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

January 27, 2011

Mr. Mano Nazar
Executive Vice President
Nuclear and Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000335/2010005, 05000389/2010005

Dear Mr. Nazar:

On December 31, 2010, the US Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Plant. The enclosed inspection report documents the inspection results, which were discussed on January 6, 2011, with Mr. Lingle 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.

This report documents one NRC-identified finding and one self-revealing finding, both of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating the findings as non-cited violations (NCVs) consistent with the NRC Enforcement Policy. Also, one licensee identified violation which was of very low safety significance is listed in Section 4OA7 of the report. If you contest these NCVs, 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, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the St. Lucie facility. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at St. Lucie

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,

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

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 05000335/2010005, 05000389/2010005
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

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|---|---|
| Docket Nos: | 50-335, 50-389 |
| License Nos: | DPR-67, NPF-16 |
| Report No: | 05000335/2010005, 05000389/2010005 |
| Licensee: | Florida Power & Light Company (FP&L) |
| Facility: | St. Lucie Nuclear Plant, Units 1 & 2 |
| Location: | 6351 South Ocean Drive<br>Jensen Beach, FL 34957 |
| Dates: | October 1 to December 31, 2010 |
| Inspectors: | T. Hoeg, Senior Resident Inspector<br>S. Sanchez, Resident Inspector<br>S. Walker, Senior Reactor Inspector (4OA5.2)<br>C. Even, Reactor Inspector (4OA5.2)<br>R. Aiello, Senior Operations Engineer (1R11)<br>R. Patterson, Reactor Inspector (4OA5.2)<br>R. Williams, Reactor Inspector (4OA5.3)<br>B. Collins, Reactor Inspector (1RO8, 4OA5.3) |
| Approved by: | D. Rich, Chief<br>Reactor Projects Branch 3<br>Division of Reactor Projects |

Enclosure

## SUMMARY OF FINDINGS

IR 05000335/2010-005, 05000389/2010-005; 10/01/2010 – 12/31/2010; St. Lucie Nuclear Plant, Units 1 & 2; Identification and Resolution of Problems and Other Activities.

The report covered a three month period of inspection by resident inspectors and region based inspectors. Two Green NCVs were identified. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP); the cross-cutting aspect was determined using IMC 305, Operating Reactor Assessment Program; and 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 and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green: A self-revealing Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the licensee's failure to promptly identify and correct a condition adverse to quality (CAQ) that resulted in the 1C Auxiliary Feedwater (AFW) pump being inoperable for greater than its Technical Specifications (TS) allowed outage time (AOT). Specifically, in December 2009, the licensee identified a concern with housekeeping in both Unit 1 and Unit 2 AFW pump areas that could affect the pump motor, bearings, seals, and turbine controls and linkages. Then in June 2010, these same housekeeping issues combined with extended operation of the atmospheric dump valves (ADVs) caused failure of the 1C-AFW pump to reach rated speed during its scheduled surveillance test.

The finding was determined to be more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a CAQ affected the 1C-AFW pump's operability and affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capacity of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets. Because it represented an actual loss of safety function of a single train for greater than its TS AOT, SDP Phase 2 worksheets were evaluated. The phase 2 notebook produced an overly conservative result for a short exposure time (less than 2 week duration), and consequently a phase 3 SDP evaluation was performed. The resultant core damage frequency (CDF) was <1E-6 Green. The inspectors determined that the cause of this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity (IMC 0310 Aspect P.1.d). (Section 4OA2.2)

Cornerstone: Barrier Integrity

Green: The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee failing to take timely and effective corrective actions for Emergency Core Cooling System (ECCS) area exhaust fan damper louver failures resulting in TS Limiting Conditions for Operation (LCO) entries for an inoperable ECCS area exhaust air filter train. Specifically, multiple damper failures occurred over at least a two year period where the root cause of the failures was not identified and corrected to prevent recurrence.

The finding was more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a condition adverse to quality affected the 1-HVE-9A ECCS area exhaust fan's operability. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets and determined to be of very low safety significance because the finding did not represent a degradation of the radiological barrier function provided for the auxiliary building, or represent a degradation of the control room barrier function, or an actual open pathway of containment, or a reduction in function of containment hydrogen ignitors. The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate the problem such that the resolution addressed causes, as necessary (IMC 0310 Aspect P.1.c). (Section 4OA2.3).

B. Licensee Identified Violations

One violation of very low safety significance was identified by the licensee and has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into their CAP. This violation and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status:

Unit 1 began the period at full Rated Thermal Power (RTP) and essentially operated at full power for the entire period. Unit 2 began the period at full RTP and essentially operated at full power until December 31 when a coastdown to a refuel outage was initiated.

## 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

### 1R04 Equipment Alignment

#### .1 Partial Equipment Walkdowns

a. Inspection Scope

The inspectors conducted two partial alignment verifications of the safety-related systems listed below. These inspections included reviews using plant lineup procedures, operating procedures, and piping and instrumentation drawings, which were compared with observed equipment configurations to verify that the critical portions of the systems were correctly aligned to support operability. The inspectors also verified that the licensee had identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers by entering them into the corrective action program (CAP).

- 2B Component Cooling Water (CCW) System While 2A CCW was Out of Service (OOS)
- 1B Emergency Diesel Generator (EDG) While 1A EDG OOS

b. Findings

No findings were identified.

#### .2 Complete System Walkdown

a. Inspection Scope

The inspectors conducted a detailed walkdown/review of the alignment and condition of the 1A-EDG to verify its capability to meet its design basis function. The inspectors utilized licensee procedure 1-NOP-59.01, 1A Emergency Diesel Generator Standby Alignment, and drawing 8770-G-086, Unit 1 Flow Diagram, Miscellaneous Systems - Diesel Oil Storage Tanks, as well as other licensing and design documents to verify the system alignment was correct. During the walkdown, the inspectors verified, as appropriate, that: (1) valves were correctly positioned and did not exhibit leakage that would impact their function, (2) electrical power was available as required, (3) major portions of the system and components were correctly labeled, cooled, and

ventilated, (4) hangers and supports were correctly installed and functional, (5) essential support systems were operational, (6) ancillary equipment or debris did not interfere with system performance, (7) tagging clearances were appropriate, and (8) valves were locked as required by the licensee's locked valve program. Pending design and equipment issues were reviewed to determine if the identified deficiencies significantly impacted the system's functions. Items included in this review were the operator workaround list, the temporary modification list, system health reports, system description, and outstanding maintenance work requests/work orders. In addition, the inspectors reviewed the licensee's CAP to ensure that the licensee was identifying and resolving equipment alignment problems.

b. Findings

No findings were identified.

1R05 Fire Protection

Fire Area Walkdowns

a. Inspection Scope

The inspectors toured the following five plant areas during this inspection period to evaluate conditions related to control of transient combustibles and ignition sources, the material condition and operational status of fire protection systems including fire barriers used to prevent fire damage or fire propagation. The inspectors reviewed these activities against provisions in the licensee's procedure AP-1800022, Fire Protection Plan, and 10 CFR Part 50, Appendix R. The licensee's fire impairment lists, updated on an as-needed basis, were routinely reviewed. In addition, the inspectors reviewed the Condition Report (CR) database to verify that fire protection problems were being identified and appropriately resolved. The following areas were inspected:

- Unit 1 Vital Battery Rooms
- 2A EDG Room
- Unit 1 Emergency Core Cooling System (ECCS) Pump Room
- Unit 1 Shutdown Cooling Heat Exchanger Rooms
- Unit 2 Auxiliary Feedwater (AFW) Pump Area

b. Findings

No findings were identified.

1R06 Flood Protection Measures

.1 Internal Flooding

a. Inspection Scope

The inspectors conducted walkdowns of the Unit 1 Shutdown Cooling Heat Exchanger Rooms, which included checks of building structure sumps to ensure that flood protection measures were in accordance with design specifications. The inspectors reviewed Updated Final Safety Analysis Report (UFSAR), Section 3.4, Water Level (Flood) Design and UFSAR Table 3.2-1, Design Classification of Systems, Structures, and Components (SSC). The inspectors also reviewed plant procedures that discussed the protection of areas containing safety-related equipment that may be affected by internal flooding. Specific plant attributes that were checked included structural integrity, sealing of penetrations, control of debris, and operability of sump pump systems.

b. Findings

No findings were identified.

.2 Underground Manhole Inspections

a. Inspection Scope

The inspectors performed underground manhole inspections containing safety related cables. The inspectors reviewed licensee procedure ER-AA-106, "Cable Condition Monitoring Program." The inspectors reviewed Manhole Inspection Work Order (WO) 39003515 and WO 38004622. The inspectors observed all or portions of manhole inspections of Unit 2 manholes M226, M227, M299, and ECB #1 found on Electrical Manhole and Handhole Drainage System Drawing 2998-G-486. The inspectors verified the presence of water intrusion and dewatering capabilities related to the manholes containing safety-related cabling. The inspectors reviewed CRs 451973 and 581511 associated with manhole inspections and findings, including the presence of standing water requiring some manholes to be pumped down for inspection. The inspectors verified the cabling in the manholes was designed for moisture and were capable of being submerged. The inspectors looked for signs of cable splicing or damaged support structures.

b. Findings

No findings were identified.

1R07 Heat Sink Performance

a. Inspection Scope

During the week of December 27, the inspectors interviewed engineering personnel responsible for 1A-CCW heat exchanger monitoring and performance. The inspectors verified that periodic maintenance activities were conducted in accordance with licensee procedure PMM-14.01, CCW Heat Exchanger Clean/Repair. The inspectors reviewed the monitoring and trending of heat exchanger performance data and verified the operational readiness of the system should it be needed for accident mitigation. The inspectors walked down portions of the system for signs of degradation and to assess overall material condition, as well as to monitor system parameters for proper operation. The inspectors verified that significant heat sink issues were being identified and entered into the CAP.

b. Findings

No findings were identified.

1R08 Inservice Inspection (ISI) Activities

The inspectors conducted a review of the implementation of the licensee's ISI Program for monitoring degradation of the reactor coolant system, steam generator tubes, emergency feedwater systems, risk-significant piping and components and containment systems.

The inspections described in Sections 1R08.1, 1R08.2, 1R08.3, 1R08.4 and 1R08.5 below constituted one inservice inspection sample as defined in Inspection Procedure 71111.08-05.

This inspection was completed in April 2010. However, the inspection input was inadvertently left out from NRC Inspection Report Nos. 05000335, 389/2010-003. This ISI inspection was included in this inspection report for the record.

.1 Piping Systems ISI

a. Inspection Scope

The inspectors evaluated the following non-destructive examinations mandated by the ASME Code Section XI to verify compliance with the ASME Code Section XI and Section V requirements and, if any indications and defects were detected, to evaluate if they were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- Ultrasonic Testing (UT) of SG 1B2 Outlet Nozzle-to-Shell weld (1-SGB-W6), ASME Class 1, Reactor Coolant system, 30" diameter – Direct Observation
- UT of SG 1B1 Outlet Nozzle-to-Shell weld (1-SGB-W7), ASME Class 1,

Reactor Coolant system, 30" diameter – Direct Observation

- Radiographic Testing (RT) of 1A2 RCP Cold Leg Charging Nozzle weld (RC-148-FW2007), ASME Class 1, Reactor Coolant system, 2" diameter – Document Review

During non-destructive surface and volumetric examinations performed since the previous refueling outage, the licensee did not identify any recordable indications that were accepted for continued service. Therefore, no NRC review was completed for this inspection procedure attribute.

The inspectors reviewed documentation for the following pressure boundary welds completed for risk-significant systems during the outage to evaluate if the licensee applied the preservice non-destructive examinations and acceptance criteria required by the construction Code. In addition, the inspectors reviewed the welding procedure specifications, welder qualifications, welding material certifications and supporting weld procedure qualification records to evaluate if the weld procedures were qualified in accordance with the requirements of Construction Code and the ASME Code Section IX.

- WO 39014309, Replacement 1A1 RCP Intermediate Leg Drain Valve RC-113
- WO 39014313, Replacement 1A2 RCP Cold Leg Charging Valve RC-148

b. Findings

No findings were identified.

.2 Reactor Pressure Vessel Upper Head Penetration Inspection Activities

c. Inspection Scope

For the Unit 1 vessel head, a bare metal visual examination was required this outage pursuant to 10 CFR 50.55a(g)(6)(ii)(D).

The inspectors reviewed records of the visual examination conducted on the Unit 1 reactor vessel head at to evaluate if the activities were conducted in accordance with the requirements of ASME Code Case N-729-1 and 10 CFR 50.55a(g)(6)(ii)(D). Specifically, the inspectors reviewed the following documentation and/or observed the following activities:

- Evaluated if the required visual examination scope/coverage was achieved and limitations (if applicable) were recorded in accordance with the licensee procedures.

- Evaluated if the licensee's criteria for visual examination quality and instructions for resolving interference and masking issues were adequate.

The licensee did not perform any welded repairs to vessel head penetrations since the beginning of the preceding outage for Unit 1. Therefore, no NRC review was completed for this inspection procedure attribute.

d. Findings

No findings were identified.

.2 Boric Acid Corrosion Control (BACC)

a. Inspection Scope

The inspectors performed an independent walkdown of portions of the containment building, which recently received a licensee boric acid walkdown and evaluated if the licensee's BACC visual examinations emphasized locations where boric acid leaks could cause degradation of safety-significant components.

The licensee did not perform any evaluations of reactor coolant system components with boric acid deposits and no corrective actions for any degraded reactor coolant system components were required. Therefore, no NRC review was completed for this inspection procedure attribute.

The inspectors reviewed the following corrective actions related to evidence of boric acid leakage to evaluate if the corrective actions completed were consistent with the requirements of the ASME Code Section XI and 10 CFR Part 50, Appendix B, Criterion XVI.

- CR 2009-12396 – Heavy Dry Boric Acid Buildup on Valve V2489
- CR 2009-12716 – Potential Active Boric Acid Leak on ICI #4
- CR 2009-15692 – Boric Acid Leakage from Valve V01110

b. Findings

No findings were identified.

.3 Steam Generator (SG) Tube Inspection Activities

No Steam Generator Tube Inspection Activities occurred during this outage, therefore no NRC review was completed for this inspection procedure attribute.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI-related problems entered into the licensee's corrective action program and conducted interviews with licensee staff to determine if;

- the licensee had established an appropriate threshold for identifying ISI-related problems;

- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and

- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate 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 were identified.

1R11 Licensed Operator Requalification Training Program

Resident Inspector Quarterly Review

a. Inspection Scope

During the week of November 22, the inspectors observed and assessed licensed operator actions during a simulator job performance measure loss of shutdown cooling event caused by the loss of offsite power. The inspectors also observed a simulated reactor startup with main steam isolation valve testing. The inspectors reviewed simulator physical fidelity and specifically evaluated the following attributes related to the operating crews' 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
- Effectiveness of the post-evaluation critique.

b. Findings

No findings were identified.

.2 Annual Review of Licensee Requalification Examination Results

a. Inspection Scope

On December 6, 2010, the licensee completed the comprehensive biennial requalification written examinations and annual requalification operating tests required to be administered to all licensed operators in accordance with 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the written examinations, individual 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 were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed system performance data and associated CAP items for the two systems listed below to verify that the licensee's maintenance efforts met the requirements of 10 CFR 50.65 (Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants) and licensee Administrative Procedure ADM-17-08, Implementation of 10CFR50.65, Maintenance Rule. The inspectors' efforts focused on maintenance rule scoping, characterization of maintenance problems and failed components, risk significance, determination of a(1) and a(2) classification, corrective actions, and the appropriateness of established performance goals and monitoring criteria. The inspectors also interviewed responsible engineers and observed some of the corrective maintenance activities. The inspectors also attended applicable expert panel meetings and reviewed associated system health reports. The inspectors verified that equipment problems were being identified and entered into the licensee's CAP.

- Unit 2 Intake Cooling Water (ICW) System
- Unit 2 AFW System

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors completed in-office reviews, plant walkdowns, and control room inspections of the licensee's risk assessment of two emergent or planned maintenance activities. The inspectors verified the licensee's risk assessment and risk management activities using the requirements of 10 CFR 50.65(a)(4); the recommendations of Nuclear Management and Resource Council 93-01, Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 3; and licensee procedure ADM-17.16, Implementation of the Configuration Risk Management Program. The inspectors also reviewed the effectiveness of the licensee's contingency actions to mitigate increased risk resulting from the degraded equipment. The inspectors interviewed responsible Senior Reactor Operators on-shift, verified actual system configurations, and specifically evaluated results from the online risk monitor (OLRM) for the combinations of out of service (OOS) risk significant systems, structures, and components (SSCs) listed below:

- 2B-CCW Pump, 2C-ICW Pump, 2D Instrument Air Compressor (IAC), 2A-ECCS Pumps, and 1A-EDG OOS
- 2B-ECCS Pumps, 2B-CCW Pump, and 2C-IAC OOS

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following three CR interim dispositions and operability determinations to ensure that operability was properly supported and the affected SSCs remained available to perform its safety function with no increase in risk. The inspectors reviewed the applicable UFSAR, and associated supporting documents and procedures, and interviewed plant personnel to assess the adequacy of the interim disposition.

- CR 584189, Unit 2 B-Channel Quality Safety Parameter Display System Failed
- CR 584721, Unit 1 ECCS Fan HVE-9A Surveillance Unsatisfactory
- CR 589224, Unit 1 Reactor Coolant System (RCS) Sample Valves V5200/5203 Leaking By Seals

b. Findings

No findings were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the documentation for a temporary modification to the Unit 1 Containment Instrument Air Annunciators F-22 and F-46, and Pressure Instrument PIS-18-32. The temporary system alteration (TSA) was performed in accordance with TSA 1-10-027 to eliminate nuisance alarms and change the low pressure alarm setpoint. The inspectors reviewed the 10 CFR 50.059 screening and evaluation, fire protection review, environmental review, and license renewal review, to verify that the modification had not affected system operability/availability. The inspectors reviewed associated plant drawings and UFSAR documents impacted by this modification and discussed the changes with licensee personnel to verify that the installation was consistent with the modification documents. The inspectors walked down the modification to determine if it was installed in the field as described in the subject TSA. Additionally, the inspectors verified that problems associated with modifications were being identified and entered into the CAP.

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the six post maintenance tests (PMTs) listed below, the inspectors reviewed the test procedures and either witnessed the testing and/or reviewed test records to determine whether the scope of testing adequately verified that the work performed was correctly completed and demonstrated that the affected equipment was functional and operable. The inspectors verified that the requirements of licensee procedure ADM-78.01, Post Maintenance Testing, were incorporated into test requirements. The inspectors reviewed the following work orders (WO) and/or work requests (WR):

- WO 40046102, Inspect and Lube ECCS Fan HVE-9A Louver
- WO 40006386, 1A2 EDG Fan Repair
- WO 40003876, 1B-EDG Fuel Injector Replacement
- WO 39012898, Shield Building Ventilation System Isolation Valve FCV-25-32 Operator Preventive Maintenance
- WO 38000209, 2C-ICW Pump and Motor Overhaul
- WO 39006257, 2A Charging Pump Accumulator Maintenance

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors either reviewed or witnessed the following four surveillance tests to verify that the tests met the TS, the UFSAR, the licensee's procedural requirements, and demonstrated the systems were capable of performing their intended safety functions and their operational readiness. In addition, the inspectors evaluated the effect of the testing activities on the plant to ensure that conditions were adequately addressed by the licensee staff and that after completion of the testing activities, equipment was returned to the positions/status required for the system to perform its safety function. The tests reviewed included one in-service test (IST) surveillance. The inspectors verified that surveillance issues were documented in the CAP.

- 0-OSP-37.01, Emergency Cooling Water Canal – Periodic Test
- 0-OP-3200051, At Power Determination of Moderator Temperature Coefficient and Power Coefficient
- 2-OP-0010125A, Surveillance Data Sheets for Valve MV-07-1A/2A
- 2-OSP-01.03, Reactor Coolant System Inventory Balance

b. Findings

No findings were identified.

1EP6 Drill Evaluation

Emergency Preparedness Drill

a. Inspection Scope

On October 27, 2010, the inspectors observed an off-hours unannounced drill of the site emergency response organization. The drill included a fire on the 2B-ICW pump motor and a loss of all feedwater causing the operators to place the unit in once-through-cooling. During the drill the inspectors assessed operator actions to verify that emergency classifications and notifications were made in accordance with licensee emergency plan implementing procedures (EPIPs) and 10 CFR 50.72 requirements. The inspectors specifically reviewed the Alert and Site Area Emergency classifications and notifications were in accordance with licensee procedures EPIP-01, Classification of Emergencies and EPIP-02, Duties and Responsibilities of the Emergency Coordinator. The inspectors also observed whether: (1) the initial activation of the emergency response centers was timely and as specified in the licensee's emergency plan, (2) the required TS actions for the drill scenario were reviewed to assess correct implementation, (3) the licensee identified critique items were discussed and reviewed to verify that drill weaknesses were identified and captured in the CAP.

b. Findings

No findings were identified.

## 4. OTHER ACTIVITIES

### 4OA1 Performance Indicator Verification

Mitigating Systems Cornerstones

a. Inspection Scope

The inspectors checked licensee submittals for the performance indicators (PIs) listed below for the period October 2009 through September 2010, to verify the accuracy of the PI data reported during that period. Performance indicator definitions and guidance contained in NEI 99-02, Regulatory Assessment Performance Indicator Guideline, and licensee procedures ADM-25.02, NRC Performance Indicators, and NAP-206, NRC Performance Indicators, were used to check the reporting for each data element. The inspectors checked operator logs, plant status reports, condition reports, system health reports, and PI data sheets to verify that the licensee had identified the required data, as applicable. The inspectors interviewed licensee personnel associated with performance indicator data collection, evaluation, and distribution.

- Unit 1 Mitigating Systems Performance Indicators
- Unit 2 Mitigating Systems Performance Indicators

b. Findings

No findings were identified.

### 4OA2 Identification and Resolution of Problems

.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 CAP. This review was accomplished by reviewing daily printed summaries of CRs and by reviewing the licensee's electronic CR database. Additionally, reactor coolant system unidentified leakage was checked on a daily basis to verify no substantive or unexplained changes.

b. Findings

No findings were identified.

.2 Annual Sample: Unit 1 and 2 AFW Pump Area Housekeeping

a. Inspection Scope

The inspectors selected CR 2009-33970, "Housekeeping: Unit 1 and 2 AFW Pump Rooms," for a more in-depth review of the circumstances that led up to the writing of the condition report and corrective actions that followed.

The inspectors reviewed the licensee's evaluation of the issue(s) and the associated corrective actions. The inspectors interviewed plant personnel and evaluated the licensee's administration of this selected CR in accordance with their CAP as specified in licensee procedures PI-SL-204, "Condition Identification and Screening Process", and PI-SL-205, "Condition Evaluation and Corrective Actions."

b. Findings and Observations

Introduction: A self-revealing Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the licensee's failure to promptly identify and correct a condition adverse to quality (CAQ) that resulted in the 1C Auxiliary Feedwater (AFW) pump being inoperable for greater than its Technical Specifications (TS) allowed outage time (AOT). Specifically, in December 2009, the licensee identified a concern with housekeeping in both Unit 1 and Unit 2 AFW pump areas that could affect the pump motor, bearings, seals, and turbine controls and linkages. In June 2010, these same housekeeping issues combined with extended operation of the atmospheric dump valves (ADVs) caused failure of the 1C-AFW pump to reach rated speed during its scheduled surveillance test.

Description: The licensee has documented concerns with "debris" such as sand, dirt, dust, and rust accumulating in the Unit 1 AFW system pump areas as far back as 1999. In 2005, the licensee identified additional concerns with debris accumulating in the area resulting from ADV operation. In December 2009, the licensee identified a concern with housekeeping of the Unit 1 and Unit 2 AFW pump areas where accumulated debris could affect the AFW motors, bearings, seals, and turbine control actuators and linkages as documented in CR 2009-33970. The corrective action from this CR entailed a cleanup of both pump areas.

On June 25, 2010, the Operations Department attempted to perform a surveillance test of the 1C-AFW pump. The pump started, was unable to reach rated speed, and was subsequently tripped and declared out of service (OOS). Troubleshooting revealed that the governor cam assembly had foreign material (particulate debris resembling corrosion products) in the gap between the cam slot and the cam follower. This debris caused binding that resulted in the governor valve cam plate being in a

position consistent with a partially closed governor valve. The licensee determined that the debris originated from operation of the ADV system and associated exhaust piping silencers. The ADVs had been in use for an extended period of time while the unit was kept in Mode 3 to facilitate repairs to the rod control system. With the ADVs in operation for this extended time, particulate debris accumulated in the AFW pump area and eventually affected the equipment in the surrounding area. The licensee's root cause evaluation concluded that six barriers failed, leading to the ineffective corrective actions that resulted in the failure of the 1C-AFW pump to reach rated speed. The failed barriers are: (1) housekeeping practices, (2) work practices, (3) system and operator walkdowns, (4) component design, (5) CAP evaluations, and (6) outage scope control process. Long term corrective actions are to install a permanent cover over the pump's governor cam assembly and associated linkage. The inspectors determined that the licensee's previous corrective actions were inadequate to prevent debris from affecting the operation of the turbine driven AFW pump. The licensee determined that the last time the 1C-AFW pump was successfully operated was on June 1, 2010. Since this time, the 1B-EDG had been declared OOS from June 17 through June 24, 2010, thereby placing the unit in TS 3.0.3. for two inoperable AFW pumps. The Licensee Event Report associated with this condition is discussed in section 4OA3 of this report.

Analysis: The inspectors considered the failure to promptly identify and correct a CAQ that resulted in the 1C-AFW pump being inoperable for greater than its TS AOT, was a performance deficiency. The finding was determined to be more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a CAQ affected the 1C-AFW pump's operability and affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capacity of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets. Because it represented an actual loss of safety function of a single train for greater than its TS AOT, SDP Phase 2 worksheets were evaluated. The finding was determined to be potentially greater than Green because the 1C AFW pump was inoperable for 24 days and no operator recovery credit was allowed. Because the Phase 2 notebook produced an overly conservative result for a short exposure time (less than 2 week duration), a phase 3 SDP evaluation was performed. The performance deficiency would result in a failure-to-start for the 1C turbine driven AFW pump with no recovery capability credit given. The analyst determined that operators would not credibly be able to determine the cause of the failure and correct the condition in less than the mission time during a postulated accident. The NRC's SPAR model was utilized to assess the risk significance of the finding modeling the impact of a failure-to-start on demand. The analyst confirmed that the other components potentially affected by the performance deficiency (e.g., adjacent AFW pumps) had not been affected by the dust/debris. The dominant sequences for internal events were losses of electrical DC buses where the opposite train motor driven AFW pump fails for another reason (e.g., test and maintenance or an independent failure) leading to core damage. External risk (i.e., from seismic events, tornadoes, hurricanes, and fires) was also quantified by the analyst. The resultant core damage frequency (CDF) was <1E-6

Green. The inspectors determined that the cause of this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity (P.1 (d)).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to this requirement, the licensee failed to promptly identify and corrective a CAQ that resulted in the 1C-AFW pump being inoperable for greater than its TS AOT. Because the licensee entered the issue into their CAP as CRs 2010-16485 and 575519, and the finding is of very low safety significance, this violation is being treated as a NCV, consistent with the NRC Enforcement Policy: NCV 05000335/2010005-01: Failure to Identify and Correct a Condition Adverse to Quality that Resulted in the 1C-AFW Pump Being Out of Service for Greater Than Its Allowed Outage Time.

.3 Semi-Annual Trend Review: Unit 1 ECCS Fan HVE-9A Damper Failures

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors reviewed the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors selected ECCS fan damper failures for trending due to several surveillance failures identified by the licensee. The inspectors' review was focused on the repetitive nature of the damper failures as well as the apparent causes performed by the licensee in several previous CRs. The inspectors also considered the results of daily inspector CR item screening discussed in Section 4OA2.1 above, plant status reviews, plant tours, document reviews, and licensee trending efforts. The inspectors' review nominally considered the nine month period of April through December 2010. Corrective actions associated with a sample of the issues identified in the licensee's CAP were reviewed for adequacy.

b. Findings and Observations

Introduction: The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee failing to take timely and effective corrective actions for Emergency Core Cooling System (ECCS) area exhaust fan damper louver failures resulting in TS Limiting Conditions for Operation (LCO) entries for an inoperable ECCS area exhaust air filter train. Specifically, multiple damper failures occurred over at least a two year period where the root cause of the failures was not identified and corrected.

Description: The ECCS exhaust fans HVE-9A/B safety-related function is to reduce the spread of radioactivity within the reactor auxiliary building (RAB). Each ECCS exhaust fan is sized to draw more air than is supplied to the ECCS areas to create a negative pressure. The motor-operated ECCS exhaust fan dampers function are to close automatically when the associated fan is turned off to ensure adequate exhaust flow by preventing short circuiting through the standby fan. Under normal operation, the RAB main ventilation supply and exhaust system provides the necessary ventilation for the ECCS pump rooms. Under accident conditions when several or all the ECCS pumps are running, the air supply to the non-essential section of the RAB is directed to the ECCS pump rooms to provide the additional cooling air requirement. The TS surveillance requires, in part, that each ECCS area exhaust air filter train be demonstrated operable at least once per 31 days on a staggered test basis by initiating flow through the high efficiency particulate filter and charcoal absorber train and verifying that the train operates for at least 15 minutes. Typically for these exhaust fan/damper failures, a low flow condition occurs that results in Operations declaring the ECCS exhaust train inoperable and troubleshooting to find that not all dampers opened as designed.

While reviewing a trend of Unit 1 HVE-9A ECCS exhaust fan damper failures, the inspectors identified that a long standing equipment reliability problem existed. Dating back to August 2008, the licensee performed three apparent cause evaluations related to ECCS exhaust fan damper failures where each time, the corrective action was to increase the preventive maintenance (PM) frequency from eighteen months to twelve months then to six months. However, that corrective action was not implemented until August 2010 and another failure occurred before the next six month PM could be performed. The inspectors reviewed the licensee's non-safety-related procedure PI-SL-204, "Condition Identification and Screening Process" and determined that because there have been multiple failures of these fans/dampers, a root cause evaluation should have been performed that was not. In addition, the inspectors determined that had the licensee performed a more robust evaluation, this long standing problem would have been corrected much sooner. After each failure, the licensee performed clean and lube repairs on the dampers, and in some cases replaced the damper actuator, then successfully returned the fan to service. The licensee's short term corrective actions increased the PM frequency to quarterly and the long term corrective action is to replace the dampers and associated actuators with a more robust design that can overcome the inherent friction that currently exists with the installed dampers.

Analysis: The inspectors considered the failure to take timely and effective corrective actions for ECCS area exhaust fan damper failures to be a performance deficiency. The finding was more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a condition adverse to quality affected the 1-HVE-9A fan's operability. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets and determined to be of very low safety significance (Green) because the finding did not only represent a degradation of the radiological barrier function provided for the auxiliary building, or represent a degradation of the control room

barrier function, or an actual open pathway of containment, or a reduction in function of containment hydrogen ignitors. The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate the problem such that the resolution addressed causes, as necessary (P.1 (c)).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Contrary to this requirement, the licensee failed to take timely and effective corrective actions for ECCS fan damper failures resulting in fan 1-HVE-9A being inoperable on multiple occasions since August 2008. Because the licensee entered the issue into their CAP as CR 584721 and the finding is of very low safety significance, this violation is being treated as a NCV, consistent with the NRC Enforcement Policy: NCV 05000335/2010005-02: Failure to Take Timely and Effective Corrective Actions for ECCS Fan Damper Failures.

4OA3 Event Follow-up

.1 (Closed) LER 05000335/2010-007-00, Latent Failure of Steam Driven AFW Pump Led to Operation Prohibited by Technical Specification

On June 25, 2010, the licensee was performing a surveillance test of the 1C-AFW pump while operating in Mode 3. The pump was unable to reach rated speed and the licensee subsequently determined that failure of the pump was caused by debris generated from extensive use of the atmospheric dump valves (ADVs), and that the debris interfered with operation of the turbine governor assembly. The licensee later identified that two trains of Unit 1 AFW were inoperable for longer than the allowed technical specification limiting condition of operation when the 1B EDG was taken out of service for maintenance from June 17-24, 2010 rendering the 1B AFW unavailable. Corrective actions included repair of the governor assembly, erection of a temporary housing enclosure, and providing procedural guidance for as-left and as-found governor condition. This finding constitutes a violation of very low safety significance and the enforcement aspects of this finding are discussed in Sections 4OA2 and 4OA7 of this report. This LER is closed.

.2 (Closed) LER 05000335/2010-001-00 and 01, Air Intrusion from 1A Containment Instrument Air Compressor into Unit 1 Component Cooling Water (CCW) System

These LERs describe a 2008 CCW air intrusion event that resulted in an NRC-identified Yellow inspection finding and subsequent 95002 Supplemental Inspection. During the review of the root cause evaluation and initial LER, the 95002 inspection team determined that the LER did not list all the reportability requirements or conclusively discuss operability. However, the team did determine that completed and planned corrective actions for each root cause and contributing cause were specific, measurable, timely, and sufficient. Following the December 16, 2010,

issuance of the revised LER, the inspectors determined that the LER revision addresses the additional reportability requirements and adequately discusses operability. These LERs are closed.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.2 (Discussed) NRC Temporary Instruction (TI) 2515/177, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter (GL) 2008-01)"

a. Inspection Scope

The inspectors reviewed the implementation of the licensee's actions in response to GL 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems. The subject systems included the high head safety injection (HHSI), low head safety injection (LHSI), containment spray (CS), shutdown cooling (SDC), and chemical and volume control (CVCS) systems.

The inspectors reviewed the licensing basis of the facility to verify that actions to address gas accumulation were consistent with the operability requirements of the subject systems.

The inspectors reviewed the design of the subject systems to verify that actions taken to address gas accumulation were appropriate given the specifics of the functions, configurations, and capabilities of these systems. The inspectors reviewed selected analyses performed by the licensee to verify that methodologies for predicting gas void size, accumulation, movement, and impact were appropriate. The inspectors performed walkdowns of selected subject systems to verify that the reviews and

design verifications conducted by the licensee had drawn appropriate conclusions with respect to piping configurations and pipe slope which could result in gas accumulation susceptibility.

The inspectors reviewed testing implemented by the licensee to address gas accumulation in subject systems. A selection of test procedures and completed test results were reviewed to verify that test procedures were appropriate to detect gas accumulations that could challenge subject systems. The inspectors reviewed the specified testing frequencies to verify that the testing intervals had appropriately taken historical gas accumulation events as well as susceptibility to gas accumulation into account. The inspectors also reviewed the test programs and processes to verify that they were sensitive to pre-cursors to gas accumulation. The inspectors also reviewed calculations to verify appropriate gas void acceptance criteria.

The inspectors reviewed corrective actions associated with gas accumulation in subject systems to verify that issues were being appropriately identified and corrected. This review included modifications made to the plant including the installation of additional vent valves. The inspectors reviewed the locations of selected vent valve installations to verify that the locations selected were appropriate based on piping configuration and pipe slopes.

b. Findings and Observations

The inspectors noted that the licensee relied, in part, on test data documented in WCAP-16631-NP, "Testing and evaluation of gas transport to the suction of ECCS pumps," to validate the use of GOTHIC computer code to acceptably predict quantitative void transport behavior. WCAP-16631-NP documented tests that were conducted by Westinghouse to study the transport of a gas void through a piping system. The results of these tests were referenced in calculations used by the licensee to benchmark the performance of GOTHIC computer code against test data and to ultimately determine void size acceptance criteria. The inspectors discussed these observations with Office of Nuclear Reactor Regulation (NRR) and concluded that these observations would require further evaluation to: (1) better understand the acceptability of the application of the test results contained in WCAP-16631-NP to void assessment analysis; and (2) assess potential generic implications. Consequently, TI-2515/177 will be left open pending resolution of these observations by NRR which may require subsequent inspection in this area consistent with the results of those evaluations.

.3 (Closed) Reactor Coolant System Dissimilar Metal Butt Welds (TI 2515/172, Rev. 1)

a. Inspection Scope

This inspection is documented in this inspection report because the inspection was completed in April 2010 and inadvertently omitted in NRC Inspection Report No. 05000335, 389/2010-003.

The inspectors conducted a review of the licensee's activities regarding licensee dissimilar metal butt weld (DMBW) mitigation and inspection implemented in accordance with the industry self imposed mandatory requirements of Materials Reliability Program (MRP) 139, "Primary System Piping Butt Weld Inspection and Evaluation Guidelines." Temporary Instruction (TI) 2515/172, "Reactor Coolant System Dissimilar Metal Butt Welds," Revision 1 was issued May 27, 2010, to support the evaluation of the licensees' implementation of MRP-139.

On December 8, 2010, the inspectors performed a review in accordance with TI 2515/172, Revision 1 as described in the Observation Section below:

Observations

The licensee has met the MRP-139 deadlines for baseline examinations of all welds scoped into the MRP-139 program. TI 2515/172, Revision 1 is considered closed. In accordance with requirements of TI 2515/172, Revision 1, the inspectors evaluated the following areas:

(1) Implementation of the MRP-139 Baseline Inspections

1. Have the baseline inspection been performed or are they scheduled to be performed in accordance with MRP-139 guidance?

   Yes. The licensee has performed all required baseline inspections at the time of this review.

   Unit 1: as reported previously, the U1 Pressurizer (PZR) was replaced with a new stainless steel one. As such, the associated welds are no longer susceptible to Primary Water Stress Corrosion Cracking (PWSCC) and are subsequently no longer subject to MRP-139 requirements. In addition, several welds were previously mitigated by Full Structural Weld Overlay (FSWOL). These include the RCS HL Shutdown Cooling (SDC) Nozzles (2) and the RCS HL PZR Surge Nozzle.

   During the SL1-23 refueling outage, several welds were cut out and replaced with non-susceptible stainless steel welds. These include the Reactor Coolant System (RCS) Hot Leg (HL) Drain Nozzle, RCS Cold Leg (CL) PZR Spray Nozzles (2), RCS CL Charging Nozzles (2), and RCS Intermediate Leg Drain Nozzles (4). Also during this outage, the RCS CL Safety Injection (SI) Nozzles (4) were stress improved by the Mechanical Stress Improvement process (MSIP™). And, during this outage, the RCS CL Reactor Coolant Pump Inlet Nozzles (4) and Outlet Nozzles (4) were volumetrically examined by means of Appendix VII-approved Ultrasonic Testing (UT) methods.

   The completion of the activities in SL1-23 completes all MRP-139 activities for Unit 1, with the exception of the follow-on visual/volumetric exams to be

performed. These have been appropriately categorized and put into the ISI program.

Unit 2: as reported previously, the U2 PZR Spray Nozzle, Safety Nozzles (3) and the RCS CL PZR Spray Nozzle Tee were cut out and replaced with non-susceptible stainless steel materials. As such, the associated welds are no longer susceptible to PWSCC and are subsequently no longer subject to MRP-139 requirements. In addition, several welds were previously mitigated by FSWOL. These include the PZR Surge Line Nozzle, PZR Relief Nozzle, RCS HL SDC Nozzles (2), RCS HL PZR Surge Nozzle and RCS HL Drain Nozzle.

Delays from the previous refueling outage shifted the schedule for the upcoming outage from November 2010 to January 2011. Had the November 2010 outage occurred on schedule, the remaining Cold Leg activities were planned to have been completed, which would have met the December 31, 2010 deadline in MRP 139 for Cold Leg welds. However, since the outage has been shifted to January 2011, these requirements will not be met. The licensee has submitted a Deviation to cover this situation (L-2010-003, dated January 6, 2010).

During the January 2011 refueling outage, several welds will be cut out and replaced with non-susceptible stainless steel welds. These include the RCS CL PZR Spray Nozzles (2) and RCS Intermediate Leg Drain Nozzles (4). Also during this outage, the RCS CL Charging Nozzles (2) and RCS CL SI Nozzles (4) will be stress improved by MSIP™. And, during this outage, the RCS CL Reactor Coolant Pump Inlet Nozzles (4) and Outlet Nozzles (4) will be volumetrically examined by means of Appendix VII-approved UT methods.

The completion of the activities in January 2011 will complete all MRP-139 activities for Unit 2, with the exception of the follow-on visual/volumetric exams to be performed.

2. Is the licensee planning to take any deviations from the MRP-139 baseline inspection requirements of MRP-139? If so, what deviations are planned, what is the general basis for the deviation, and was the NEI-03-08 process for filing a deviation followed?

   Yes, the licensee has submitted a request for deviation from MRP-139 requirements, as described above in the answer to question 1.

(2) Volumetric Examinations

1. Were the examinations performed in accordance with the MRP-139, Section 5.1 guidelines and consistent with NRC staff relief request authorization for weld overlaid welds?

   Yes, all examinations were performed in accordance with applicable requirements.

2. Were examinations performed by qualified personnel? (Briefly describe the personnel training/qualification process used by the licensee for this activity.)

   Yes, all personnel performing the examinations were qualified under the Performance Demonstration Initiative (PDI) program.

3. Were examinations performed such that deficiencies were identified, dispositioned, and resolved?

   Yes, examinations were performed in a manner where deficiencies were identified, dispositioned and resolved.

(3) Weld Overlays

This portion of the TI was not inspected during the period of this inspection report, but was previously covered in NRC Inspection Report 05000335/2008005.

(4) Mechanical Stress Improvement (SI)

1. Are the nozzle, weld, safe end and pipe configurations, as applicable, consistent with the configuration addressed in the SI qualification report?

   Yes. All configurations were consistent with those stated in the SI qualification report.

2. Does the SI qualification report address the location radial loading is applied, the applied load, and the effect that plastic deformation of the pipe configuration may have on the ability to conduct volumetric examinations?

   Yes. These issues were addressed in the report – the two former were addressed explicitly and the latter was addressed implicitly by way of post-SI configuration drawings.

3. Do the licensee's inspection procedure records document that a volumetric examination per the ASME Code, Section XI, Appendix VII was performed prior to and after the application of the SI?

   Yes. Both pre- and post-SI volumetric examinations were performed per ASME Section XI Appendix VIII requirements.

4. Does the SI qualification report address limiting flaw sizes that may be found during pre-SI and post-SI inspection and that any flaws identified during the volumetric examination are to be within the limiting flaw sizes established by the SI qualification report?

   Yes, indirectly. The limiting flaw sizes that could have been found during pre- and post- inspection were dictated by the qualified Appendix VIII process used, which

was prescribed in the report. In discussions with NDE personnel, the licensee was well aware of sizing/configuration limitations and for this reason, they chose to use the Phased Array UT procedure – giving what they considered a best-effort to find any flaws.

5. Performed such that deficiencies were identified, dispositioned and resolved?

   Yes. Deficiencies were identified, dispositioned and resolved during the overlay welding process.

(5) Application of Weld Cladding and Inlays

There were no weld cladding nor inlay activities performed or planned by this licensee to comply with their MRP-139 commitments.

(6) Inservice Inspection Program

1. Has the licensee prepared an MRP-139 inservice inspection program? If not, briefly summarize the licensee's basis for not having a documented program and when the licensee plans to complete preparation of the program.

   Unit 1: yes. The welds associated with MRP-139 have been entered into the Augmented Exam section of the licensee's ISI program.

   Unit 2: no, not all of the welds associated with MRP-139 have been entered into the Augmented Exam section of the licensee's ISI program. As described in the answer to question 1.a, there still remain several activities associated with Cold Leg welds. The licensee is aware of these and is actively tracking the completion of said activities. Once those activities are complete, they will be entered into the Augmented Exam section of their ISI program, as appropriate.

2. In the MRP-139 inservice inspection program, are the welds appropriately categorized in accordance with MRP-139? If any welds are not appropriately categorized, briefly explain the discrepancies.

   Yes. The welds are currently appropriately categorized in accordance with MRP-139. As the U2 activities are completed, re-categorization will be performed as applicable to each activity.

3. In the MRP-139 inservice inspection program, are the inservice inspection frequencies, which may differ between the first and second intervals after the MRP-139 baseline inspection, consistent with the inservice inspections frequencies called for by MRP-139?

   Yes. The inspection frequencies of the Augmented exams are consistent with the requirements of MRP-139.

4. If any welds are categorized as H or I, briefly explain the licensee's basis of the categorization and the licensee's plans for addressing potential PWSCC.

   Welds previously categorized as H or I have been inspected and have been recategorized.

5. If the licensee is planning to take deviations from the MRP-139 inservice inspection guidelines, what are the deviations and what are the general bases for the deviations? Was the NEI 03-08 process for filing deviations followed?

   No, the licensee is not planning to make any requests for deviation from MRP-139 requirements.

b. Findings

No findings were identified.

4OA6 Meetings

Exit Meeting Summary

.1 In-service Inspection

An exit meeting for the ISI and TI-172 portions was conducted on April 16, 2010 with licensee management. The licensee did not identify any material provided to the inspector to be proprietary.

.2 TI 2515/177 Inspection

An interim exit with licensee management and staff was conducted on October 29, 2010, to discuss the results of this inspection. Proprietary information reviewed by the team as part of routine inspection activities was returned to the licensee in accordance with prescribed controls.

.3 Resident Inspection

The resident inspectors presented the inspection results to Mr. Lingle and other members of licensee management on January 6, 2010. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary information. The licensee did not identify any proprietary information.

4OA7 Licensee Identified Violations

TS 3.0.3 requires that when a limiting condition of operation (LCO) is not met, except as provided in the associated action requirements, within 1 hour, action shall be initiated to place the unit in a mode which the specification does not apply. Contrary

to this, from June 17-24, 2010, two auxiliary feed water pumps were not operable, and actions were not taken to place the unit in the required mode of operation. This was identified in the licensee's CAP as condition report 2010-16485 and Unit 1 LER 02010-007-00. The analyst determined the finding was of very low safety significance (<1E-6) Green.

ATTACHMENT: SUPPPLEMENTAL INFORMATION

## KEY POINTS OF CONTACT

Licensee personnel:
C. Ali, Licensing Engineer
R. Anderson, Site Vice President
P. Barnes, Engineering Supervisor
R. Bashwiner, Acting Work Control Manager
M Baughman, Training
E. Belizar, Projects Manager
E. Burgos, Chemistry Supervisor
D. Calabrese, Emergency Preparedness Manager
D. Cecchett, Licensing Engineer
J. Connor, Systems and Component Engineering Manager
T. Coste, Repair and Replacement Program Manager
S. Duston, Training Manager
R. Filapek, Design Engineering Manager
K. Frehafer, Licensing Engineer
J. Hamm, Site Engineering Director
M. Haskins, Maintenance Manager
M. Hicks, Excellence Director
T. Horton, Assistant Operations Manger
B. Hughes, Plant General Manager
J. Kramer, Site Safety Manager
R. Lingle, Operations Manager
C. Martin, Radiation Protection Manager
R. McDaniel, Fire Protection Supervisor
G. McKenzie, Lead Design Engineer
M. Moore, Performance Improvement Department Manager
B. Moss, BACCP Coordinator
D. Nowakowski, ISI Planning
J. Owens, Performance Improvement Department
O. Rodriguez, Systems Engineer
J. Schemenauer, Alloy 600 Project Manager
T. Skiba, Site Welding Engineer
M. Snyder, Site Quality Assurance Manager
G. Swider, Engineering Manager - Programs
D. West, Lead System Engineer
T. Young, Security Manager

NRC personnel:

S. Ninh, Senior Project Engineer, Division of Reactor Projects
J.Hanna, Senior Risk Analyst, Division of Reactor Safety

Attachment

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

| | | |
|---|---|---|
| 05000335/2010005-01 | NCV | Failure to Identify and Correct a Condition Adverse to Quality that Resulted in the 1C-AFW Pump Being Out of Service for Greater Than Its Allowed Outage Time (Section 4OA2.2) |
| 05000335/2010005-02 | NCV | Failure to Take Timely and Effective Corrective Actions for ECCS Fan Damper Failures (Section 4OA2.3) |

Closed

| | | |
|---|---|---|
| 05000335/2010-007-00 | LER | Latent Failure of Steam Driven AFW Pump Led to Operation Prohibited by Technical Specification (Section 4OA3) |
| 05000335/2010-001-00, 01 | LER | Air Intrusion from 1A Containment Instrument Air Compressor into Unit 1 Component Cooling Water (CCW) System (Section 4OA3) |
| 050000335, 389/2515/172 | TI | Reactor Coolant System Dissimilar Metal Butt Welds (Section 4OA5.3) |

Discussed

| | | |
|---|---|---|
| 050000335, 389/2515/177 | TI | Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter 2008-01) (4OA5.2). |

## LIST OF DOCUMENTS REVIEWED

Nuclear Policy Procedure NP-910, Plant Readiness for Operations
St. Lucie Daily Quality Summaries
Health Physics Procedure HPP-4, Scheduling of Health Physics Activities
Operations Department Policy OPS-119, Standing Orders/Night Orders

### Section 1RO8: Inservice Inspection

Procedures
1-ISP-01.01 – Reactor Coolant System ASME Leakage Test, dated 06/19/08
901167-01, 1A1 RCP Cold Leg Intermediate Drain Weld Traveler, Rev. 3
901167-07, 1A2 RCP Cold Leg Charging Line Weld Traveler, Rev. 3
901167-09, 1A1 RCP Cold Leg Intermediate Drain Spool Piece Shop Weld Traveler, Rev. 2
ADM-29.03, Boric Acid Corrosion Control Program, Rev. 6D
WO 39014309 01, Replace 1A1 V1235/RC-113 Intermediate Drain PCM-09077, Rev. 0

WO 39014313 01, Replace 1A2 Charging-RC-148 PCM-09077, Rev. 0

Calculations
None

Corrective Action Documents
2009-12396 – Heavy Dry Boric Acid Buildup on Valve V2489, dated 04/27/2009
2009-12716 – Potential Active Boric Acid Leak on ICI #4, dated 04/29/2009
2009-12785 – Pressurizer Heater Cables Degraded, dated 04/29/2009
2009-13060 – Degraded CCW Piping Coating, dated 04/30/2009
2009-13274 – Pressurizer Heater Cables Damaged, dated 05/02/2009
2009-13287 – Nuclear Records Unreadable, dated 05/02/2009
2009-13508 – Debonding of Moisture Barrier Sealant, dated 05/04/2009
2009-14573 – 2B HPSI Hot Leg Injection Valve V3527 Bolts Not Torqued Properly, dated 05/13/2009
2009-15692 – Boric Acid Leakage from Valve V01110, dated 05/25/2009
2009-16774 – Welding Control Deficiencies, dated 06/06/2009

Other
046, Procedure Qualification Record, Rev. 3
062, Procedure Qualification Record, Rev. 3
063, Procedure Qualification Record, Rev. 3
071, Procedure Qualification Record, Rev. 2
095, Procedure Qualification Record, Rev. 1
1 MN-GTAW/SMAW, Weld Procedure Specification, Rev. 8
18 MC-GTAW, Weld Procedure Specification, Rev. 1
18 MN-GTAW/SMAW, Weld Procedure Specification, Rev. 2
2009 BACC Program Quick Hit Self-Assessment, dated January 2009
231, Procedure Qualification Record, Rev. 3
267, Procedure Qualification Record, Rev. 1
600, Procedure Qualification Record, Rev. 4
8 MC-GTAW, Weld Procedure Specification, Rev. 12
8 MN-GTAW/SMAW, Weld Procedure Specification, Rev. 17
864, Procedure Qualification Record, Rev. 0
901167-101, Liquid Penetrant Examination Report, dated 5-03-10
901167-110, Radiographic Examination Report, dated 5-1-10
901167-111, Radiographic Examination Report, dated 5-1-10
901167-52, Liquid Penetrant Examination Report, dated 4-25-10
901167-85, Liquid Penetrant Examination Report, dated 4-30-10
901167-94, Liquid Penetrant Examination Report, dated 5-2-10
901167-98, Liquid Penetrant Examination Report, dated 5-03-10
901167-99, Liquid Penetrant Examination Report, dated 5-03-10
Boric Acid Corrosion Program Health Report (1/1/2010 – 3/31/2010), dated April 14, 2010
Custom Alloy Corporation Certified Material Test Report (2" 316/316L safe end), dated 2-9-10
L-2010-003, Letter: "Deviation from EPRI MRP-139 – Mandatory Work Product Element," dated January 6, 2010
QR-10-164, Westinghouse Quality Release & Certificate of Conformance, Rev. 0
QR-4500319917-01, Westinghouse Quality Release & Certificate of Conformance, Rev. 0
Weldstar Certificate of Compliance (309/309L filler metal), dated October 28, 2005
Weldstar Certificate of Compliance (316/316L filler metal), dated October 28, 2005

## Section 4OA5: Other Activities

### Licensing Bases Documents

Updated Final Safety Analysis Report
Technical Specifications and Bases
Technical Requirements Manual

### Miscellaneous

EC-249371, Insulation Modifications to Support UT Void Inspections for GL 2008-01, Rev. 0
GL 2008-01 Gap Analysis, Rev. 1
WO 36020860, DBA at Packing, Clean and Adjustment, dtd. 02/15/2009
Gas Accumulation Monitoring Program, Quarterly Trending Report 3Q/2010

### Drawings

8770-D-100, Sh. 5, Charging System Suction, Rev. 0
2998-D-100, Sh. 2A, LPSI & CS Discharge Train A, Rev. 0
8770-D-100, Sh. 1B, ECCS Suction Train B, Rev. 0
8770-D-100, Sh. 2B, LPSI & CS Discharge Train B, Rev. 0
8770-D-100, Sh. 3B, HPSI Discharge Train B, Rev. 0
2998-D-100, Sh. 1B, ECCS Suction Train B, Rev. 0
2998-D-100, Sh. 2B, LPSI & CS Discharge Train B, Rev. 0
2998-D-100, Sh. 3B, HPSI Discharge Train B, Rev. 0
8770-G-125, Sh. CH-G-1, Chemical and Volume Control, Rev. 3
8770-G-125, Sh. CH-G-13, Chemical and Volume Control, Rev. 3
8770-G-125, Sh. SI-N-2, Safety Injection, Rev. 10
8770-G-125, Sh. SI-N-3, Safety Injection, Rev. 4
8770-G-125, Sh. SI-N-6, Safety Injection, Rev. 5
8770-G-125, Sh. SI-N-7, Safety Injection, Rev. 4
8770-G-125, Sh. SI-N-8, Safety Injection, Rev. 5
8770-G-125, Sh. CS-K-1, Safety Injection, Rev. 10
8770-G-125, Sh. CS-K-3, Safety Injection, Rev. 3
8770-G-125, Sh. CS-K-10, Safety Injection, Rev. 4
2998-G-078, Sh. 130A, Safety Injection, Rev. 21
2998-G-078, Sh. 130B, Safety Injection, Rev. 29
2998-G-078, Sh. 131, Safety Injection, Rev. 22
2998-G-088, Sh. 1, Containment Spray and Refueling, Rev. 43
2998-G-088, Sh. 2, Containment Spray and Refueling, Rev. 45
8770-G-078, Sh. 120B, Chemical and Volume Control, Rev. 17
8770-G-078, Sh. 121B, Chemical & Volume Control, Rev. 34
8770-G-078, Sh. 121A, Chemical & Volume Control, Rev. 40
2998-G-088, Sh. 2, Containment Spray and Refueling Water, Rev. 45
2998-G-088, Sh. 1, Containment Spray and Refueling Water, Rev. 43
2998-G-078, Sh. 130B, Safety Injection, Rev. 29
2998-G-078, Sh. 131, Containment Spray and Refueling Water, Rev. 22
2998-G-078, Sh. 130A, Safety Injection, Rev. 21
8770-G-088, Sh. 1, Containment Spray and Refueling Water, Rev. 54

### Calculations

PSL-ENG-SEMS-09-061, GL 2008-01 Gas Accumulation Acceptance Criteria, dated 10/09

PSL-ENG-SEMS-08-030, GL 2008-01 Managing Gas Accumulation in ECCS, SDC & CS Systems, dated 09/09
PSL-ENG-SEMS-08-060, Unvented Highpoint Rationale, Rev. 3
PSL-BFSM-09-001, Gas-Waterhammer within Discharge Piping, Rev. 0
PSL-ENG-SEMS-08-030, Engineering Evaluation Package for GL 2008-01,Att. 13, Rev. 4
NAI-1400-001, Evaluation of Gas Accumulation in PSL ECCS Suction Piping, Rev. 0
NAI-1411-002a, Evaluation of Air Ingestion from Dead End Piping in ECCS Suction, Rev. 0

**Condition Reports Reviewed During Inspection**

AR 00575509, Focus Area: GL 2008-02, (St. Lucie TI-177 Self Assessment), Rev. 1
AR 00573895, UT Looking for Voids per Procedure 1-OSP-03.30B
AR 00566239, Evaluation of 2 inch Void Discovered During UT
AR 00465915, 2009-14560 Potential Variance for GL 08-01 Project
CR 96-1970, RAB Watertight Doors are not being Consistenty Dogged Closed
CR 98-0783, No PM to Addressing the Correct Adjustment of the Dogs
CR 00-0178, Tornadic Protection Dogging Mechanism in Broke
CR 03-0139, Pipe tunnel and RAB doors not sealed
CR 03-3801, Failed ESFAs Component Surv. Due to Degraded Door Seal
CR 03-2942, Inadequate Hurricane Prep RAB Are Not Closing
CR 03-2557, U1 & U2 Submarine Doors Not Closing is a Safety Hazard
CR 03-0225, Absence of PM for Door Seal Replacement
CR 06-24223, U2 ECCS Door Dogs Failing in Several Places
CR 2010-13173, Evaluation of Void Discovered in SB2
CR 2010-14313, Evaluation of 8 inch Void Discovered in HRB4
CR 2010-12730, UT Evaluation of Void Discovered in CA6

**Procedures**

0-EMP-80.07, Preventive Maintenance of EQ Lim MOV Actuators, Rev. 23
0-EMP-80.16, Viper Testing of Globe and Gate Valves, Rev. 2A
0-NOP-100.06, Generic Fill and Vent Instructions, Rev. 0A
1-OSP-02.30, UT Evaluation of CVCS Sentinel Locations, Rev. 0
1-OSP-02.30, UT Evaluation of CVCS Monitored Locations, Rev. 0
1-OSP-03.31B, UT Evaluation of B Train ECCS Monitored Locations, Rev. 0
1-OSP-03.30B, UT Evaluation of B Train ECCS Sentinel Locations, Rev. 1
2-0420060, Venting of the ECCS & CS Systems, Rev. 24
2-OSP-03.30B, UT Evaluation of B Train ECCS Sentinel Locations, Rev. 0
2-OSP-03.30B, UT Evaluation of B Train ECCS Monitored Locations, Rev. 0
2-OSP-68.01, Integrated Leak Rate Test
ADM-09.15, Labeling/Tagging of Plant Equipment, Rev. 0
ADM-17.25, Plant Barrier Control, Rev. 4
ADM- 25.04, Tech Spec Bases Control Program, Rev. 29
ADM- 25.04, Tech Spec Bases Attachment 7, Rev. 1
ADM-29.01A, IST Program for Pumps and Valves, Rev. 2
ADM-78.01, Post Maintenance Testing, Rev. 35
ADM-03.10, Gas Accumulation Management Program, Rev. 1
OSP-503, Technical Specification Guidance, Rev. 43
SCEG-019, System and Component Engineering Walkdown Program, Rev. 11

**Completed Testing**

1-0420060, Venting of the ECCS & CS Systems, Rev. 34, dtd. 05/03/10

1-0420060, Venting of the ECCS & CS Systems, Rev. 34, dtd. 05/28/10
1-0420060, Venting of the ECCS & CS Systems, Rev. 35, dtd. 07/09/10
1-GOP-504, Reactor Plant Heatup-Mode 5 to Mode 4, dtd. 05/28/2010
1-NOP-03.12, Filling of the ECCS Supply Piping, Rev. 12, dtd. 05/31/09
1-NOP-03.13, Venting SDC Trains 1A & 1B, Rev. 0B, dtd. 06/16/10
1-OSP-02.31, UT Evaluation of CVCS Monitored Locations, dtd. 05/16/2010
2-OSP-03.30A, UT Evaluation of A Train ECCS Sentinel Points, Rev. 0, dtd. 02/02/10
2-OSP-03.30A, UT Evaluation of A Train ECCS Sentinel Points, Rev. 0, dtd. 08/03/10
2-OSP-03.30B, UT Evaluation of B Train ECCS Sentinel Points, Rev. 0, dtd. 04/30/10
2-OSP-03.30B, UT Evaluation of B Train ECCS Sentinel Points, Rev. 0, dtd. 07/20/10
2-OSP-03.31A, UT Evaluation of A Train ECCS Monitored Locations, Rev. 0, dtd. 08/03/10
2-OSP-03.31B, UT Evaluation of B Train ECCS Monitored Locations, Rev. 0, dtd. 04/30/10
2-OSP-03.31B, UT Evaluation of B Train ECCS Monitored Locations, Rev. 0, dtd. 07/20/10

**Condition Reports Generated As a Result of Inspection**

AR 590090, Self Assessment Report contained incorrect Charging System configuration
AR 590269, Fire Door RA4 Door Dogs wore out in Unit 1
AR 590271, Fire Door RA4 Door Dogs wore out in Unit 1
AR 590521, NRC walkdown identified Unit 1 RA5 Door dogs not secured
AR 590643, Unit 2 2B ECCS did not have all scheduled GAMP UT surveillances performed
AR 590718, Unit 1 V02356 not depicted on drawing
AR 590883, 2-OSP-68.01 was not updated to reflect new vent valve V07493
AR 590831, NRC walkdown identified V02356 Charging Pump Suction Vent missing valve tag
AR 590273, NRC observed not all Unit 2 HPSI Watertight Door Dogs not secured
AR 590622, NRC noted sharp edged sheet metal pipe insulation as potential safety hazard

Condition Reports

| | | | | |
|---|---|---|---|---|
| 0583542 | 0587053 | 0588157 | 0588558 | 0591757 |
| 05830582 | 0587063 | 0588164 | 0588563 | 0591895 |
| 0583631 | 0587069 | 0588165 | 0588597 | 0591909 |
| 0583637 | 0587109 | 0588168 | 0588694 | 0591998 |
| 0583642 | 0587146 | 0588170 | 0588712 | 0592005 |
| 0583727 | 0587201 | 0588172 | 0588718 | 0592038 |
| 0583777 | 0587273 | 0588173 | 0589224 | 0592063 |
| 0584031 | 0587438 | 0588175 | 0589288 | 0592323 |
| 0584189 | 0587505 | 0588180 | 0589291 | 0592194 |
| 0584285 | 0587532 | 0588181 | 0589337 | 0592384 |
| 0584685 | 0587576 | 0588182 | 0589338 | 0592507 |
| 0584721 | 0587633 | 0588184 | 0588828 | 0592578 |
| 0584721 | 0587665 | 0588187 | 0589020 | 0592719 |
| 0584861 | 0587666 | 0588188 | 0589025 | 0592812 |
| 0585076 | 0587667 | 0588189 | 0589723 | 0592944 |
| 0585332 | 0587671 | 0588190 | 0589749 | 0593136 |
| 0585649 | 0587705 | 0588193 | 0589763 | 0593184 |
| 0586340 | 0587707 | 0588195 | 0589870 | 0593208 |
| 0586394 | 0587718 | 0588196 | 0589896 | 0593254 |
| 0586426 | 0588124 | 0588199 | 0589898 | 0593311 |

| | | | | |
|---|---|---|---|---|
| 0586447 | 0588125 | 0588200 | 0590269 | 0593439 |
| 0586453 | 0588127 | 0588202 | 0590271 | 0593516 |
| 0586577 | 0588129 | 0588204 | 0590273 | 0593521 |
| 0586618 | 0588131 | 0588207 | 0590284 | 0593527 |
| 0586743 | 0588137 | 0588208 | 0590990 | 0593719 |
| 0586745 | 0588141 | 0588224 | 0591080 | 0591757 |
| 0586794 | 0588144 | 0588228 | 0591085 | 0591895 |
| 0586864 | 0588145 | 0588234 | 0591182 | 0591909 |
| 0586875 | 0588147 | 0588242 | 0591191 | 0591998 |
| 0586894 | 0588150 | 0588247 | 0591408 | 0592005 |
| 0587004 | 0588152 | 0588312 | 0591484 | 0592038 |
| 0587052 | 0588154 | 0588387 | 0591729 | 0592063 |
| 0592323 | 0593184 | 0596412 | 0596791 | 0597768 |
| 0592194 | 0593208 | 0596415 | 0596840 | 0597849 |
| 0592384 | 0593254 | 0596492 | 0596856 | 0597875 |
| 0592507 | 0593311 | 0596600 | 0596859 | 0597947 |
| 0592578 | 0593439 | 0596610 | 0596911 | 0597983 |
| 0592719 | 0593516 | 0596611 | 0596944 | 0598066 |
| 0592812 | 0593521 | 0596208 | 0597573 | 0598427 |
| 0593136 | 0593527 | 0596696 | 0597693 | 0598436 |
| 0592944 | 0593719 | 0596709 | 0597750 | |

## LIST OF ACRONYMS

| | |
|---|---|
| CAP | Corrective Action Program |
| CCW | Component Cooling Water |
| CFR | Code of Federal Regulations |
| CR | Condition Report |
| ECCS | Emergency Core Cooling System |
| IP | Inspection Procedure |
| NRC | U.S. Nuclear Regulatory Commission |
| UFSAR | Updated Final Safety Analysis Report |
| WO | Work Order |
| CRDM | Control Rod Drive Mechanism |
| TS | Technical Specifications |
| IST | Inservice Testing |
| NAP | Nuclear Administrative Procedure |

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Sincerely,

/RA/

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

Docket Nos. 50-335, 50-389
License Nos. DPR-67, NPF-16

Enclosure: Inspection Report 05000335/2010005, 05000389/2010005
w/Attachment: Supplemental Information

cc w/encl: (See next page)

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| NAME | SNinh | THoeg | SSanchez | SWalker | CEven | RAiello | RPatterson |
| DATE | 01/27/2011 | 01/27/2011 | 01/27/2011 | 01/27/2011 | 01/27/2011 | 01/27/2011 | 01/27/2011 |
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