



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

January 29, 2008

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
05000302/2007005

Dear Mr. Young:

On December 31, 2007, 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 January 7, 2008, 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, the inspectors identified one finding of very low safety significance (Green). The finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance of the issue, and because it was entered into your corrective action program, the NRC is treating the issue as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, NRC Region II; The Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Crystal River Unit 3 site.

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Sincerely,

/RA By M. Sykes For/

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

Docket No.: 50-302
License No.: DPR-72
Enclosure: Inspection Report 05000302/2007005
w/Attachment: Supplemental Information
cc w/encl: (See page 4)

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).

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cc w/encls:

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

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

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

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

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

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

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

Jim Mallay
Framatome Technologies
Electronic Mail Distribution

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

David M. Varner
Manager, Support Services - Nuclear
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 Dept.
Progress Energy Service Company, LLC
Electronic Mail Distribution

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

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Letter to Dale E. Young from Steven J. Vias dated January 29, 2008,

SUBJECT: CRYSTAL RIVER UNIT 3 - EXERCISE OF DISCRETION
NRC INTEGRATED INSPECTION REPORT 05000302/2007005

Distribution w/encl:

S. Bailey, NRR

C. Evans (Part 72 Only)

L. Slack, RII EICS

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OE Mail (email address if applicable)

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NRC Resident Inspector

U.S. Nuclear Regulatory Commission

6745 N Tallahassee Road

Crystal River, FL 34428

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-302

License No.: DPR-72

Report No: 05000302/2007005

Licensee: Progress Energy Florida (Florida Power Corporation)

Facility Crystal River Unit 3

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

Dates: October 1, 2007 - December 31, 2007

Inspectors: T. Morrissey, Senior Resident Inspector
R. Reyes, Resident Inspector
R. Aiello, Senior Operations Engineer (Section 1R11)
R. Carrion, Senior Reactor Inspector (Section 1R08)
J. Fuller, Reactor Inspector (Section 1R08)
C. Peabody, Reactor Inspector (Section 4OA5)
A. Nielsen, Health Physicist (Sections 2OS2 and 4OA1)
G. Kuzo, Senior Health Physicist (Sections 2PS1 and 2PS2)
R. Hamilton, Senior Health Physicist (Sections 2OS1 and 4OA1)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000302/2007-005; 10/01/2007 - 12/31/2007; Crystal River Unit 3; Refueling and Other Outage Activities.

The report covered a three-month period of inspection by the resident inspectors. One Green non-cited violation was identified during this inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation (NCV) of Improved Technical Specification 5.6.1.1.a, for failure to adequately implement procedures required by Regulatory Guide 1.33, Appendix A, Section 3, Procedures for Startup, Operation, and Shutdown of Safety-Related PWR Systems. Specifically, the licensee failed to verify no latent debris was present in containment that could impact the emergency core cooling system (ECCS) sump. Corrective actions completed include: removal of the debris identified by the inspectors and performing additional inspection and cleaning of containment.

The finding is more than minor because it could be reasonably viewed as a precursor to a significant event involving debris accumulation on the containment sump screens which could cause impairment to ECCS recirculation flow during a design basis loss of coolant accident. The inspectors referenced Inspection Manual Chapter 0609, Significance Determination Process (SDP), Phase 1 screening and determined the finding to be of very low safety significance. Although the debris impacted the mitigating system cornerstone, it was unlikely to have resulted in an actual loss of safety function and was not potentially risk significant due to possible external events. A contributing cause of this finding is related to the crosscutting area of Human Performance, specifically Work Practices in that the licensee did not adequately comply with a containment inspection procedure. (IMC 305, H.4(b))

B. Licensee-identified Violations

None

REPORT DETAILS

Summary of Plant Status:

The unit operated at essentially 100 percent rated thermal power (RTP) until October 29 when power was reduced to approximately 61 percent RTP after condensate pump CDP-1B was secured due to a problem with its control circuit. The unit was shut down for a planned refueling outage on November 3rd. The unit was restarted on December 6th and resumed 100 percent RTP on December 9th. The unit operated at essentially 100 percent RTP for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

Seasonal Susceptibility: Cold Weather Preparation

a. Inspection Scope

The inspectors evaluated the licensee's readiness for mitigating cold weather to assure that vital systems and components were protected from freezing in accordance with the licensee's Administrative Instruction AI-513, Seasonal Weather Preparations, Section 4.1, Cold Weather Preparations. The inspectors walked down portions of the systems/areas listed below to check for any unidentified susceptibilities. Operability of heat trace circuits was verified. Nuclear condition reports (NCRs) were reviewed to check that the licensee was identifying and correcting cold weather protection issues.

- Emergency feedwater pump (EFP)-3 building
- Emergency diesel generator (EGDG) rooms
- Raw water and service water systems room

There were no sustained periods of freezing weather during the inspection period.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

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

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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:

- Raw water pump (RWP)-3A, using operating procedure (OP)-408, Nuclear Services Cooling System; and A train decay heat removal (DHR) systems, using OP-404, Decay Heat Removal System, while RWP-3B was out of service for testing,
- EGDG-1A and its associated 4160V engineered safeguards (ES) bus, using OP-707, Operation of the Engineered Safeguards Diesel Generators, and surveillance procedure (SP)-321, Power Distribution Breaker Alignment and Power Availability Verification, while the EGDG-1B system was out of service for maintenance, and
- A and B trains spent fuel pool cooling, service water pump (SWP)-1B and RWP-2B systems utilizing OP-406, Spent Fuel Cooling System and OP-408, Nuclear Services Cooling System, with a full core off load in the spent fuel pool.

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 and ongoing work activities. 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 walked down the following nine areas important to reactor safety:

- Control complex chiller and ventilation room
- Emergency feedwater initiation and control (EFIC) rooms
- EFP-3 building
- Intermediate building, main steam isolation and atmosphere dump valve areas
- B train decay heat removal (DHR) and building spray (BS) vault
- Emergency diesel generator EGDG-1C building

- Auxiliary building fuel handling floor
- Reactor building - top of pressurizer area
- Main control room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

.1 Internal Flood Protection

a. Inspection Scope

The inspectors reviewed the Crystal River Unit 3, Final Safety Analysis Report (FSAR), Chapter 2.4.2.4, Facilities Required for Flood Protection, and the Crystal River Unit 3 Design Basis Documents that depicted protection for areas containing safety-related equipment to identify areas that may be affected by internal flooding. A walkdown of emergency feed pump EFP-1 and EFP-2 area 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.

1R08 Inservice Inspection (ISI) Activities

.1 Inservice Inspection Activities Other than Steam Generator Tube Inspections, PWR Vessel Upper Head Penetration Inspections, and Boric Acid Corrosion Control

a. Inspection Scope

From November 13 - November 20, 2007, the inspectors reviewed the implementation of the licensee's ISI program for monitoring degradation of the reactor coolant system (RCS) boundary and other risk significant piping system boundaries for Crystal River Unit 3. The inspectors selected a sample of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI required examinations for review.

The inspectors conducted an on-site review of nondestructive examination (NDE) activities to evaluate compliance with Technical Specifications and the applicable editions of ASME Section V and XI (1989 Edition/No Addenda) and to verify that indications and defects (if present) were appropriately evaluated and dispositioned in accordance with the requirements of ASME Section XI acceptance standards.

Specifically, the inspectors directly observed the NDE activities described below and reviewed the corresponding NDE procedures, NDE reports, equipment and consumables certification records, and personnel qualification records.

- Computer Radiographic Examination (RT) of weld FW-00-029 R1 (Repair 1), 18" Main Feed Water, ASME Class 2
- Computer RT of weld FW-00-028 R1 (Repair 1), 18" Main Feed Water, ASME Class 2
- Ultrasonic Examination (UT) of weld B1.1.1, Nozzle Belt to Upper Shell Weld, Reactor Pressure Vessel Internal Weld, ASME Class 1
- Magnetic Particle Examination (MT) of weld FW-00-028 R1 (Repair 1), 18" Main Feed Water, ASME Class 2
- Eddy Current Testing (ECT) of 'A' and 'B' Steam Generator tubes, ASME Class 1 (sample of data acquisition and resolution analysis)

Specifically, the inspectors reviewed the following examination records and the associated NDE procedures, equipment and consumables certification records, and personnel qualification records.

- Computer RT of welds FW-00-028, FW-00-028 R2 (Repair 2), FW-00-029, and FW-00-029 R2 (repair 2), 18" Main Feed Water, ASME Class 2
- Visual Examination Leak Test, VT-07-164, RCT-1 Vessel Manway Flange, ASME Class 1 Bolted Connection
- Visual Examination Leak Test, VT-07-178, RCRE-1 Vessel Head Flange, ASME Class 1 Bolted Connection
- Visual Examination Leak Test, VT-07-161, RCV-10 Valve Flange Connection Bolting, ASME Class 1 Bolted Connection
- Visual Examination Leak Test, VT-04-014, EFP-3 Buried Piping Pressure Test, ASME Class 3
- Visual Examination Leak Test, VT-07-026, EFP-3 Buried Piping Pressure Test, ASME Class 3
- Visual Examination for Boric Acid Detection, VT-07-162, Reactor Pressure Vessel Head and 69 Control Rod Drive Mechanisms
- UT-07-040, Makeup and Purification System Pipe to Elbow Weld, ASME Class 2

The inspectors reviewed the following NDE reports with recordable indications to ensure that they were properly dispositioned in accordance with the applicable ASME Section XI acceptance criteria.

- Report Number VT-05-170, VT-3 Examination of Liner Plate Penetration 426
- Report Number VT-05-209, VT-3 Examination of Liner Plate Penetration 426
- Report Number VT-07-002, VT-3 Examination of Support DHH-558
- Report Number VT-07-013, VT-3 Examination of Support DHR-38

The inspectors observed and reviewed in-process welding activities performed during this outage. Specifically, the inspectors observed welding on Alloy 600 pressurizer weld overlays and Alloy 600 pressurizer nozzle repairs. The inspectors reviewed welding records and observed in-process post-weld heat treatment for FW-00-028 and FW-00-029, main feedwater piping welds. The inspectors reviewed welding procedures, procedure qualification records, welder qualification records, and NDE reports for the welds.

b. Findings

No findings of significance were identified.

.2 Boric Acid Corrosion Control Inspection Activities

a. Inspection Scope

The inspectors reviewed the licensee's Boric Acid Corrosion Control Program (BACCP) to ensure compliance with commitments made in response to NRC Generic Letter 88-05, Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary, and Bulletin 2002-01, Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity.

The inspectors conducted an on-site record review, and an independent walk-down of the auxiliary building and the containment building, which is not normally accessible during at-power operations, to evaluate licensee compliance with their program procedures and applicable industry guidance. In particular, the inspectors verified that the licensee's visual examinations focused on locations where boric acid leaks could cause degradation of safety-significant components and that degraded or non-conforming conditions were properly identified in the licensee's corrective action program.

The inspectors reviewed the results of the Refueling Outage 15 ASME Class 1 Bolted Connection Inspection as required by IWA-5242 of ASME Section XI, 1989 Edition with no Addenda, and the licensee's boric acid corrosion control program. The inspectors also reviewed the results of the last ASME Section XI, Class 1 System Leakage Test. The inspectors reviewed the results of the licensee's Mode 3 walkdowns completed March 18, 2006, August 19, 2006, and February 22, 2007. These walkdowns were prescribed by the BACCP, but were not required by ASME Section XI.

The inspectors reviewed a sample of engineering evaluations completed for boric acid found on reactor coolant system piping and/or other ASME code class components to verify that the minimum design code required section thickness had been maintained for affected components. The inspectors also reviewed licensee corrective action documents initiated for evidence of boric acid leakage to confirm that those documents were consistent with the requirements of Section XI of the ASME Code, 10 CFR 50 Appendix B Criterion XVI, and licensee BACCP procedures.

b. Findings

No findings of significance were identified.

.3 Steam Generator (SG) Tube Inspection Activities

a. Inspection Scope

From November 13 - 20, 2007, the inspectors reviewed the Unit 3 SG tube ECT examination activities to ensure compliance with Technical Specifications (TS), applicable industry operating experience and technical guidance documents, and ASME Code Section XI requirements.

The inspectors reviewed licensee SG inspection activities to ensure that ECT inspections were conducted in accordance with the licensee's SG Program and applicable industry standards. The inspectors reviewed the SG examination scope, ECT acquisition procedures, site-specific Examination Technique Specification Sheets, the most recent SG degradation assessment, and the last condition monitoring and operational assessment. The inspectors reviewed documentation to ensure that the ECT probes and equipment configurations used were qualified to detect the expected types of SG tube degradation, and a sampling of tube data was reviewed with the independent qualified data analyst. The inspectors also verified that the appropriate inspection scope expansion criteria was applied based on inspection results. The licensee identified a number of tubes that were required to be removed from service, and the inspectors reviewed the licensee's tube plugging criteria to verify that it had been appropriately applied. The inspectors ensured that all tubes with relevant indications were appropriately screened for in-situ pressure testing. The licensee identified that three tubes meet the screening criteria for in-situ pressure testing. The NRC inspectors reviewed the in-situ pressure testing plans and the resulting pressure versus time traces. Additionally, the inspectors observed in-situ pressure testing activities for one tube.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

The inspectors performed a review of ISI related problems, including welding, BACC and SG ISI, that were identified by the licensee and entered into the corrective action program. The inspectors reviewed the corrective action documents to confirm that the licensee had appropriately described the scope of the problem and had initiated adequate corrective actions. The inspectors performed this review to ensure compliance with 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action requirements. The corrective action documents reviewed by the inspectors are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalificationa. Inspection Scope

Annual review of Licensee Requalification Examination Results. On February 16, 2007, the licensee completed the requalification biennial written exam and annual operating tests, required to be given to all licensed operators by 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the individual written examination and operating tests and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609 Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectivenessa. Inspection Scope

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

- NCR 250154 Reactor coolant system power operated relief valve momentarily opened during control card replacement
- NCR 211171, Diesel breaker would not close during testing

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 four work week assessments.

- Work Week 07W39, risk assessment for operation with A train control complex chiller (CHHE-1A) out of service for maintenance, EGDG-1A out of service for testing and emergent work on A train control room emergency ventilation and A channel of the reactor protection system,
- Work Week 07W40, risk assessment for operation with pressurizer power operated relieve valve (PORV) block valve (RCV-11) shut,
- Work Week 07W41, risk assessment for operation with the pressurizer PORV block valve (RCV-11) shut and EGDG-1B and control complex chiller (CHHE-1B) individually out of service for maintenance, and
- Work Week 07W49, risk assessment for operation with EGDG-1A and EGDG-1B individually out of service for surveillance testing and emergent work on reactor protective system A channel.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following five NCRs to verify that the operability of systems important to safety was properly established, that the affected components or systems remained capable of performing their intended safety function, and that no unrecognized increase in plant or public risk occurred. The inspectors determined if operability of systems or components important to safety was consistent with technical specifications, the FSAR, 10 CFR Part 50 requirements, and when applicable, NRC Inspection Manual, Part 9900, Technical Guidance, Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety. The inspectors reviewed licensee NCRs, work schedules, and engineering documents to check if operability issues were being identified at an appropriate threshold and

documented in the corrective action program, consistent with 10 CFR 50, Appendix B requirements; and licensee procedure NGGC-CAP-200, corrective action program.

- NCR 249153, Spurious Trip Of 'A' Reactor Protection Channel
- NCR 250154, Pressurizer PORV momentarily opened
- NCR 251139, Non-Conservative Assumption in Calculation I94-0011 For Reactor Building Service Water Flow Loop
- NCR 255010, Invalid KW and PF Data Recorded During Max Load Test
- NCR 257965, Total Reactivity Worth of Rod Groups 6 and 7 did not meet acceptance criteria

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 five post-maintenance tests reviewed are listed below:

- SP-186, AHFL-4A/4B (Control Room) In-Place Filter Testing, and performance testing procedure PT-190, In-Place Filter Testing Procedures, after replacing A train control room charcoal filters per work order (WO) 1130284,
- OP-409, Plant Ventilation System and preventative maintenance procedure PM-136A, Control Complex Chiller CHHE-1A, after performing maintenance on CHHE-1A per WOs 1010776 and 986650,
- SP-354A, Monthly Functional Test of the Emergency Diesel Generator, and Post Maintenance Test WO 01155129, after performing corrective maintenance due to an engine lube oil leak on EGDG-1A,
- SP-630, MUP/HPI Check Valves Full Flow Test (MUP-1A portion only), after performing maintenance on make-up pump MUP-1A per WO 1154513, and
- SP-354B, Monthly Functional Test of the Emergency Diesel Generator EGDG-1B (fast start) after maintenance was performed on EGDG-1B per WOs 803990, 1127159 and 804648.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage ActivitiesRefueling Outage (RFO15)a. Inspection ScopeOutage Planning, Shutdown Monitoring and Licensee Control of Outage Activities

The inspectors reviewed the licensee's RFO15 Outage Risk Assessment report, to confirm the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing the outage plan. During the refueling outage, the inspectors observed and monitored licensee controls over the outage activities listed below. Documents reviewed are listed in the Attachment.

- Outage related risk assessment monitoring
- Controls associated with shutdown cooling, reactivity management, electrical power alignments, containment closure and integrity, and spent fuel pool cooling
- Implementation of equipment clearance activities
- Reduced inventory activities
- Refueling activities
- Reactor mode changes
- Reactor heat-up and pressurization
- Containment cleanup and closeout inspection
- Reactor initial startup and reactor physics testing
- Reactor power ascension and related testing

Review of Operating Experience Smart Sample (OPESS) FY2007-03, Crane and Heavy Lift Inspection, Supplemental Guidance for IP-71111.20

The inspectors performed an operating experience smart sample in the area of handling of heavy loads. The inspectors reviewed selected heavy lifting evolutions in the reactor building. Specifically, the inspectors observed removal of the reactor head package to verify the maximum lift height and load path were in accordance with the load drop analysis and reactor vessel head lift procedures. The inspectors verified proper polar crane preventative maintenance was performed prior to the head lift and the crane operators were properly trained and briefed prior to the lift.

b. Findings

Debris found in Containment

Introduction: A Green, non-cited violation (NCV) of Improved Technical Specification 5.6.1, Procedures, was identified by the NRC for failure to follow procedural guidance associated with removal of debris in containment.

Description: On December 2, 2007, with the exception of the reactor building incore pit area where limited scope work was continuing, the licensee completed containment inspections in accordance with SP-324, Containment Inspection. The procedure is utilized, in part, to ensure no latent debris is present that can be carried to and possibly block the emergency core cooling system (ECCS) containment sump. The inspection is performed prior to plant heat-up to Mode 4 when the containment sump is required to be operable.

Later on December 2, the inspectors performed a detailed inspection of containment. In general, the inspectors found that the containment was clean and free of debris of substantial size. However, the inspectors identified outage related materials that had not been removed by the licensee. On the 160' elevation, the inspectors found two pairs of work gloves, a bag of tie wraps and two approximately 12" X 18" fibrous scaffold boards under a scaffold storage box. Around reactor coolant pump RCP-1C seal area, the inspectors found a skull cap, ½ of a scrubbing pad, pieces of wire and rubber booties. The debris identified by the inspectors was removed by the licensee prior to Mode 4 entry. As a result of the inspectors observations, the licensee performed additional containment cleanup/inspections to ensure latent debris was removed.

Analysis: The inspectors determined that the failure to ensure latent debris was removed from containment is a performance deficiency. The finding is more than minor because it could be reasonably viewed as a precursor to a significant event involving debris accumulation on the containment sump screens which could cause impairment to ECCS recirculation flow during a design basis loss of coolant accident. The inspectors referenced Inspection Manual Chapter 0609, Significance Determination Process (SDP), Phase 1 screening and determined the finding to be of very low safety significance. Although the debris impacted the mitigating system cornerstone, it would not have resulted in an actual loss of safety function and was not potentially risk significant due to possible external events. A contributing cause of this finding is related to the crosscutting area of Human Performance, specifically Work Practices in that the licensee did not adequately comply with a containment inspection procedure. (IMC 305, H.4(b))

Enforcement: Improved Technical Specification 5.6.1.1.a requires that written procedures be implemented for those systems referenced in Regulatory Guide 1.33, Revision 2, Appendix A, which would include operation of the emergency core cooling system. SP-324, Containment inspection, Revision 56, enclosures 5, 8 and 9 require, in part, that no latent debris exist in containment that could impact performances of the ECCS. Contrary to this, on December 2, 2007, the licensee documented satisfactory completion of the SP-324 enclosures, even though the acceptance criteria regarding debris was not met. Because this finding is of very low safety significance and because it

was entered into the licensee's corrective action program (NCR 257426), this violation is being treated as a Non-cited Violation consistent with Section VI.A of the NRC Enforcement Policy, and is identified as NCV 05000302/2007005-001, Failure to Follow Procedural Guidance Associated with Removal of Containment Debris. Corrective actions completed include: removal of the debris identified by the inspectors and performing additional inspection and cleaning of containment.

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 seven activities were observed/reviewed:

In-Service Test:

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

Surveillance Tests:

- SP-354A, Monthly Functional Test Of The Emergency Diesel Generator EGDG-1A
- SP-349C, EFP-3 and Valve Surveillance (Cold Shutdown Valve Testing)
- SP-102, Control Rod Drop Time Tests
- SP-417, Refueling Interval Integrated Plant Response to an Engineered Safeguards Actuation

Containment Isolation Valve Test:

- SP-179C, Containment Leakage Test - Type "C", make-up valve MUV-253
- SP-179C, Containment Leakage Test - Type "C", leak rate valve LRV-50

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Controls to Radiologically Significant Areas

a. Inspection Scope

Access Controls The inspectors evaluated licensee guidance and its implementation for controlling worker access to radiologically significant areas and monitoring jobs in-progress. The inspectors directly observed implementation of administrative and physical radiological controls; evaluated radiation worker (radworker) and health physics technician (HPT) knowledge of and proficiency in implementing radiation protection requirements; and assessed worker exposures to radiation and radioactive material.

During facility tours, the inspectors directly observed postings and physical controls for radiation areas and high radiation areas (HRAs) established within the radiologically controlled area (RCA) of the auxiliary building and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates or directly observed conduct of licensee radiation surveys for selected RCA areas. Results were compared to current licensee surveys and assessed against established postings and Radiation Work Permit (RWP) controls. Licensee key control and access barrier effectiveness were observed and evaluated for selected Locked High Radiation Area (LHRA) locations. Changes to procedural guidance for LHRA and Very High Radiation Area controls were discussed in detail with health physics (HP) supervisors. Physical controls for storage of irradiated material within the spent fuel pool were observed. In addition, licensee controls for areas where dose rates could change significantly as a result of refueling operations or radwaste activities were reviewed and discussed.

The inspectors attended the pre-job briefings and remotely observed activities leading to the removal of the core barrel as part of the 10 year in-service inspection. The observations afforded the inspectors opportunity to assess various aspects of the radiation protection program including communications between HP and various workgroups, internal communications, RWP controls, contamination control, surveys, radiation worker adherence to RWP and other HP guidance, HPT proficiency in providing job coverage and supervisory willingness to intervene when conditions deviated from expected.

The inspectors observed various other work activities including work on pressurizer surge line as part of the alloy 600 inspection and weld overlay. The inspectors continued to evaluate various aspects of the HP program to include comparisons of the electronic dosimeter (ED) alarms setpoints with area radiation survey results and ED alarm response actions were discussed with radiation workers and HP supervisors.

The inspectors evaluated the effectiveness of radiation exposure controls, including air sampling, barrier integrity, engineering controls, and postings through a review of both internal and external exposure results. Licensee evaluations of skin dose resulting from discrete radioactive particle or dispersed skin contamination events were reviewed and

assessed. For HRA tasks involving significant dose rate gradients, the inspectors evaluated procedural guidance for the use and placement of whole body and extremity dosimetry to monitor worker exposure. The inspectors also reviewed and discussed internal dose assessments and whole body count results for one individual.

Radiation protection activities were evaluated against the requirements of Final Safety Analysis Report (FSAR) Chapter 11; Technical Specifications (TS) Section 5.8; 10 Code of Federal Regulations (CFR) Part 20; and approved licensee procedures. Records reviewed are listed in Section 2OS1 of the report Attachment.

Problem Identification and Resolution Licensee Corrective Action Program (CAP) documents associated with access control to radiologically significant areas were reviewed and assessed. This included the review of a licensee self-assessment and selected Nuclear Condition Reports (NCRs) related to radworker and HPT performance. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with CAP-NGGC-0200, Corrective Action Program, Rev. 19. Licensee CAP documents reviewed are listed in Section 2OS1 of the report Attachment.

The inspectors completed 21 of the specified line-item samples detailed in Inspection Procedure (IP) 71121.01.

b. Findings

No findings of significance were identified.

2OS2 As Low As Reasonably Achievable (ALARA) Planning and Controls

a. Inspection Scope

ALARA The inspectors reviewed ALARA program guidance and its implementation for refueling outage 15 (R15) job tasks. The inspectors evaluated the accuracy of ALARA work planning and dose budgeting, observed implementation of ALARA initiatives and radiation controls for selected jobs in-progress, assessed the effectiveness of source-term reduction efforts, and reviewed historical dose information.

ALARA planning documents and procedural guidance were reviewed and projected dose estimates were compared to actual dose expenditures for the following high dose jobs: Alloy 600 weld overlay work, steam generator (S/G) eddy current testing, and scaffolding emplacement and removal. Differences between budgeted dose and actual exposure received were discussed with cognizant ALARA staff. Changes to dose budgets relative to changes in radiation source term and/or job scope were also discussed. The inspectors attended pre-job briefings and evaluated the communication of ALARA goals, RWP requirements, and industry lessons-learned to job crew personnel. The inspectors also attended an ALARA review committee meeting and observed the interface between plant management and ALARA planning staff.

The inspectors made direct field or closed-circuit-video observations of outage job tasks involving S/G eddy current testing and Alloy 600 work. For the selected tasks, the inspectors evaluated radworker and HPT job performance; individual and collective dose expenditure versus percentage of job completion; surveys of the work areas, appropriateness of RWP requirements; and adequacy of implemented engineering controls. For S/G eddy current testing, Alloy 600 remediation, and reactor building scaffold work, the inspectors interviewed radworkers and job sponsors regarding understanding of dose reduction initiatives and their current and expected accumulated doses at completion of the job tasks.

Implementation and effectiveness of selected program initiatives with respect to source-term reduction were evaluated. Chemistry program ALARA initiatives and their effect on reactor building dose rate trends were reviewed. The effectiveness of temporary shielding installed for the current outage was assessed through review of shielding request packages and pre-shielding versus post-shielding dose rate data.

Plant exposure history for calendar year (CY) 2004 through CY 2006 and data reported to the NRC pursuant to 10 CFR 20.2206 were reviewed, as were established goals for reducing collective exposure during the current R15 outage. The inspectors reviewed procedural guidance for dosimetry issuance and exposure tracking. The inspectors also examined dose records of declared pregnant workers to evaluate assignment of gestation dose.

ALARA program activities and their implementation were reviewed against 10 CFR Part 20, and approved licensee procedures. In addition, licensee performance was evaluated against guidance contained in Regulatory Guide (RG) 8.8, Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Reasonably Achievable and RG 8.13, Instruction Concerning Prenatal Radiation Exposure. Procedures and records reviewed within this inspection area are listed in Sections 2OS2 of the report Attachment.

Problem Identification and Resolution The inspectors reviewed selected NCRs in the area of exposure control. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with CAP-NGGC-0200, Corrective Action Program, Rev. 19. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results. Documents reviewed for problem identification and resolution are listed in Section 2PS2 of the report Attachment.

The inspectors completed 18 of the specified line-item samples detailed in IP 71121.02.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety (PS)

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systemsa. Inspection Scope

Current licensee programs for monitoring, tracking, and documenting the results of both routine and abnormal liquid releases to onsite and offsite surface and ground water environs were reviewed and discussed in detail. The inspectors discussed results of the recently completed site hydrology study which confirmed groundwater movement toward the west. Radionuclide analysis results for samples collected from eight shallow wells and one deep well surrounding the power block, and for four shallow wells surrounding a leaching pond which receives intermittent releases containing low concentrations of tritium from the turbine building and is located within the owner controlled area were discussed in detail. Low concentrations of tritium, less than or equal to 1000 picocuries per liter (pCi/l) were reported from wells located west of the power block and in wells adjacent to the onsite leaching pond. All values were significantly less than the Environmental Protection Agency drinking water limit of 20,000 pCi/l. No other nuclides have been detected in the samples collected. In addition, the inspectors reviewed and discussed the status of 10 CFR 50.75 (g) spill data. Licensee current capabilities and proposed surveillances to minimize and rapidly identify any abnormal leaks from onsite systems, structures, and components were reviewed and discussed. In addition, the inspectors reviewed and discussed current licensee guidance for reporting any potential releases to offsite groundwater environs.

The inspectors completed two of the specified radiation protection line-item samples detailed in IP 71122.01.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportationa. Inspection Scope

Waste Processing and Characterization During inspector walk-downs, accessible sections of the liquid radwaste processing system were assessed for material condition and conformance with system design diagrams. Inspected equipment included liquid waste demineralizer skids and abandoned radwaste processing equipment. In addition, the inspectors discussed recent processing system engineering changes, and radwaste program implementation with licensee staff.

The 2006 Radioactive Effluent Report and radionuclide characterizations from 2005 - 2007 for selected waste streams were reviewed and discussed with radwaste staff. For Primary Resin and Dry Active Waste (DAW) the inspectors evaluated analyses for hard-to-detect nuclides, reviewed the use of scaling factors, and examined comparison results between licensee waste stream characterizations and outside laboratory data.

The inspectors also reviewed the licensee's procedural guidance for monitoring changes in waste stream isotopic mixtures.

Radwaste processing activities and equipment configuration were reviewed for compliance with the licensee's Process Control Program (PCP) and FSAR, Chapter 11. Waste stream characterization analyses were reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 61, and guidance provided in the Branch Technical Position on Waste Classification and Waste Form. Reviewed documents are listed in Section 2PS2 of the report Attachment.

Transportation The inspectors directly observed preparation activities for a shipment of contaminated laundry. The inspectors noted package markings and placarding, performed independent dose rate measurements, and interviewed shipping technicians regarding Department of Transportation (DOT) regulations.

The inspectors directly observed and evaluated staff proficiency in preparation of radioactive material shipment number 07-075. In addition, shipping records for four previous radioactive material or radwaste shipments were reviewed for consistency with licensee procedures and compliance with NRC and DOT regulations. The inspectors reviewed emergency response information, DOT shipping package classification, radiation survey results, and evaluated whether receiving licensees were authorized to accept the packages. For selected shipment records, the licensee's handling of Type B shipping casks was compared to Certificate of Compliance (CoC) requirements. In addition, training records and training curricula for individuals currently qualified to prepare shipments of radioactive material were reviewed.

Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 71, 49 CFR Parts 172-178; as well as the guidance provided in NUREG-1608. Training activities were assessed against 49 CFR Part 172 Subpart H. Documents reviewed during the inspection are listed in Section 2PS2 of the report Attachment.

Problem Identification and Resolution Selected NCRs in the area of radwaste/shipping were reviewed in detail and discussed with licensee personnel. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure CAP-NGGC-0200, Corrective Action Program, Rev. 19. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results. Documents reviewed for problem identification and resolution are listed in Section 2PS2 of the report Attachment.

The inspectors completed six of the required samples specified in IP 71122.02.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

.1 Reactor Safety Performance Indicators

a. Inspection Scope

The inspectors checked the accuracy of the mitigating systems performance indicators listed below to verify the accuracy of the PI data reported. Performance indicator data submitted from October 2006 through September 2007 was compared for consistency to data obtained through the review of, monthly operating reports, nuclear condition reports, and control room records. The inspections were conducted in accordance with NRC Inspection Procedure 71151, Performance Indicator Verification. The applicable planning standard, Nuclear Energy Institute (NEI) 99-02, Revision 5, Regulatory Assessment Performance Indicator Guidelines, and the licensee's procedure P06-0002, NRC Mitigating System Performance Index (MSPI) Basis Document For The CR3 Nuclear Plant, were used to check the reporting for each data element. The inspectors discussed the PI data with licensee personnel associated with performance indicator data collection and evaluation.

- Emergency AC power
- Residual Heat Removal system
- Heat Removal System
- High Pressure Injection System
- Cooling Water System

b. Findings

No findings of significance were identified.

.2 Radiation Protection Performance Indicators

a. Inspection Scope

Occupational Radiation Safety Cornerstone The inspectors reviewed the Occupational Exposure Control Effectiveness PI results for the Occupational Radiation Safety Cornerstone from December 1 to November 24, 2007. For the assessment period, the inspectors reviewed ED alarm logs, monthly PI reports, and selected NCRs related to controls for exposure significant areas. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in sections 2OS1 and 4OA1 of the report Attachment.

Public Radiation Safety Cornerstone The inspectors reviewed the Radiological Control Effluent Release Occurrences PI results for the Public Radiation Safety Cornerstone from January through September, 2007. For the assessment period, the inspectors reviewed cumulative and projected doses to the public, out-of-service effluent radiation monitors and compensatory sampling data, and selected NCRs related to Radiological

Effluent Technical Specifications/Offsite Dose Calculation Manual issues. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in section 4OA1 of the report Attachment.

The inspectors completed two of the required samples specified in IP 71151.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

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

a. Inspection Scope

As required by inspection procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's 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 of significance were identified.

.2 Annual Sample Review

a. Inspection Scope

The inspectors selected NCRs 244022 for a detailed review. The NCR was initiated to address reoccurring increasing particulate levels in onsite diesel fuel tanks. The inspectors checked that the issue had been completely and accurately identified in the licensee's CAP, and that safety concerns were properly classified and prioritized for resolution, apparent cause determinations were sufficiently thorough, and appropriate corrective actions were implemented in a manner consistent with safety and compliance with plant technical specifications and 10 CFR 50. The inspectors also evaluated the NCR using the requirements of the licensee's CAP as delineated in corrective action procedure CAP-NGGC-200, Corrective Action Program.

b. Findings and Observations

NCR 244022 documented the need to investigate the cause of increasing particulate levels in both safety-related and non-safety-related diesel fuel tanks. The particulate level did not impact the operability of any safety related system. The inspectors determined that the short term corrective action of filtering the tanks was appropriate. The investigation, utilizing both outside resources and industry operating experience,

determined that the cause of the increasing particulate levels was due to the interaction between high and low sulfur diesel fuels when high sulfur fuel was added to the tanks over the last year. The inspectors determined that long-term corrective actions in place should resolve the issue.

.3 Annual Sample Review

a. Inspection Scope

The inspectors performed an in-depth review of eleven nuclear condition reports (NCR) that described issues associated with plant status control (PSC), including a priority one NCR that identified a significant adverse trend in PSC. The inspectors reviewed the licensee's self assessment report on this subject, the corrective actions that were implemented to address the overall programmatic PSC issues, and the investigative methods and time-lines the licensee will use in investigating and correcting new plant status issues. During the inspection period, the inspectors observed meetings held by the newly formed "Plant Status Control Review Board," that performed an independent review of completed NCR investigations and the respective corrective actions associated with plant status control issues. Additionally, the inspectors reviewed the newly formed "Plant Status Control Event Zero-Tolerance Policy" that was implemented during the inspection period.

b. Findings and Observations

No findings of significance were identified. The inspectors found that the licensee has been very aggressive in their investigations to understand and to correct the causes of plant status control (PSC) issues. Corrective actions include increasing awareness on plant status control on a plant wide level, i.e., PSC cultural change, provide better guidance on PSC issue investigations, and upper management involvement in reviewing completed investigations. For example, the licensee has developed a procedure that provides better guidance for interviewing personnel and documenting facts relating to PSC issues, and guidance on the timeliness to complete PSC issue investigations are now provided. With the creation of the PSC Review Board which consisted of members from upper management (PGM, Operations manager, Maintenance manager, Chemistry superintendent, and Human Performance team lead) and the Plant Status Control Zero-Tolerance Policy, upper management is directly involved in reviewing all PSC issue investigations and corrective actions. Training, PSC operating experience discussions at pre-job briefs, and more personnel accountability are other methods the licensee is using to heighten the awareness of the importance to ensure good plant status control.

.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 June 2007 through December 2007. The review also included issues documented in the Equipment Performance Priority List dated December, 2007; System Health Report January to June 2007 dated September 13, 2007; various nuclear assessment section reports and maintenance rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's 3rd Quarter 2007, Site CAP Rollup & Trend Analysis report. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy.

b. Assessment and Observations

No findings of significance were identified. The inspectors evaluated the licensee's trend methodology and observed that the licensee had performed a detailed review. The inspectors compared the licensee's reviews with the results of the inspector's daily screening and did not identify any discrepancies or potential trends in the data which the licensee had failed to identify.

40A3 Followup of Events and Notices of Enforcement Discretion

Operator performance during non-routine event

a. Inspection Scope

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

- October 10, Pressurizer power operated relief valve opened following card replacement,
- October 29, Rapid power decrease to 65 percent power in accordance with licensee abnormal procedure AP-510, Rapid Power Reduction, following a loss of the condensate pump CDP-1B,
- November 3, Reactor shutdown to Mode 3 in accordance with SP-209A, Plant Shutdown And Cooldown, and
- December 7, Plant startup activities in accordance with OP-203, Plant Startup.

b. Findings

No findings of significance were identified.

4OA5 Other Activities(Closed) Temporary Instruction (TI) 2515/166, Pressurized Water Reactor Containment Sump Blockage (NRC Generic Letter 2004-02)a. Inspection Scope

The inspectors reviewed Unit 3 implementation of the licensee's commitments documented in their September 1, 2005 response to Generic Letter 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors. These commitments included the permanent modification of the Containment Building ECCS sump strainer assembly, and installation of a flow distributor and debris interceptor. The inspectors reviewed the sump strainer assembly Engineering Change packages (EC), corresponding 10 CFR 50.59 evaluation, and ECCS sump inspection requirements in the Plant Operating Manual. The inspectors conducted a visual walkdown to verify the installed strainer assembly configuration was consistent with drawings and specifications provided in the ECs.

b. Findings and Observations

No findings of significance were identified.

The inspectors determined the following answers to the Reporting Requirements detailed in TI 2515/166-05 issued 5/16/07:

- 05.a Progress Energy implemented plant modifications and procedure changes at Crystal River committed to in their GL 2004-02 response for Unit 3. A list of commitments and their respective completion dates is listed in the attachment, Status of GL 2004-02 Commitments for Crystal River 3.
- 05.b Progress Energy updated the Crystal River 3 licensing bases to reflect the corrective actions taken in response to GL 2004-02.
- 05.c By NRC letter (TAC NO. MC4678) an extension has been approved to extend the completion of steam generator fibrous insulation removal to the end of the Fall 2009 refueling outage during which the steam generators will be replaced. An extension was also approved by the same letter for completion of the in-vessel downstream effects and ex-vessel downstream effects evaluations by February 29, 2008.

TI 2515/166 is closed for Crystal Unit 3, no additional modifications or procedural changes under GL 2004-02 are anticipated.

4OA6 Meetings

Exit Meeting Summary

On January 7, 2008, the resident inspectors presented the inspection results to Mr. D. Young, Site Vice President and other members of licensee management, who acknowledged the finding. 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

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. Herrin (Acting), Supervisor, Licensing
M. Rigsby, Superintendent, Radiation Protection
J. Stephenson, Supervisor, Emergency Preparedness
Ivan Wilson, Manager, Outage and Scheduling
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

NCV 05000302/2007005-001 NCV Failure to Follow Procedural Guidance Associated with Removal of Containment Debris (Section 1R20)

Closed

Temporary Instruction (TI) 2515/166, Pressurized Water Reactor Containment Sump Blockage (NRC Generic Letter 2004-02) (Section 4OA5)

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
SP-804, Surveillance of Plant Fire Brigade Equipment

HPP-502, Respiratory Equipment Inspection And Maintenance

Section 1R08: Inservice Inspection Activities

Procedures/Calculations/Engineering Documents

EGR-NGGC-0207, Boric Acid Corrosion Control, Revision 2
SP-204, Class 1 System, System Leakage Test for Inservice Inspection, Revision 21
SP-206, System Inservice or Functional Pressure Test of Class 2 and 3 Systems, Revision 12
51-904-2860-004, CR-3 Pressurizer Nozzle Weld Overlay – Technical Requirements
51-5028921-04, CR-3 Pressurizer Nozzle Modification – Technical Requirements
Welding Procedure Specification (WPS): WP1/8/43/F43OLTBSCa3, Revision 2
Supporting Procedure Qualification Records (PQRs): PQ5394-002, PQ7214-001, PQ7213-001,
PQ7200-003
55-WCP03-012, Welder/Welding Operator Performance Qualification Testing, Revision 12
Welding Procedure Specification: WPS 01 3 04, GTAW and SMAW Manual, Revision 1
Procedure Qualification Record: PQR 193A, Revision 2; PQR 193B, Revision 2; PQR 5,
Revision 1; PQR 1, Revision 2
NW-08, Postweld Heat Treatment, Revision 7
EGR-NGGC-0208, Steam Generator Integrity Program, Revision 2
NAP-08, Computer Radiographic Examination, Revision 0
NDEP-0425, Ultrasonic Examination of Austenitic Pipe Welds, Revision 6
NDEP-0301, Dry Magnetic Particle Examination, Revision 16
NDEP-A, Nuclear NDE Program and Personnel Process, Revision 12
NDEP-B, Nuclear NDE Procedures Process, Revision 3
NDEP-C, NDE Program Responsibilities, Revision 1
MNT-NGGC-0007, Foreign Material Exclusion Program, Revision 6

Problem Identification and Resolution (1R08)

AR 00226557, CONVAL, INC – 10CFR21 Notification – Globe Valves
AR 00175216, Defective Tube Plugs Found During Eddy Current 14R OTSG
AR 00253815, White Substance Found on RPV Head
AR 00254817, Review of Visual Inspection of Vessel Head Report
AR 225681, ISI Calibration Block Material Discrepancy
CR 2007-5818, Corrective Action Document for Evaluation of Indication during Welding of Hot
Leg Surge Nozzle Structural Weld Overlay (SWOL)

Reports / Work Packages / Calculations (1R08)

WO 00540368 01, Class 1 System Leakage Test, 10-24-2005
EC 59239R0, Reactor Vessel Head Susceptibility Profile, Effective Degradation Years
Calculation
EC 65626R1, Feedwater “B” Loop Weld #28 (Spool Piece FW-2-FX) and associated Work
Order Package 1002989-05
CAL No. NRR-07-016; Confirmatory Action Letter, Crystal River Unit 3, March 27, 2007
Letter from Progress Energy to the NRC, dated February 22, 2007
Letter from Progress Energy to the NRC, dated January 29, 2007

CR3 15R DA, Once-Through Steam Generator Degradation Assessment for Crystal River Unit 3, Refueling Outage 15, Revision 0
CR3 ECDAG, Eddy Current Data Analysis Guidelines for the Once-Through Steam Generator Inservice Inspection, Revision 4
CR3 ASME Section XI Inservice Inspection Program, Revision 6
Crystal River Unit 3 – 90-Day Inservice Inspection (ISI) Summary Report for Refueling Outage 13 and Refueling Outage 14
EC 0000067705 000, Section V, Article 2 – Reconciliation, Revision 0

Section 1R20: Refueling and Other Outage Activities

Procedures

AI-504, Guidelines For Cold Shutdown And Refueling
AI-1305, Administrative Inspection of Reactor Containment
OP-103B, Plant Operating Curves
OP-203, Plant Startup
OP-209A, Plant Shutdown And Cooldown
OP-210, Reactor Startup
CP-341, Containment Penetration Control
SP-179C, Containment Leakage Test - Type "C"
SP-324, Containment Inspection
WCP-102, Outage Risk Assessment
WCP-103, Station Readiness for Reduced Inventory, Mode 4/3 Entry and Mode 2/1 Entry
RFO-15, Outage Risk Assessment (AR 217682)
FP-409, Reactor Vessel Closure Head Removal
FP-410, Reactor Vessel Closure Head Installation
PM-143, Check/inspection and Maintenance of Whiting Cranes
PM-144, Check and Maintenance of Electrical Components of Cranes and Hoists

Calculations

F97-0014, CR-3 Spent Fuel Pool Temperature Rise from Fuel in Pool
F99-0004, CR-3, Time to Boil, Time to 200F, Time to Saturation, Time to Uncovery
F03-0005, CR-3, Decay Heat Study
Nureg - 0612 Nine-Month Report Control of Heavy Loads at Nuclear Plants, Crystal River Unit 3, Appendix F, Analysis of the Effect of Reactor Vessel Head Drop on the Reactor Vessel, October 1983

Nuclear Condition Reports

NCR 247148 Industry initiatives on heavy loads

Section 2OS1: Access Controls to Radiologically Significant Areas

Procedures, Manuals, and Guidance Documents

DOS-NGGC-0001, Dosimetry Records Management, Rev. 11
DOS-NGGC-0002, Dosimetry Issuance, Rev. 24

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DOS-NGGC-0005, Skin Dose from Contamination, Rev. 9
DOS-NGGC-0006, Personnel Exposure Investigations, Rev. 11
HPP-111, Radiation Control Field Operations, Rev. 8
HPP-112, Hard to Detect Radionuclides Analyses, Rev. 1
HPP-202A, Supplemental Instructions to HPS-NGGC-0003: Radiological Surveys and Inspections, Rev. 29
HPP-209, Radioactive Materials Storage Warehouses, Rev. 21
HPP-215, Health Physics Source Receipt and Control, Rev. 8
HPP-216, Diving Operations in Radiological Environments, Rev. 7
HPP-218, Reportable Events and Reports, Rev. 5
HPP-219, RP Failed Fuel Action Plan, Rev. 6
HPP-221, High Radiation Area, Locked High Radiation Area, and Very High Radiation Area Controls, Rev. 9
HPP-222, RP Planning, Pre-Job Briefings And Post-Job Reviews, Rev. 5
HPP-332, RP Program Annual Review, Rev. 2
HPP-333, Dose Calculations for Members of the Public and Unmonitored Occupational Individuals, Rev. 2
HPS-NGGC-0003, Radiological Posting, Labeling and Surveys, Rev. 11

HPS-NGGC-0013, Personnel Contamination Monitoring, Decontamination, and Reporting, Rev. 7
HPS-NGGC-0014, Radiation Work Permits, Rev. 4
HPS-NGGC-0016, Access Control, Rev. 3
HPS-NGGC-0023, Remote Radiological Monitoring, Rev. 1
RSP-101, Basic Radiological Safety Information and Instructions for Radiation Workers, Rev. 42

Records and Data

Personnel Exposure Investigation: 3496, Worker lost badge and TLD while working in plant
Personnel Exposure Investigation: 3524, Individual stated that he sent his TLD through the baggage x-ray at the airport.
Personnel Exposure Investigation: 3545, Individual working in the Yellow room verifying dewatering pump operation without his dosimetry.
Personnel Exposure Investigation: 3552, Individual stated that he dropped his security badge and TLD into the water at the intake structure and was unable to retrieve either one.
Personnel Exposure Investigation: 3563, Significant dosimetry discrepancy- Individual did fly with his dosimetry
Personnel Exposure Investigation: 3569, Individual inadvertently put the TLD through the x-ray at the airport.
Personnel Exposure Investigation: 3610, Individual received a medical treatment which involved radiopharmaceuticals and failed to turn his TLD in prior to the treatment.
Personnel Exposure Investigation: 3614, Individual stated that he had a medical which involved radiopharmaceuticals and wore his TLD during this time for about 1 hour
Personnel Exposure Investigation: 3580, Individual stated that his vehicle was stolen and his security badge and TLD was in the vehicle.
Security No. 07-11-0733, Incore trench during thimble pull, 11/22/07

CAP Documents

CNAS-2007-39, Crystal River Nuclear Plant Radiation Protection Assessment, 5/30/07

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Assessment 216675, 2007 Radiation Protection Annual Review, 7/9 -20/07
AR 247034, While disassembling a RCP seal workers ED came in contact with parts with higher than normal dose rates resulting in an unexpected alarm
AR 238306, Loose contamination found in a clean area of auxiliary building
AR 231678, Individual entered yellow room without the proper dosimetry
AR 231142, Jail bar door in the green room left unsecured
AR 229948, Multiple distractions occurred during RP briefing (phones and vacuum cleaner)
AR 216872, Informational postings left down after moving equipment through a doorway
AR 253492, Radworker signed in on wrong rwp (Briefed on right one but scanned the wrong barcode) and received a dose rate alarm

Section 2OS2: ALARA

Procedures, Manuals, and Guidance Documents

ADM-NGGC-0105, ALARA Planning, Rev. 8
DOS-NGGC-0002, Dosimetry Issuance, Rev. 24
MNT-NGGC-0003, Radiation Shielding Use, Rev. 10
CAP-NGGC-0200, Corrective Action Program, Rev. 19

Records and Data

'A' and 'B' S/G Upper and Lower Tubesheet Dose Rate Trends, R8 - R15
R14 and R15 Crudburst and Cleanup Curves
Contamination Occurrence Logs, 11/8/07 - 11/28/07
Declared Pregnant Worker Dosimetry Records, 11/2005 - 11/2007
ALARA Work Plan 07-0020, Reactor Building Scaffolding, Rev. 0
ALARA Work Plan 07-0009, S/G Eddy Current Testing and Repair Work, Rev. 0
ALARA Work Plan 07-0022, Alloy 600 Activities, Rev. 1
Temporary Shielding Request, Lower Pressurizer Surge Line Nozzle
RWP No. 3845, Pressurizer Repair Activities (High Risk)
Survey No. 07-11-0209, 'B' Lower S/G, 11/7/07
Survey No. 07-11-0293, 'B' Lower S/G, 11/10/07
Survey No. 07-11-0650, 'A' S/G Main Steam, Feedwater, and Emergency Feedwater
Survey No. 07-11-0369, Bottom of pressurizer (surge line), 11/12/07
Survey No. 07-11-0295, Reactor Building General Areas, 11/10/07
R15 Daily RWP Dose Data Sheets: 11/13/07 - 12/6/07
CR3 Scaffolding Dose White Paper, 12/1/07
Dose Reduction Strategy - Fuel Cycle 15

CAP Documents

Radiation Protection Assessment C-RP-07-01, 5/30/07
AR 00239596, R15 dose goal is not achievable, 7/16/07
AR 00236970, Weekly dose budget has been exceeded, 6/20/07
AR 00240175, Conflicting procedural guidance for Planned Special Exposures, 7/20/07
AR 00240348, Support services for installation and removal of shielding have not been established, 7/23/07
AR 00255334, RFO 15 exceeded dose budget on the following: scaffold activities, LDL replacement, OTSG eddy current activities, Health Physics activities and ALLOY 600 pressurizer activities, 11/19/07

AR 00257275, Investigation of scaffolding dose budgeting and causes during R15 outage to include lessons learned, 11/30/07

Section 2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

Procedures, Instructions, and Guidance Documents

CP-151, External Reporting Requirements, Rev. 19
CP-161, Radiological Environmental Monitoring Program, Rev. 4
HPP-230, Recording Keeping for Decommissioning Planning, Rev. 0
CR3 Offsite Dose Calculation Manual, Rev. 30

Records and Data Reviewed

Decommissioning File Data: Calendar Year 2005 and CY 2006
Groundwater Flow Study Report, Progress Energy Florida, CR-3 Power Generating Facility, Crystal River Energy Complex, Crystal River, Florida; 01/22/2007
Groundwater Monitoring Well Tritium Concentration Data, 02/27/2007 through 09/04/2007
Calendar Year 2006, 4th Quarter Florida Department of Health Tritium and Gamma-isotopic Analyses for Unit 1 and Unit 2 Settling CY 2006 Pond Sediments and Surface Water Annual Samples

CAP Documents

Self-Assessment Report Number 220681, Industry Groundwater Protection Initiative, 10/08-10/2007
AR 197927, CR-3 NEI Groundwater Protection Initiative Assignments, 06/20/06
AR 00250297, Recommendations for Groundwater Monitoring Program, 10/11/07

Section 2PS2: Radioactive Material Processing and Transportation

Procedures, Instructions, and Guidance Documents

MGM, Process Control Program, Rev. 6
HPS-NGGC-0001, Radioactive Material Receipt and Shipping Procedure, Rev. 25
HPS-NGGC-0002, Vendor Cask Utilization Procedure, Rev. 15
WPP-204A, Dewatering High Integrity Containers, Rev. 7
CAP-NGGC-0200, Corrective Action Program, Rev. 19
oC No. 9168 Rev.8, Amendment for Model CNS-120B Package, 08/16/07

Records and Data Reviewed

RG 1.21 Report Data for CY 2005 and CY 2006 Sample Data Set Scaling Factor Comparisons for WDT-6, Primary Resin, 01/22/2005 versus 03/07/2007: Comparisons Included Sample Scaling Factors, Fractional Abundance, and Value Comparisons
Low-level radioactive waste gamma comparison data sheet, 11/28/06, low-level radioactive waste analysis data sheet, 01/25/07 versus 11/16/06
Shipment no. 07-075, Radioactive material, SCO-11 fissile-excepted, 7, UN2913 (2 packages) and Radioactive material, excepted package-limited quantity of material, 7, UN2910 (4 packages), 11/27/07
Shipment no. 06-023, Radioactive material, LSA-1, fissile excepted, 7, UN2912; Radioactive material, excepted package-limited quantity of material, 7, UN2910, 05/11/06

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Shipment no. 06-022, RQ-Radioactive material, LSA-II fissile excepted, 7, UN3321, 05/02/06
Shipment no. 05-045, RQ-Radioactive material, LSA-II fissile excepted, 7, UN3321, 09/22/05
Shipment no. 05-035, RQ-Radioactive material, Type B(U) package fissile excepted, 7, UN2916,
08/05/05
EC 000061346R2, Use of macroporous resin as an overlay resin in MUDM-1A, MUDM-1B,
WDDM-2B, and SFDM-1 and downgrade all CR-3 primary resins procurement
classification from "safety related" to "augmented quality"
EC 0000064424R0, Abandonment of liquid waste disposal system heat tracing,

CAP Documents

CNAS-2007-39, Radiation Protection Assessment, 05/30/2007
Assessment Number 216675, Self-Assessment of the CRNP Radiation Protection Program
07/10-20/2007
NUPIC Audit/Survey Number 19954, 10/23-26/2006
AR 00171980, Radioactive Material Moved Without HP Escort, 10/07/2005
AR 00176220, Full LSA Container Found With Hole in Bottom, 11/15/2005
AR 00182426, Notification of Low Rad Delivery to Radiation Protection, 01/27/2006
AR 00194161, Waste Container Inspection, 05/11/2006
AR 00201778, DOT HAZMAT Qualifications Expired in PQD Database, 07/31/06
AR 00202909, Rad Container Damaged at the D RMSW, 08/10/2006
AR 00206186, Radioactive Material Shipped as Non-Radioactive Shipment, 09/13/2006
AR 00210826, Radioactive Waste Disposal, 10/30/06
AR 00220392, Hazardous Material and Waste Characterization, 01/25/2007
AR 00231390, Primary Resin Dewatering Equipment, 04/30/2007
AR 00231474, NAS Assessment C-RP-07-01, 05/01/2007
AR 00249070, Puncture Hole Found in RAM Container During Incoming Shipment,
10/05/2007
AR 00256922, Comparison of old and new 10 CFR Part 61 analyses not performed, 11/29/07

Section 40A1: Performance Indicator Verification

Procedures

CP-217, NRC Performance Indicator Program, Rev. 8
REG-NGGC-0009, NRC Performance Indicators And Monthly Operating Report Data, Rev. 7
Uncontrolled Reference and Assistance Document: NRC Reactor Oversight Process
Performance Indicator Program

Records and Data

Monthly PI Reports, 12/1/06 - 9/30/07
Text file listing NCRs involving Dose Rate Alarms since December 2006
Crystal River Unit 3 Radioactive Effluent Release Report 2006
Out-of-service effluent monitor logs, 12/1/06 - 9/30/07
Gaseous effluent release permit Nos. 70055.020.410.G and 70057.023.055.G
Liquid effluent release permit Nos. 70132.002.496.L and 70124.006.580.L

CAP Documents

AR 00175740, Incore detectors excessively withdrawn, 11/10/05

AR 00231678, Individual Entered Yellow Room Without The proper dosimetry, 5/2/07
AR 00253492, Radiation Worker Signed in on the wrong RWP, 11/6/07
AR 00255994, Unanticipated ED alarm, 11/23/07
AR 00245650, Valve drip bag overflowed from contaminated area into clean area, 9/6/07

Section 4OA2: Problem Identification and Resolution

Nuclear Condition Reports

NCR 218895 Significant Adverse Trend In Plant Status Control
NCR 211180 Fire Door A202 found open without a breach permit
NCR 214397 CE-101 Lined up while CE-26 lined up
NCR 208561 Zone 13 pull station actuated
NCR 211346 Human error results in unexpected start of ARP-1B
NCR 215015 Breaker 3245 found out of expected position
NCR 216312 CAV-126 in wrong position
NCR 216323 RWP-3B cycled with annubar flow instrument not retracted
NCR 217775 ACDP-4 BRKR-18 found out of position
NCR 218572 RCS found lined up flowing to MUT-1
NCR 214266 Breaker 2AR inappropriately closed

Section 4OA5: Other Activities

EC 58982, RB Sump Strainer, RB Flow Distributor, and RB Debris Interceptor Modifications,
Rev. 17
EC 59476, RB Sump Level Indication Modification, Rev. 18
SP-175A, RB Emergency Sump Inspection, Rev. 0

LIST OF ACRONYMS

ALARA	as low as reasonably achievable
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CY	Calendar Year
DAW	Dry Active Waste
DOT	Department of Transportation
ED	electronic dosimeter
FSAR	Final Safety Analysis Report
HP	health physics
HPT	health physics technician
HRA	high radiation area
IP	inspection procedure
LHRA	locked high radiation area
NCR	Nuclear Condition Report
OS	Occupational Radiation Safety
pCi/l	picocuries per liter
PCP	Process Control Program
PI	performance indicator
PS	Public Radiation Safety
R15	refueling outage 15
radwaste	radioactive waste
radworker	radiation worker
RCA	radiologically controlled area
RG	Regulatory Guide
RWP	radiation work permit
S/G	steam generator
TLD	thermoluminescent dosimeter
TS	Technical Specification

CRYSTAL RIVER 3 GL 2004-02 COMMITMENTS APPLICABLE TO TI 2515/166

Commitments made in response to GL 2004-02	Actions implemented	Status
<p>The following interim compensatory measures that were adopted in response to NRC Bulletin 2003-01 will be maintained or revised to account for the modified RB sump strainer:</p> <ol style="list-style-type: none"> 1. Operator training on indications and responses to RB sump strainer clogging 2. Accident Assessment Team (Technical Support Center and Emergency Operations Facility) guidance such as: <ul style="list-style-type: none"> ● Back-flushing of the sump stainer (new strainer designed for gravity drain loads) ● Provision of Core decay heat boil-off matching flow versus time curves ● Terminating unnecessary ECCS/CSS pump operation ● Commencement of BWST refill following ECCS and BS pump switchover to the sump in preparation for re-establishing an injection flow path. <p>Due date - 12/31/05</p>	<p>Operations training has been revised to include training on indications and responses to sump strainer clogging.</p> <p>Emergency Operating Procedures (EOPs) and Plant Operating Manuals have been revised to include guidance for back flushing the sump strainer, provisions for core decay heat boil off matching flow versus time curves, terminating unnecessary ECCS/CSS pump operation and commencement of refill of the BWST following ECCS and BS pump switchover to the sump in preparation for re-establishing an injection flow path*</p>	<p>All operations training and procedure revisions are complete as committed to in the 8/30/05 letter*</p> <p>In addition, operations and engineering are currently in the process of outlining additional means of back flushing the sump strainer in cases of high differential pressure or blockage.</p>
<p>Modified sump strainer, flow distributor and debris interceptor will be installed in Refueling Outage 14 scheduled for Fall 2005.</p> <p>Due Date 12/31/2005</p>	<p>Modified sump strainer, flow distributor, and debris interceptor were installed in November 2005.</p>	<p>Complete. No modifications currently planned for installed structures.</p>

CRYSTAL RIVER 3 GL 2004-02 COMMITMENTS APPLICABLE TO TI 2515/166

Commitments made in response to GL 2004-02	Actions implemented	Status
<p>Surveillance Procedure, SP-175A, will confirm that the strainer integrity is maintained prior to startup for Refueling Outages (required by ITS 3.5.2.7)</p> <p>Due Date - 12/31/05</p>	<p>SP-175A is implemented prior to startup from refueling outages.</p>	<p>Ongoing prior to start-up from every refueling outage.</p>
<p>Analyses or testing needed to confirm assumptions made for coating zone of influence (ZOI), chemical effects, and downstream effects will be performed.</p> <p>Due Date - 10/31/06</p>	<p>Coating ZOI of 4D was confirmed via testing (WCAP 16568-P)</p> <p>CR-3 specific chemical effects testing is currently being performed by Enercon/Alion.</p> <p>Downstream effects evaluation per WCAP 16406-P Rev. 1 is currently being performed by Enercon.</p>	<p>Coating ZOI confirmation complete.</p> <p>Chemical effects testing is scheduled to be completed by the end of November 2007.</p> <p>Downstream effects evaluation is currently scheduled to be complete by 1/08. NRC letter (TAC NO. MC4678) granted an extension for completing the evaluation to February 29, 2008.</p>
<p>CR3 will revise analyses for debris transport, latent debris, and head loss to address issues identified in the pilot plant audit report.</p> <p>Due Date - 10/31/06</p>	<p>The CR-3 debris transport and head loss analyses have been revised to address issues identified in the pilot plant audit report. Additional latent debris surveys have been performed to support the assumptions in the pilot plant audit report.</p>	<p>Debris transport analysis revision has been issued.</p> <p>Revision to the head loss calculation is in review.</p> <p>Latent debris survey is being incorporated into the debris generation analysis.</p>

CRYSTAL RIVER 3 GL 2004-02 COMMITMENTS APPLICABLE TO TI 2515/166

Commitments made in response to GL 2004-02	Actions implemented	Status
<p>Plant modifications determined to be necessary by analyses or testing to address coating ZOI, chemical effects, and downstream effects will be installed in Refueling Outage 15 scheduled for fall 2007</p> <p>Due Date - 12/31/2007</p>	<p>In addition to modifications installed in R14, plant modifications planned for R15 include partial replacement of fibrous insulation on pressurizer with RMI, removal of fibrous insulation from OTSG blowdown lines, floor drain strainer replacement, and further removal of aluminum from containment.</p> <p>Cyclone separators on the BS and DH pumps have been replaced and their throttle valves have been eliminated (blockage concern).</p>	<p>Based on the results of chemical effects testing scheduled to be completed by November 2007, it may be determined that CR-3 will not be in compliance with GL 2004-02 until Fall 2009 when OTSGs and their fibrous insulation are replaced with OTSGs with RMI. An extension request was granted by NRC letter (TAC NO4678) following OTSG fibrous insulation replacement activities to be completed during the Fall 2009 refueling outage.</p>

***Procedures Revised/Updated**

- EM-225E, Rev. 9, "Guidelines for Long Term Cooling"
- EM-225, Rev. 19, "Duties of Technical Support Center Accident Assessment Team"
- EGR-NGGC-0005, Rev. 23, "Engineering Change
- CPL-XXXX-W-005, Rev. 9, "Specification for Nuclear Power Plant Protective Coatings"
- EGR-NGGC-0351, Rev. 13, "Condition Monitoring of Structures"
- AI-516, Rev. 3, "Plant Labeling Guidelines"
- AI-607, Rev. 17, "Pre-job and Post-job Briefings"
- SP-324, Rev. 53, "Containment Inspection"
- SP-175A, Rev. 0, "Reactor Building Emergency Sump Inspection
- MNT-NGGC-0007, Rev. 5, "Foreign Materials Exclusion Program"