>rd</sup> 2008; various nuclear assessment section reports and maintenance rule reports. Corrective actions associated with a sample of the issues identified in the licensee's corrective action program were reviewed for adequacy.

b. Assessment and Observations

No findings of significance were identified. The inspectors noted one negative trend in the last six months related to the increased number of inspector identified items found during plant tours. Most of these items were minor in nature; however a good portion of

Enclosure



them should have been identified by licensee personnel. The licensee independently identified this trend as documented in NCR 272132. This trend was previously documented in NRC Problem Identification and Resolution Inspection Report 05000302/2008007.

#### 4OA3 Event Follow-up

##### .1 Operator Performance During Non-routine Event

###### a. Inspection Scope

For the one non-routine plant evolution 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 plant procedures.

- May 20, reactor power reduction to 50 percent RTP in accordance with OP-204, Power Operation

###### b. Findings

No findings of significance were identified.

##### .2 Licensee Event Report (LER)

(Closed) LER 05000302/2008-002-00, Emergency Feedwater Actuation on Low Steam Generator Level Due to Feedwater Pump Speed Tuning

The LER documented that an emergency feedwater initiation and control (EFIC) actuation occurred due to an improperly tuned feedwater pump FWP-2A control system. The inspectors reviewed the LER and NCR 268400 documenting the event. The inspectors checked the accuracy and completeness of the LER and the appropriateness of the licensee's corrective actions. No findings of significance or violations of NRC requirements were identified.

#### 4OA5 Other Activities

##### .1 Quarterly Resident Inspector Observations of Security Personnel and Activities

###### a. Inspection Scope

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

- Multiple tours of operations within the Central and Secondary Security Alarm Stations

Enclosure

- Tours of selected security towers/security officer response posts
- Direct observation of personnel entry screening operations within the plant's main access building
- Security force shift turnover activities, and
- Owner control area vehicle search activities

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 inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Exit

Exit Meeting Summary

On July 07, 2008, the resident inspectors presented the inspection results to Mr. M. Annacone, Plant General Manager, and other members of licensee management. 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 personnel:**

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  
J. Holt, Manager, Operations  
D. Westcott, Supervisor, Licensing  
M. Rigsby, Superintendent, Radiation Protection  
J. Stephenson, Supervisor, Emergency Preparedness  
I. Wilson, Manager Outage and Scheduling  
D. Young, Vice President, Crystal River Nuclear Plant

#### **NRC personnel:**

M. Sykes, Chief, Branch 3, Division of Reactor Projects

### **LIST OF ITEMS OPENED, CLOSED AND DISCUSSED**

#### **Closed**

0500302/2008002-00 LER Emergency Feedwater Actuation on Low Steam Generator Level  
Due to Feedwater Pump Speed Tuning (Section 4OA3.2)

### **LIST OF DOCUMENTS REVIEWED**

#### **Section 1R01: Adverse Weather Protection**

##### **Procedures**

AP-730, Grid Instability  
AI-500, Conduct of Operations Department Organization and Administration  
AI-513, Seasonal Weather Preparations  
NGGM-IA-0003, Transmission Interface Agreement for Operation, Maintenance, and Engineering Activities at Nuclear Plants  
CP-253, Power Operation Risk Assessment and Management  
SP-321, Power Distribution Breaker Alignment and Power Availability Verification  
SP-354A, Monthly Functional Test of the Emergency Diesel Generator EGDG-1A  
SP-354B, Monthly Functional Test of the Emergency Diesel Generator EGDG-1B  
AP-1040, Aux Building Flooding  
AP-1050, Turbine Building Flooding

Work Orders

WO 1041054, Inspect Watertight doors, gates, wall seals and other flood barriers

**Section 1R05: Fire Protection**Procedures

AI-2205A, Pre Fire Plan – Control Complex  
 AI-2205C, Pre Fire Plan – Auxiliary Building  
 AI-2205D, Intermediate Building  
 AI- 2205F, Miscellaneous buildings and Components  
 SP-804, Surveillance of Plant Fire Brigade Equipment

**Section 1R06: Flood Protection Measures**Procedures

AP- 1040 Aux Building Flooding

**Section 1R07 Heat Sink Performance**Procedures

MP-300, DC, SC and SW Heat Exchanger Channel Head Removal/Installation  
 PM-175, General Maintenance Work.  
 OP-103B, Plant Operating Curves

Work Orders

WO 823277, Replace channel head SWHE-1A  
 WO 976735, Replace 20 tubes SWHE-1A  
 WO 1312786, DCHE-1B pick/shoot/clean

**Section 1R12: Maintenance Effectiveness**Nuclear Condition Reports

216465, RW system issues warrant improved focus  
 271622, RWP-2A low discharge pressure  
 271622, RWP-2A vibrations in the alert range  
 274433, RWP-2B, outboard motor bearing vibration in alert range  
 197403, RWV-57 failed as-found setpoint