



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

January 30, 2012

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
05000335/2011005, 05000389/2011005

Dear Mr. Nazar:

On December 31, 2011, the US Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Plant Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on January 5, 2012, with Mr. R. Anderson 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.

One NRC identified finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve a violation of NRC requirements. One licensee-identified violation which was determined to be of very low safety significance is listed in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

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 St. Lucie. If you disagree with a cross-cutting aspect assignment 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, its enclosure, and your response (if any) 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 Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure: Inspection Report 05000335/2011005, 05000389/2011005
w/Attachment: Supplemental Information

cc w/encl: (See next page)

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4

Report to Mano Nazar from Daniel Rich dated January 30, 2012

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT
05000335/2011005, 05000389/2011005

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-335, 50-389

License Nos.: DPR-67, NPF-16

Report No.: 05000335/2011005, 05000389/2011005

Licensee: Florida Power & Light Company (FPL)

Facility: St. Lucie Nuclear Plant, Units 1 & 2

Location: 6351 South Ocean Drive
Jensen Beach, FL 34957

Dates: October 1 to December 31, 2011

Inspectors: T. Hoeg, Senior Resident Inspector
R. Reyes, Resident Inspector
N. Childs, Resident Inspector
L. Lake, Senior Reactor Inspector (1R08)
M. Coursey, Reactor Inspector (1R08)
A. Butcavage, Reactor Inspector (1R08)
B. Caballero, Senior Operations Engineer (1R11.2)

Approved by: D. Rich, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335/2011-005, 05000389/2011-005; 10/01/2011 – 12/31/2011; St. Lucie Nuclear Plant, Units 1 & 2; Identification and Resolution of Problems.

The report covered a three month period of inspection by resident inspectors and region based inspectors. One Green NCV was 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".

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a NCV of Technical Specification (TS) 6.8.1, which requires in part that written procedures be implemented covering activities referenced in Regulatory Guide (RG) 1.33, Revision 2, dated February 1978, including safety related activities carried out during operation of the reactor plant. Licensee engineering procedure EN-AA-203-1001, "Operability Determinations and Functionality Assessments," was not fully implemented as written on multiple occasions when the 1A and 2A auxiliary feed water pump discharge pressure gauges used for periodic in-service surveillance testing were found out of calibration during periodic maintenance. Specifically, during the performance of maintenance procedure 1400064P, "Installed Plant Instrumentation Calibration," pressure gauge PI-09-7A was found out of calibration, required adjustment, and a condition report written for evaluation in the licensee's corrective action program. The inspector determined a performance deficiency existed when on three separate occasions from 2009 thru 2011, the senior reactor operator concluded incorrectly that the out of calibration gauge conditions did not affect past operability and therefore no engineering evaluation was performed as required by procedure EN-AA-203-1001. The licensee entered this performance deficiency into their corrective action program for resolution.

The finding was more than minor because if the performance deficiency is not corrected then it could lead to a more significant safety concern. Using the NRC Manual Chapter 0609, "Significance Determination Process," Table 4A, "Characterization Worksheet," the finding does not represent an actual loss of safety function or screen as potentially risk significant due to seismic, flooding, or severe weather. A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution, with a corrective action program aspect. Specifically, the operator failed to thoroughly evaluate the condition for past operability of the affected auxiliary feed water pump. [P.1(c)]. (Section 4OA2.3)

Enclosure

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 corrective action program. This violation and corrective actions are listed in Section 4OA7 of this report.

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REPORT DETAILS

Summary of Plant Status:

Unit 1 began the inspection period at full Rated Thermal Power (RTP) and was manually tripped on October 19 due to a lowering condenser vacuum. Unit 1 was restarted on October 20 and reached 45 percent power before being shutdown on October 25 to repair a turbine generator hydrogen seal oil system filter. Unit 1 was restarted on October 27 and returned to full RTP on October 30. On November 27 Unit 1 was shut down for a planned refueling outage where it remained through the end of this inspection period. Unit 2 began the period at full RTP and remained there throughout this inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment

.1 Partial Equipment Walkdowns

a. Inspection Scope

The inspectors conducted four 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 CAP.

- 2B intake cooling water (ICW) header during a yellow online risk configuration while the 2A ICW header was out of service
- 1A and 1B auxiliary feedwater (AFW) Trains while the 1C AFW pump was out of service
- 1A containment spray (CS) train while the 1B CS train was out of service
- 2A and 2B emergency diesel generators while the 2A start-up transformer was out of service

b. Findings

No findings were identified.

Enclosure

.2 Complete System Walkdown

a. Inspection Scope

The inspectors conducted a detailed walkdown and review of the alignment and condition of the 1B component cooling water (CCW) system to verify its capability to meet its design basis function while the 1A CCW system was out of service for scheduled maintenance. The inspectors utilized licensee procedure 1-NOP-14.01 Component Cooling Water System Initial Alignment, and drawing 8770-G-083, Unit 1 Component Cooling Water System Piping and Instrumentation Drawing, 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

.1 Fire Area Walkdowns

a. Inspection Scope

The inspectors toured the following four plant areas during this inspection period to evaluate conditions related to control of transient combustibles and ignition sources, and 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:

Enclosure

- Unit 1 CCW Water Surge Tank Room and adjacent HVAC Room
- Unit 1A Vital Battery Room Area
- 2B Emergency Diesel Generator Room
- 2A and 2B Auxiliary Feedwater Pump Room

b. Findings

No findings were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors interviewed engineering personnel responsible for 1A CCW heat exchanger monitoring and performance. The inspectors reviewed as-found heat exchanger conditions on both the inlet and outlet side of the heat exchanger that used sea water. The inspectors verified the licensee adequately completed re-tubing of the heat exchanger as a result of the eddy current test results. 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 (IP 71111.08P)

a. Inspection Scope

Non-Destructive Examination Activities and Welding Activities

From December 12 – 16, 2011, the inspectors conducted an on-site review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring degradation of the reactor coolant system, emergency feed water systems, risk-significant piping and components, and containment systems in Unit 1. The inspectors' activities included a review of non-destructive examinations (NDEs) to evaluate compliance with the applicable edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC), Section XI (Code of record: 2001 Edition, with 2003 Addenda), and to verify that indications and defects (if present) were appropriately evaluated and dispositioned in accordance with the requirements of ASME Code, Section XI, acceptance standards.

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The inspectors evaluated the following non-destructive examinations required by 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 High Pressure Safety Injection (HPSI) Header B to SDC Loop 2B Pipe-to-Valve weld (SI-180-FW-2), ASME Class 2, diameter – Direct Observation

- Liquid Penetrant Testing (PT) of HPSI Header B to SDC Loop 2B Pipe-to-Elbow weld (SI-181-1-SW-1), ASME Class 2, High Pressure Safety Injection system, 3" diameter – Direct Observation
- Visual Examination (VT) of HPSI Header B to SDC Loop 2B Box Restraint (SI-2415-138), ASME Class 2, High Pressure Safety Injection system, 3" diameter – Direct Observation

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 pre-service 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 ASME Code Section IX.

- WO 39014311-01, Loop 1B1 Drain
- WO 39021658-01 CS-11 V07161 Weld 2009
- WO 39021660-01 CS-10 V07164 Weld 2015

Reactor Pressure Vessel Upper Head Penetration Inspection Activities

The inspectors reviewed records of the visual examination conducted on the Unit 1 reactor vessel head 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.

Enclosure

Boric Acid Corrosion Control (BACC)

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 ASME Code Section XI and 10 CFR Part 50, Appendix B, Criterion XVI.

- CR 2009-11082 – “Active Boric Acid Leak V2326, Safety Relief 2C Charging Pump”
- CR 2009-12716 – “Potential Active Boric Acid Leak on ICI #4”

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. The inspectors reviewed the licensee's Condition Monitoring and Operational Assessment, including technical justification for not performing primary side inspections of the Unit 1 SG tubes to verify compliance with the SG Program requirements in the Plant Technical Specifications.

Identification and Resolution of Problems

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
- 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.

Enclosure

b. Findings

One Un-resolved Issue (URI) was identified.

Introduction

The inspectors identified an unresolved item related to the Reactor Pressure Vessel (RPV) component supports, for which additional information is needed. The information will be used to determine if the performance deficiency that has been identified is more than minor.

Description

The inspectors identified that the scope of the St. Lucie, Unit 1 In-Service Inspection (ISI) Program did not meet the requirements of 10 CFR 50.55a, which requires that in-service inspections be conducted in accordance with the requirements of ASME Code, Section XI, Rules for In-service Inspection of Nuclear Power Plant Components.

The inspectors identified that the nuclear Class 1 reactor pressure vessel supports were not included in the scope of the St Lucie Unit 1 ISI Program for the fourth interval. The ISI program was prepared in accordance with the 2001 Edition of the ASME Section XI Code, with addenda through 2003, as modified by 10 CFR 50.55a. In accordance with the requirements of Article IWF1000, Table IWF-2500-1, Examination Category, Item Number F1.40, "Support Other than Piping Supports, Class 1, 2, 3 and MC," the RPV supports are required to be visually examined per the requirements of the VT-3 examination.

The St. Lucie Reactor Pressure Vessel (RPV) is supported by three supports that are made up of an integrally attached lug and other support components. The function of the support assembly is to provide support to the reactor vessel and attached piping and to allow for thermal movement of the piping during normal and accident conditions. Periodic examinations are required to provide reasonable assurance that these supports can continue to perform their intended function.

The licensee initially indicated that they have documentation that indicated it was acceptable to not include these supports in their ISI program. Subsequently the licensee determined that these supports are subject to the examinations requirements of the ASME Section XI Code and should have been included in the ISI program scope. The licensee entered this issue into their CAP with AR 176657.

Currently the licensee has identified a partial disposition of AR 176657 which includes:

- Revise design drawings to clearly include equipment ID numbers and locations of RPV supports.

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- Update the ISI Program to include the RPV supports and create component ID numbers.
- Schedule the RPV supports for examination prior to startup during the current refueling outage.
- Update ISI isometric drawings to reflect the component ID numbers and locations of the RPV supports.

The visual (VT-3) inspections of the RPV supports are scheduled to be conducted prior to the completion of the current refueling outage. Unit 1 is currently in an extended shutdown for Power Uprate modifications and the outage is scheduled to be completed in March 2012.

Further evaluation of this issue will be performed upon completion of the following licensee's corrective actions:

- Licensee's evaluation of the results of the RPV support examinations conducted during this outage
- Update the ISI Program to include the RPV supports and create component ID numbers
- Revise design drawings to clearly include equipment ID numbers and locations of RPV supports
- Update ISI isometric drawings to reflect the component ID numbers and locations of the RPV supports

This issue requires further review and additional information from the licensee to complete its disposition in accordance with IMC-0609. Therefore, this issue will be tracked as an unresolved item (05000335/2011005-01).

1R11 Licensed Operator Regualification Program and Licensed Operator Performance

.1 Resident Inspector Quarterly Review

a. Inspection Scope

On October 5, 2011, the inspectors observed and assessed licensed operator actions during a simulated Unit 2 reactor coolant system leak that escalated to a loss of coolant accident. The unit was manually tripped, and lost all containment spray and several safety related electrical busses. The inspectors also reviewed simulator physical fidelity and specifically evaluated the following attributes related to the operating crews' performance:

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- 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 Regualification Examination Results

a. Inspection Scope

On August 19, 2011, the licensee completed the requalification 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 operating tests and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 0609 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 CRs for the three 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

Enclosure

reports. The inspectors verified that equipment problems were being identified and entered into the licensee's CAP.

- Unit 1 emergency diesel generator system
- Unit 1 480 volt switchgear and motor controls
- Unit 2 480 volt switchgear and motor controls

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 four 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:

- Unit 2, 2A intake cooling water pump, 2A intake cooling water header, and the control element assembly out of service
- Unit 1, A and B intake cooling water pumps and intake cooling water headers during execution of infrequently performed evolution per procedure 1-LOI-27.01, Wood Flour Addition In Circulating Water Pump Suction Wells
- Unit 1, 1A high pressure safety injection pump, 1A emergency core cooling system exhaust fan, ultimate heat sink valves, and 1A and 1B instrument air compressors
- Unit 2, 2C component cooling water pump, 1A emergency diesel generator, 2A low pressure safety injection pump, 2A containment spray pump, and 2A high pressure safety injection pump

b. Findings

No findings were identified.

1R15 Operability Evaluationsa. Inspection Scope

The inspectors reviewed the following seven AR interim dispositions and operability determinations to ensure that operability was properly supported and the affected SSCs remained available to perform their safety functions 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.

- AR 1695243, 1A high pressure safety injection piping air void
- AR 1699481, 2B1 emergency diesel generator fuel oil pump leak
- AR 1701611, Unit 1 HCV-25-6 stroke test
- AR 1704256, 1B emergency diesel generator starting air compressor failure
- AR 1710885, 1A emergency diesel generator 24 hour run out of spec data
- AR 1712841, Evaluation of containment integrity with V4111 removed
- AR 1717205, U1 drainage of ECC fluid to yard sump

b. Findings

No findings were identified.

1R18 Plant Modificationsa. Inspection Scope

The inspectors reviewed the following three temporary plant modifications. Each temporary system alteration (TSA) was performed in accordance with procedure ADM-17.18, "Temporary System Alterations." The inspectors reviewed the 10 CFR 50.59 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 available portions of 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.

- TSA 2-11-005, Unit 2 Control Room Alarm J-44 Core Cooling Channel 'A'
- TSA 1-10-028, Unit 1 RCP Oil Level Transmitter LT-1156 Alarm Set Point

Enclosure

- TSA 2-11-004, Unit 2 Control Room Hot Leg Injection High Pressure Alarm

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the five 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 40109140, Unit 1 fuel handling up-ender machine maintenance
- WO 40110794, 2A intake cooling water pump maintenance
- WO 40117482, 1-MV-09-9 valve maintenance
- WO 40125823, 1B emergency diesel oil day tank level indicator LI-59-003B
- WO 94034995, 2B emergency diesel generator fuel oil pump repair

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities

.1 Unit 1 Forced Outages

a. Inspection Scope

On October, 19, 2011, Unit 1 was operating at 86 percent power when the 1A1 main circulating water pump tripped off unexpectedly due to an electrical short in the motor windings causing an over current condition. The 1A2 main circulating water pump was out of service for maintenance at the time of the event with 1A1, 1B1, and 1B2 in-service. The trip of the 1A1 pump resulted in a lowering of main condenser vacuum requiring the operators to perform an unplanned manual reactor trip. The 1A2 pump was restored and returned to service. The inspector observed control room activities following the reactor plant shutdown and subsequent reactor plant startup on October 20, 2011, including synchronizing the turbine generator to the grid.

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On October 25, 2011, Unit 1 was operating at 47 percent power when it was shutdown to repair the main generator hydrogen seal oil system CUNO filter. The CUNO filter was unable to be cleaned while in-service due to a broken filter housing handle assembly which resulted in differential pressure increasing requiring planned maintenance that could only be performed while the unit was shutdown. The inspector observed control room activities following the planned reactor plant shutdown and subsequent reactor plant startup on October 27, 2011, including synchronizing the turbine generator to the grid.

Monitoring of Shutdown Activities

During both forced outage periods, the inspectors observed portions of the plant shutdown to Mode 3 Hot Standby conditions to verify that operating restrictions and procedural requirements were followed. The inspectors reviewed and monitored licensee controls and procedural compliance associated with decay heat removal operations. The inspectors observed control room operator communications, place keeping, and reviewed chronological log entries.

Monitoring of Heat up and Startup Activities

On October 20, 2011, and October 27, 2011, the inspectors observed control room activities during the reactor restart to verify that reactor parameters were within safety limits and that startup evolutions were performed in accordance with licensee procedure 1-GOP-302, "Reactor Startup Mode 3 to Mode 2."

b. Findings

No findings were identified.

.2 Unit 1 Planned Refueling Outage

a. Inspection Scope

Outage Planning, Control, and Risk Assessment

Unit 1 refueling outage started on November 26, 2011. During daily outage planning activities by the licensee, the inspectors reviewed the risk reduction methodology employed by the licensee during various refueling outage (RFO) SL1-24 meetings including Outage Control Center (OCC) morning meetings, Operations Daily Team Meetings, and Schedule Performance Update Meetings. The inspectors examined the licensee implementation of shutdown safety assessments during SL1-24 in accordance with Administrative Procedure 0-AP-010526, Outage Risk Assessment and Control, to verify whether a defense in depth concept was in place to ensure safe operations and avoid unnecessary risk. Furthermore, the inspectors regularly monitored outage planning and control activities in the OCC, and interviewed responsible OCC management during the outage to ensure system, structure, and

Enclosure

component configurations and work scope were consistent with TS requirements, site procedures, and outage risk controls.

Monitoring of Shutdown Activities

The inspectors observed portions of the reactor plant cool down of Unit 1 beginning on November 28, 2011. The inspectors reviewed operating logs and plant parameters to determine that reactor plant shutdown activities were conducted in accordance with Technical Specifications and applicable operating procedures, including 1-GOP-123, Turbine Shutdown - Full Load to Zero Load; 1-GOP-203, Reactor Shutdown; 1-GOP-305, Reactor Plant Cooldown - Hot Standby To Cold Shutdown; and 1-NOP-03.05, Shutdown Cooling. The inspectors performed walk downs of important systems and components used for decay heat removal from the reactor core and the spent fuel pool during the shutdown period including the intake cooling water system, component cooling water system, and spent fuel pool cooling system.

Outage Activities

The inspectors examined outage activities to verify that they were conducted in accordance with TS, licensee procedures, and the licensee's outage risk control plan. Some of the more significant inspection activities accomplished by the inspectors were:

- Walked down selected safety-related equipment clearance orders
- Verified operability of RCS pressure, level, flow, and temperature instruments during various modes of operation
- Verified electrical systems availability and alignment
- Verified shutdown cooling system and spent fuel pool cooling system operation
- Evaluated implementation of reactivity controls
- Reviewed control of containment penetrations
- Examined foreign material exclusion (FME) controls put in place inside containment (e.g., around the refueling cavity, near sensitive equipment and RCS breaches) and around the spent fuel pool (SFP)
- Verified worker fatigue was properly managed.

Refueling Activities and Containment Closure

The inspectors observed selected fuel handling operations being performed according to TS and applicable operating procedures from the main control room, refueling cavity inside containment, and the SFP. The inspectors also examined licensee activities to control and track the position of each fuel assembly. Furthermore, the inspectors evaluated the licensee's ability to close the containment equipment, personnel, and emergency hatches in a timely manner per procedure 1-MMP-68.02, Containment Closure.

Enclosure

Correction Action Program

The inspectors reviewed CRs generated during SL1-24 to evaluate the licensee's threshold for initiating CRs. The inspectors reviewed CRs to verify priorities, mode holds, and significance levels were assigned as required. Resolution and implementation of corrective actions of several CRs were also reviewed for completeness. The inspectors routinely reviewed the results of Quality Assurance (QA) daily surveillances of outage activities.

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors either reviewed or witnessed the following eight 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 configuration required for the system to perform its safety function. The tests reviewed included two in-service test (IST) surveillances. The inspectors verified that surveillance issues were documented in the CAP.

- 1-SMM-08.08, Main Steam Safety Valve Set Point Surveillance Using Furmanite Trevitest Mark VIII-2 Equipment
- 2-OSP-66.01, Control Element Assembly Quarterly Exercise
- 1-OSP-25.09A, Train A ECCS Ventilation Monthly Surveillance Test (ST)
- 1-OSP-59.01B, 1B Emergency Diesel Generator (EDG) Monthly ST
- 2-OSP-59.01B, 2B Emergency Diesel Generator (EDG) Monthly ST
- OP-2-0010125A, MV-07-1A Stroke Test (In-service test)
- 2-OSP-09-01A, 2A Auxiliary Feedwater Pump Code Run
- 1-OSP-68.02, Local Leak Rate Test Fuel Transfer Canal Bellows (In-service test)

b. Findings

No findings were identified.

Enclosure

1EP6 Exercise EvaluationEmergency Preparedness Drilla. Inspection Scope

On October 5, 2011, the inspectors observed licensed operators in the simulator, technical support center staff, and the emergency operations facility staff during a drill of the site emergency response organization. The drill scenario included a reactor coolant system leak that increased to a loss of cooling accident, a manual reactor trip, loss of containment spray, and failure of electrical safety related busses. Plant conditions degraded to a point where the licensee declared a general area emergency. 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 (EIPs) and 10 CFR 50.72 requirements. The inspectors specifically reviewed the Site Area Emergency and General Emergency classifications and notifications were in accordance with licensee procedures EIP-01, Classification of Emergencies and EIP-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 ACTIVITIES4OA1 Performance Indicator VerificationInitiating Events and Mitigating Systems Cornerstonesa. Inspection Scope

The inspectors checked licensee submittals for the performance indicators (PIs) listed below for the period October 1, 2010, through September 30, 2011, 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

Enclosure

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: Locking Device Cable Not Properly Secured To Valve Handle

a. Inspection Scope

The inspectors selected AR 1671544 for a more in-depth review of the circumstances and the corrective actions that followed. The investigation on this condition report included an extent of condition review to determine if locking devices on safety related valves were adequately installed on Unit 1 and Unit 2.

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

b. Findings

No findings were identified.

Enclosure

.3 Semi-Annual Trend Review: Gauge Calibration Failures of Unit 1 and Unit 2 Auxiliary Feed Water System Pressure Instrument PI-09-7A

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 AR 1705077 for trending due to multiple ARs being written in a short period of time that identified auxiliary feed water pump discharge pressure gauges found out of calibration during routine planned maintenance activities that are used in performance of technical specification in-service testing.

b. Findings and Observations

Introduction: The inspectors identified a NCV of Technical Specification (TS) 6.8.1, which requires in part that written procedures be implemented covering activities referenced in Regulatory Guide (RG) 1.33, Revision 2, dated February 1978, including safety related activities carried out during operation of the reactor plant. Licensee engineering procedure EN-AA-203-1001, "Operability Determinations and Functionality Assessments," was not fully implemented as written on multiple occasions when the 1A and 2A auxiliary feed water pump discharge pressure gauges used for periodic in-service surveillance testing were found out of calibration during periodic maintenance. The inspector determined a performance deficiency existed when on three separate occasions from 2009 thru 2011, the senior reactor operator concluded incorrectly that the out of calibration gauge conditions did not affect past operability and therefore no engineering evaluation was performed as required by procedure EN-AA-203-1001. The licensee entered this performance deficiency into their corrective action program for resolution.

Description: On November 9, 2011, the inspectors performed a surveillance test inspection of the 2A auxiliary feed water pump. The inspectors checked that the installed instrumentation used for the test was properly calibrated and found that the installed discharge pressure gauge had failed previous calibration checks on multiple occasions. Specifically, during the licensee's performance of maintenance procedure 1400064P, "Installed Plant Instrumentation Calibration," pressure gauge PI-09-7A was found out of calibration, required adjustment, returned to service, and an AR was written for evaluation in the licensee's corrective action program.

The inspectors reviewed ARs 472784, 1654487, and 1682480 and determined that the licensee's subject operability determinations concluded the 2A and 2B auxiliary feed water pumps were fully operable without identifying that the gauges are used for periodic in-service surveillance tests required by technical specifications and may have been inaccurate when used during past quarterly tests. The gauges are calibrated every 18 months and were found out of calibration on November 18, 2009 and May 24, 2011 for the 2A pump and August 31, 2011 for the 1A pump. The inspector also noted that the planned calibration maintenance frequency for Unit 1

Enclosure

and Unit 2 gauges was 18 months and 36 months respectively with no justification for the difference in their planned maintenance program.

The inspectors determined that on three separate occasions from 2009 through 2011 the senior reactor operator concluded that the out of calibration gauge conditions did not affect past operability, stating that the gauges are used for pressure indication only and in one case stating in error that it was not used for surveillance testing. The inspectors determined that the maintenance identified gauge inaccuracies could have affected technical specification pump flow requirements and the SRO incorrectly screened the operability status of the pumps in contrast to the immediate operability screening guidelines of procedure EN-AA-203-1001, in the Attachment. As a result, no engineering evaluation was performed to support operability required by procedure EN-AA-203-1001, in the Attachment. The inspectors reviewed the previous affected quarterly pump surveillance test data for the 1A and 2A AFW pumps and found no data out of specification using the most recent licensee calibration data from associated gauge calibration maintenance work orders.

Analysis: The licensee's failure to follow procedure EN-AA-203-1001, "Operability Determinations and Functionality Assessments," is a performance deficiency. The finding was determined to be of more than minor significance because if the performance deficiency is not corrected then it could lead to a more significant safety concern. Using the NRC Manual Chapter 0609, "Significance Determination Process," Table 4A, "Characterization Worksheet," the finding does not represent an actual loss of safety function or screen as potentially risk significant due to seismic, flooding, or severe weather. The inspectors determined that the finding was of very low safety significance because it did not result in an actual loss of operability to the 1A and 2A auxiliary feed water pumps. A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution, with a corrective action program aspect. Specifically, the operator failed to thoroughly evaluate the condition for past operability of the affected auxiliary feed water pump. [P.1(c)].

Enforcement: Technical Specification 6.8.1, "Procedures and Programs," requires in part that written procedures be implemented covering activities referenced in Regulatory Guide (RG) 1.33, Revision 2, dated February 1978, including safety related activities carried out during operation of the reactor plant. Contrary to the above, the licensee failed to fully implement procedure EN-AA-203-1001, "Operability Determinations and Functionality Assessments," on multiple occasions when auxiliary feed water pump discharge pressure gauges used for periodic in-service surveillance testing were found out of calibration during periodic maintenance. Because the licensee entered the issue into their corrective action program as ARs 1705077 and 1705576 and the finding is of very low safety significance (Green), this violation is being treated as an NCV, consistent with the NRC Enforcement Policy: NCV 05000335/389, 2011005-02, Failure to Follow Operability Determination Procedure for Evaluation of Past Operability.

Enclosure

4OA3 Event Follow-up.1 (Closed) LER 05000335/389, 2010-005-00, Failure to Implement Required Compensatory Actions

On November 17, 2011, the NRC completed a security baseline inspection where the inspector reviewed the details associated with an unplanned loss of power to an electrical inverter in May 2010. The inspector documented his findings in inspection report 05000335/2011403 and 05000389/2011403. This LER is closed.

.2 (Closed) LER 2010-002-00, Unit 1 Opened ECCS Boundary Door in Violation of Identified Compensatory Measures

On April 4, 2010, while Unit 1 was operating at full power, Operations identified that the breach permit process for boundary door RA-8, Pipe Tunnel East door, had not been completed per the station's administrative breach permit procedure, ADM-17.25, Plant Barrier Control. Consequently no compensatory actions were in place. Door RA-8 is one of several doors that provide a barrier between the ECCS pump room area and the surrounding areas of the reactor auxiliary building. The door had been breached to support flushing and draining of a temporary air conditioning unit. This condition resulted in compromising the ECCS area ventilation pressure boundary during the period when compensatory measures were not in place. The ECCS Area Ventilation System would not have been able to maintain the required vacuum and any potential radioactive materials leaking from the ECCS equipment following a LOCA may not be filtered prior to reaching the environment. The licensee's investigation identified that the plant barrier procedure was adequate but had not been completed prior to starting work. Corrective actions included immediately stopping all work and closing the door, and training new supervisors on the breach permit procedure. This finding constitutes a violation of very low safety significance and the enforcement aspects of this finding are discussed in Section 4OA7 of this report. This LER is closed.

4OA5 Other Activities.1 Quarterly Resident Inspector Observations of Security Personnel and Activitiesa. 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

Enclosure

considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Findings

No findings were identified.

.2 Independent Spent Fuel Storage Facility (ISFSI) Walkdown (IP 60855.1)

a. Inspection Scope

On December 2, 2011, the inspectors conducted a walkdown of the ISFSI controlled access fenced-in cask area per inspection procedure 60855.1, "Operation of an ISFSI at Operating Plants." The inspectors observed each cask building temperature indicator and passive ventilation system to be free of any obstruction allowing natural draft convection decay heat removal through the air inlet and air outlet openings. The inspectors observed associated cask building structures to be structurally intact with security and radiation controlled access to the ISFSI area to be functional.

b. Findings

No findings were identified.

.3 Institute of Nuclear Power Operations (INPO) Operations Training Accreditation Report Review

The inspectors reviewed the final INPO operator training accreditation report, dated September 7, 2011. The report did not identify any significant licensee performance issues that had not been previously addressed or reviewed by the NRC.

4OA6 Meetings

Exit Meeting Summary

Resident Inspection

The resident inspectors presented the inspection results to Mr. R. Anderson and other members of licensee management on January 5, 2012. 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.

In-service Inspection

The region based inspectors presented their inspection results to Mr. R. Anderson, site Vice President, and his staff on December 16, 2011. A re-exit was conducted on

Enclosure

January 12, 2012. The licensee did not identify any material provided to the inspectors to be proprietary.

4OA7 Licensee Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as Non-cited Violations:

Unit 1 TS 6.8.1 requires, in part, that written procedures be established, implemented, and maintained recommended in Regulatory Guide 1.33, Quality Assurance Program Requirements, which states in part that maintenance procedures for safety related equipment should provide proper instructions appropriate for the circumstances. Administrative procedure ADM-17.25, Plant Barrier Control, provides the requirements for obtaining a Breach Permit and implementing compensatory measures when an opening or removal of a controlled barrier is planned. Contrary to this, Unit 1 Door RA-8 was breached and no compensatory actions were implemented. This resulted in the Emergency Core Cooling Area Ventilation System being breached for 39 hours. This finding is of very low safety significance because there was no actual loss of safety system. This event is documented in CR 1702023.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

KEY POINTS OF CONTACT

Licensee personnel:

R. Anderson, Site Vice President
D. Calabrese, Emergency Preparedness Manager
D. Cecchett, Licensing Engineer
J. Hamm, Site Engineering Director
B. Hughes, Plant General Manager
E. Burgos, Chemistry Manager
M. Haskin, Maintenance Manager
S. Duston, Training Manager
K. Frehafer, Licensing Engineer
D. Hanley, Maintenance Programs Supervisor
J. Heinold, Chemistry Technical Supervisor
M. Hicks, Director of Plant Improvement
D. Huey, Work Control Manager
D. DeBoer, Operations Manager
M. Bladek, Assistant Ops Manager
E. Katzman, Licensing Manager
J. Kramer, Site Safety Manager
R. McDaniel, Fire Protection Supervisor
C. Martin, Radiation Protection Manager
J. Owens, Performance Improvement Department Manager
R. Filipek, Design Engineering Manager
M. Snyder, Site Quality Assurance Manager
G. Swider, Systems and Component Engineering Manager
T. Young, Security Manager
D. Nowakowski, ISI Planning
B. Moss, BACCP
T. Coste, Repair and Replacement Program Manager
G. Alexander, SG Inspection Activities Lead

NRC personnel:

D. Rich, Chief, Branch 3, Division of Reactor Projects
G. Wilson, Senior Project Engineer, Division of Reactor Projects
T. Hoeg, Senior Resident Inspector
R. Reyes, Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000335/2011005-01	URI	Reactor Pressure Vessel supports not included in the St. Lucie ISI Program (Section 1R08(b))
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Opened and Closed

05000335/389, 2011005-02	NCV	Failure to Follow Operability Determination Procedure for Evaluation of Past Operability (Section 4OA2)
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Closed

05000335/389, 2010-005-00	LER	Failure to Implement Required Compensatory Actions (Section 4OA3)
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05000335/2010-002-00	LER	Unit 1 Opened ECCS Boundary Door in Violation of Identified Compensatory Measures (Section 4OA3)
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Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 40A2: Identification and Resolution of Problems

Work Orders

37025651, PI-09-7A AFW PP 1A Calibration
39011419, PI-09-7A AFW PP 2A Calibration
39011419, PI-09-7B AFW PP 2B Calibration
39021658, CS-11 V07161 Weld 2009
39021660, CS-10 V07164 Weld 2015
39023678, PI-09-7A AFW PP 2A Calibration
40019774, PI-09-7B AFW PP 1B Calibration
40020514, PI-09-7A AFW PP 2A Calibration
40020514, PI-09-7B AFW PP 2B Calibration

Section 1R08 Inservice Inspection (ISI) Activities

Procedures

St. Lucie Administrative Procedure, ADM-29.03, "Boric Acid Corrosion Control Program," Revision 9
St. Lucie Administrative Procedure, 0010728, "Unit Restart Readiness", Rev 60, Page 23 item 2
St. Lucie, In-service Surveillance Procedure, "Reactor coolant System Leak ASME Leakage Test", Attachment 3, Rev 1C
St. Lucie Administrative Procedure, ADM-02.02, "Steam Generator Integrity Program Administration", Revision 9

Corrective Action Documents

AR 01684431, NRC Resident concern with corrosion on U-1 V09124 B AFW PP
AR 01715732, Dry Boric acid found on RCP1A1 Seal Package
AR 01716165, HVS-1A CCW Containment Pipe Supports reported bowed (Connecting flange plates are bent-AJB)
AR 01716171, HVS-1A CCW Containment Pipe Condition Degraded by Support (Corrosion between support attachment point and pipe-AJB)
AR 01716174, HVS-1B CCW Containment Pipe Condition Degraded by Support (Corrosion between support attachment point and pipe-AJB)
AR 00469158, 2010-8851-Unit 2 – 2A ICW Leak Downstream the 2A CCW HX ISI
AR 1716777, NRC inspector concern regarding RPV BMV documentation
AR 1716657, RPV supports not identified in the St. Lucie ISI program.
AR 1715802, A1 Safety Injection Tank (SIT) Discharge line in contact with floor drain line
AR 1716657, RPV supports not identified in the St. Lucie ISI Program

Other

St Lucie Unit 1 Steam Generators Degradation Assessment Update for End-Of-Cycle 23 Refueling Outage
 Summary Report for St Lucie Unit 1, SL1-23 Outage, April 2010, Bare Head Visual Inspection (NDE4.15-001, Summary No.011701)
 E19368-B40-002, Rev 0, "Reactor Vessel Support Details". (CE)
 E19367-B40-003, Rev 0, "Reactor Vessel Support Arrangement" (CE)
 E-STD-220-003, Rev 01, "Reactor Vessel Support Arrangement Installation" (CE)
 8770-4357, Rev 0, "Reactor Supports" (Ebasco Services Inc.)
 8770-199, Rev. 3, "Vessel Supports for 172" ID PWR" (CE)
 8770-4310, Rev 0, "Reactor Supports" (Ebasco Services Inc.)
 8770-4305, Rev 0, "Reactor Supports" (Ebasco Services Inc.)
 8770-4306, Rev 1, "Details of Reactor Supports" (Ebasco Services Inc.)
 8770-4307, Rev 0, "Reactor Supports" (Ebasco Services Inc.)
 St. Lucie Unit 1 – Issuance of Amendment Regarding Steam Generator Tube Integrity (TAC No. MD1382)
 NEI 97-06 Rev.3, Steam Generator Program Guidelines, January 2011.
 EPRI Report TR-1019038, Steam Generator Integrity Assessment Guidelines, Rev. 3
 Work Order Task 39014311 01 Loop 1B1 Drain
 Work Order 39021658 01 CS-11 V07161 Weld 2009
 Work Order 39021660 01 CS-10 V07164 Weld 2015
 Welder Certification records for Work Order 39014311
 Welder Certification records for Work Order 39021658
 Welder Certification Records for 39021660
 NDE Certification Records for Work Order 39014311
 NDE Certification Records for Work Order 39021658
 NDE Certification Records for Work Order 39021660
 Boric Acid Leakage Data Sheets for valves V-07101, FCV-2161, V-2829, V-2336, V-3432

Section 1R20: Refueling and Other Outage ActivitiesProcedures

Nuclear Policy Procedure NP-910, Plant Readiness for Operations
 1-NOP-4.04 Fuel Pool Cooling and Purification System Normal Operations
 1-OSP-68.03, Local Leak Rate Test
 OP-AA-100-1000, Conduct of Operations
 St. Lucie Nuclear Oversight Report PSL-09-064, Fire Protection Audit
 St. Lucie Daily Quality Summaries
 Health Physics Procedure HPP-4, Scheduling of Health Physics Activities
 Operations Department Policy OPS-119, Standing Orders/Night Orders
 St. Lucie Radiation Protection Department Night Order 2009-023
 St. Lucie Administrative Procedure, ADM-29.03, "Boric Acid Corrosion Control Program"
 St. Lucie Administrative Procedure, 0010728, "Unit Restart Readiness"
 St. Lucie In-service Surveillance Procedure, "Reactor coolant System Leak ASME Leakage Test", Attachment 3

Attachment

St. Lucie Administrative Procedure, ADM-02.02, "Steam Generator Integrity Program Administration"

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