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

July 31, 2014

EA-14-124

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

SUBJECT: TURKEY POINT NUCLEAR GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000250/2014003, 05000251/2014003 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Nazar:

On June 30, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Turkey Point Nuclear Generating Station Units 3 and 4. On July 2, 2014, the NRC inspectors discussed the results of the inspection with Mr. Kiley and other members of your staff. The inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. The finding involved a violation of NRC requirements. The NRC is treating this violation as non-cited (NCV) consistent with Section 2.3.2.a of the Enforcement Policy.

In addition, the NRC is exercising enforcement discretion for one violation of very low safety significance that was not the result of a performance deficiency. Contrary to Technical Specification (TS) 3.4.6.2, “Reactor Coolant System Operational Leakage,” Unit 3 operated in Mode 1 with pressure boundary leakage from the annular space surrounding the pressurizer heater sleeve at penetration 11 longer than the TS allowed outage time. Although a violation of the TS occurred, the violation was not attributable to an equipment failure that was avoidable by reasonable licensee quality assurance measures or management controls. Therefore, the TS 3.4.6.2 violation was not associated with a licensee performance deficiency. The NRC concluded that the violation was of very low safety significance. As discussed in Section 2.2.4.d of the Enforcement Policy, a violation involving no performance deficiency is considered an exception to using only the operating reactor assessment program. After consultation with the Region II Regional Administrator and the Office of Enforcement, the NRC has concluded that the exercise of enforcement discretion is warranted in accordance with Section 3.5 of the Enforcement Policy, because the violation resulted from matters not within the licensee’s control. Accordingly, this violation will not be documented or considered in the NRC’s assessment process.

If you contest the violations or significance of 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 U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at Turkey Point Nuclear Generating Station Units 3 and 4.

If you disagree with a cross-cutting aspect assignment or the finding not associated with a regulatory requirement 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 the Turkey Point Nuclear Generating Station Units 3 and 4.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agency wide Documents 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/

Joel Munday, Director
Division of Reactor Projects

Docket Nos.: 50-250, 50-251
License Nos.: DPR-31, DPR-41

Enclosure: Inspection Report 05000250/2014003, 05000251/2014003,
w/Attachment: Supplemental Information

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Letter to Mano Nazar from Joel Munday dated July 31, 2014.

SUBJECT: TURKEY POINT NUCLEAR GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000250/2014003, 05000251/2014003 AND EXERCISE OF ENFORCEMENT DISCRETION

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-250, 50-251
License Nos:	DPR-31, DPR-41
Report Nos:	05000250/2014003, 05000251/2014003
Licensee:	Florida Power & Light Company (FP&L)
Facility:	Turkey Point Nuclear Generating Station, Units 3 & 4
Location:	9760 S. W. 344th Street Homestead, FL 33035
Dates:	April 1 to June 30, 2014
Inspectors:	T. Hoeg, Senior Resident Inspector M. Endress, Resident Inspector R. Williams, Senior Reactor Inspector A. Butcavage, Reactor Inspector
Approved by:	Joel Munday, Director Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000250/2014003, 05000251/2014003; 01/01/2014 – 03/31/2014; Turkey Point Nuclear Plant, Units 3 & 4; Surveillance Testing.

The report covered a three-month period of inspection by the resident inspectors and region-based specialist inspectors. One Green non-cited violation was identified. The significance of inspection findings are indicated by their color (i.e., Green, White, Yellow, or Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP) dated June 2, 2011. The cross-cutting aspects were determined using IMC 0310, "Components Within the Cross-Cutting Areas," dated December 19, 2013. All violations of NRC requirements were dispositioned in accordance with the NRC's Enforcement Policy dated July 9, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green: The NRC identified a non-cited violation (NCV) of Technical Specification 6.8.1, Procedures, for the licensee's failure to implement procedure 4-OSP-041.1, Reactor Coolant System (RCS) Leak Rate Calculation. Specifically, the licensee did not perform a Unit 4 reactor coolant system leak rate statistical calculation to determine the change in the average unidentified RCS leak rate which resulted in not performing a Level 3 RCS leak rate investigation. Corrective actions included performing the calculation, performing a detailed leak investigation, and entering the performance deficiency in their corrective action program as action request 01962745.

  The performance deficiency was determined to be more than minor because it was associated with the initiating events cornerstone attribute of human performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inspectors determined that the licensee's failure to fully implement the procedure directly resulted in not performing an RCS Level 3 leak rate investigation. The finding was screened using IMC 0609, Significance Determination Process, Attachment 0609.04, Initial Characterization of Findings, Tables 2 and 3, dated July 1, 2012, and Appendix A, The Significance Determination Process (SDP) for Findings At-Power, Exhibit 1 for Initiating Events , dated July 1, 2012. The inspectors determined the finding was of very low safety significance because after a reasonable assessment of the degradation, the inspectors determined the finding would not have likely affected other systems used to mitigate a Loss of Coolant Accident (LOCA) resulting in total loss of their function. This finding was associated with a cross-cutting aspect in the procedure adherence component in the human performance area because the licensee failed to fully implement the RCS leak rate calculation procedure (H.8). (Section 1R22)

REPORT DETAILS

Summary of Plant Status

Unit 3 began this inspection period in Mode 6 for a planned refueling outage. Unit 3 was restarted on April 24 and returned to 100 percent of rated thermal power (RTP) on May 2 where it remained until June 23 when power was reduced to 50 percent of RTP to troubleshoot and repair a main feedwater pump. Unit 3 remained at 50 percent of RTP through the end of this inspection period.

Unit 4 began this inspection period at 100 percent of RTP where it remained until May 25 when it was shut down for a planned maintenance outage to repair a leaking check valve body to bonnet mechanical joint on valve 4-875A. Unit 4 was restarted on May 28 and returned to 100 percent of RTP on June 1 where it remained through the end of this inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity (R)

1R01 Adverse Weather Protection

.1 Hurricane Season Preparations

a. Inspection Scope

During the months of May and June, the inspectors reviewed and verified the status of licensee actions taken in accordance with their procedural requirements prior to the onset of hurricane season. The inspectors reviewed Turkey Point procedure 0-ADM-116, Hurricane Season Readiness for completion. The inspectors performed site walk downs of the systems or areas listed below to determine if the licensee had made the required preparations in accordance with their procedure. Condition reports (CRs) were reviewed to determine if the licensee was identifying and resolving conditions associated with adverse weather preparedness.

- Switchyard and Startup Transformer AC systems (Grid Stability Sample)
- Unit 3 and Unit 4 intake cooling water structures
- Unit 3 and Unit 4 component cooling water (CCW) systems
- Unit 3 and Unit 4 intake cooling water (ICW) systems
- Unit 3 and Unit 4 turbine and auxiliary buildings

b. Findings

No findings were identified.

.2 External Flooding Preparations

a. Inspection Scope

During the week of May 19, the inspectors performed walkdown inspections of Unit 3 and Unit 4 reactor auxiliary buildings, including doors, flood protection barriers, penetrations and the integrity of the perimeter structure. The inspectors verified the licensee had implemented surveillance procedure 0-SMM-102.1, Flood Protection Stop Log and Penetration Seal Inspection, to assure that vulnerabilities had been identified and evaluated by the licensee. In addition, the Inspectors walked down the Unit 3 and Unit 4 emergency diesel generators (EDG) and fuel oil tanks, auxiliary feedwater (AFW) pump areas and the turbine buildings. The inspectors also reviewed the applicable Updated Final Safety Analysis Report (UFSAR) sections, Technical Specifications, and other licensing basis documents regarding external flooding and flood protection, including specific plant design features to mitigate the maximum flood level. Corrective Action Program (CAP) documents and work orders (WOs) related to actual flooding or water intrusion events over the past year were also reviewed by the inspectors to assure that the licensee was identifying and resolving severe weather related issues that caused or could lead to external flooding of safety related equipment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial Equipment Walk Downs (Quarterly)

a. Inspection Scope

The inspectors conducted three 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. Documents reviewed are listed in the Attachment.

- 4B emergency diesel generator (EDG) while 4A EDG was out of service (OOS)
- 3A EDG while 3B EDG was OOS
- 3B and 3C intake cooling water (ICW) trains while the 3A ICW train was OOS

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Fire Area Walkdowns

a. Inspection Scope

The inspectors toured the following five plant areas to evaluate conditions related to control of transient combustibles, ignition sources, material condition, and operational status of fire protection systems including fire barriers used to prevent fire damage and propagation. The inspectors reviewed these activities using provisions in the licensee's procedure 0-ADM-016, "Fire Protection Plan" and 10 CFR Part 50, Appendix R. The licensee's fire impairment lists were routinely reviewed. In addition, the inspectors reviewed the condition report database to verify that fire protection problems were being identified and appropriately resolved. The inspectors accompanied fire watch roving personnel on a tour of fire protection impairments and risk significant fire areas to assure monitoring of area status and to verify proper identification and handling of transient combustibles. The following areas were inspected:

- Unit 3 containment, fire zone 60
- Unit 3 and Unit 4 turbine building 42 foot elevation, fire zone 117
- Unit 4 480 volt load center rooms A and B, fire zones 93 and 94
- Unit 3 and Unit 4 DC equipment rooms 4A and 3B, zones 108A and 108B
- Unit 3 charging pump room, fire zone 055

b. Findings

No findings were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors conducted walkdowns of the following areas subject to internal flooding to ensure that flood protection measures were in accordance with plant design specifications. The inspectors reviewed the UFSAR, Appendix 5F, Internal Plant Flooding, that discussed protection of areas containing safety-related equipment that could be affected by internal flooding. Specific plant attributes that were checked included structural integrity, sealing of penetrations, and control of foreign material and debris. Documents reviewed are listed in the attachment. The following areas were inspected:

- Unit 3 and 4 4160 volt safety related switchgear rooms

b. Findings

No findings were identified.

1R08 Inservice Inspection Activities

a. Inspection Scope

Non-Destructive Examination Activities and Welding Activities: From March 24, 2014, through April 4, 2014, the inspectors conducted an onsite review of the implementation of the licensee's inservice inspection (ISI) program for monitoring degradation of the reactor coolant system, risk-significant piping and components, and containment systems in Unit 3. 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, 1998 Edition with 2000 Addenda; and to verify that indications and defects (if present) were appropriately evaluated and dispositioned in accordance with the requirements of the ASME Code, Section XI, acceptance standards or an NRC-approved alternative requirement. The inspectors directly observed the following NDE, mandated by the ASME Code:

- Visual Testing (VT), VT-3 Main Steam Pipe Support, 5613-H-654, Class 2
- Ultrasonic Testing (UT), Residual Heat Removal to Reactor Coolant Loop "C" Cold Leg, Elbow to Pipe Weld, RHR-1305-2, Class 1

The inspectors also reviewed records of the following NDE, mandated by the ASME Section XI Code, to evaluate compliance with the ASME 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.

- Penetrant Testing (PT), High Pressure Safety Injection, 2"-SI-2304-1012, Class 2
- PT, High Pressure Safety Injection, 2"-SI-2305-1, Class 2
- VT, Reactor Vessel Upper Internals ASME Section XI, Category B-N-3

The inspectors also reviewed record results of the following augmented NDE examinations conducted to evaluate erosion on an ASME Class 2 component in order to determine if UT examination thickness results demonstrated that established minimum wall thickness requirements were met, and if any indications or defects were detected, to evaluate if they were dispositioned in accordance with the ASME Code requirements.

- UT, Steam Generator Component ID, IFC-E-27, Class 2
- UT, Steam Generator Component ID, IFC-P-28, Class 2

The inspectors also reviewed the planned Design Change Package and observed welding on a pressurizer lower head mock-up assembly that was associated with the repair and replacement of pressurizer heater sleeve nozzle #11. The inspectors reviewed the vendor design basis for the design change package, the associated 10 CFR 50.59 screen and evaluation forms, and the planned work order package. A sample of welding procedure qualification records and final VT-2 leakage examination

results for the pressurizer heater penetration #11 were also reviewed in order to determine if they met regulatory and code requirements.

- Engineering Change # 0000281319, Pressurizer Heater #11, Element Nozzle Sleeve Repair and Heater Replacement

During the NRC inspection week, the licensee did not identify any examination results that were analytically evaluated and accepted for continued service. Therefore, no NRC review was completed for this inspection procedure attribute.

Pressurized Water Reactor Vessel Upper Head Penetration Inspection Activities: For the Unit 3 vessel head, a volumetric examination was required this outage pursuant to 10 CFR 50.55a. The inspectors observed portions of the Unit 3 UT examinations while in progress, including penetrations for Control Rod Drive Mechanisms (CRDMs) 45 and 66. The 2014 scans for CRDMs 45 and 66 were compared to scans taken in 2004 with no anomalies noted. The inspectors also reviewed the UT leak path assessment summary report for the vessel upper head penetration CRDM penetrations in order to determine if any leak paths through the CRDM and vessel upper head annulus spaces were detected. No leak paths were detected. The UT field observation and leak path document review were utilized to determine if the activities, including the disposition of indications and defects, were conducted in accordance with the intent of ASME and 10 CFR 50 requirements. In particular, the inspectors evaluated if the required scope/coverage was achieved and limitations (if applicable) were recorded in accordance with the licensee procedures.

Licensee personnel reported that they did not perform any welding repairs to the vessel head penetrations since the beginning of the last Unit 3 refueling outage; therefore, no NRC review was completed for these inspection procedure attributes.

Additionally, the inspectors evaluated the licensee response to inadvertent reactor coolant leakage in the vicinity of the core exit thermocouples (CETs) during reactor disassembly. The licensee entered the condition into the corrective action process and performed a visual examination of the area, which revealed that the leakage had left boric acid on the insulation package, penetration surfaces, and the upper reactor head outer surface in the vicinity of the CETs. Inspectors reviewed the associated action request (AR) and performed an independent field walkdown of the reactor head surface, in the vicinity of the CETs, to verify that no additional sources of leakage were evident. This review and walkdown was performed in order to determine if the licensee's criteria for visual examination quality and instructions for resolving interferences and masking issues were consistent with 10 CFR 50.55a requirements.

Boric Acid Corrosion Control Inspection Activities: The inspectors reviewed the licensee's Boric Acid Corrosion Control (BACC) program activities to ensure implementation with commitments made in response to NRC Generic Letter 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary," and applicable industry guidance documents. Specifically, the inspectors performed an onsite record review of procedures, and the results of the licensee's containment walkdown inspections performed during the current spring refueling outage. The inspectors also

interviewed the BACC program owner and conducted an independent walkdown of three levels of containment to evaluate compliance with the licensee's BACC program requirements. The inspectors verified that degraded or non-conforming conditions, such as boric acid leaks, were properly identified and corrected in accordance with the licensee's BACC and CAP.

The inspectors reviewed the following condition reports and associated 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.

- AR 01910194, Boric Acid (BA) Evaluation for Valve ID 03/HCV-121, Class 2
- AR 01902914, BA Evaluation for RHR Pump ID 03/3P201A, Class 2

The inspectors reviewed the following engineering evaluations completed for evidence of boric acid leakage to determine if degraded components were documented in the CAP. The inspectors also evaluated corrective actions for any degraded components to determine if they met the intent of the ASME Section XI Code, and/or NRC-approved alternative.

- AR 01949021, Evidence of Leakage at Pressurizer Heater Sleeve, Class 1

Steam Generator Tube Inspection Activities: The inspectors observed the following activities and/or reviewed the following documentation and evaluated them against the licensee's technical specifications, commitments made to the NRC, ASME Section XI, and Nuclear Energy Institute (NEI) 97-06 (Steam Generator Program Guidelines):

- Reviewed the licensee's in-situ steam generator (SG) tube pressure testing screening criteria. In particular, the inspectors assessed whether assumed NDE flaw sizing accuracy was consistent with data from the Electric Power Research Institute (EPRI) examination technique specification sheets or other applicable performance demonstrations.

- Compared the numbers and sizes of SG tube flaws/degradation identified against the licensee's previous outage Operational Assessment.

- Reviewed the SG tube eddy current testing (ECT) examination scope and expansion criteria.

- Evaluated if the licensee's SG tube ECT examination scope included potential areas of tube degradation identified in prior outage SG tube inspections, and/or as identified in NRC generic industry operating experience applicable to the licensee's SG tubes.

- Reviewed the licensee's implementation of their extent-of-condition inspection scope and repairs for new SG tube degradation mechanism(s). No new degradation mechanisms were identified during the ECT examinations.

- Reviewed the licensee's repair criteria and processes.

- Verified that primary-to-secondary leakage (e.g., SG tube leakage) was below 3 gallons per day, or the detection threshold, during the previous operating cycle according to licensee procedures.

- Evaluated if the ECT equipment and techniques used by the licensee to acquire data from the SG tubes were qualified or validated to detect the known/expected types of SG tube degradation in accordance with Appendix H Performance Demonstration for Eddy Current Examination, of EPRI Pressurized Water Reactor Steam Generator Examination Guidelines, Revision 7.

- Reviewed the licensee's secondary side SG Foreign Object Search and Retrieval (FOSAR) activities.

- Reviewed ECT personnel qualifications.

Identification and Resolution of Problems: The inspectors reviewed a sample of ISI-related problems which were identified by the licensee and entered into the CAP as ARs or CRs. The inspectors reviewed the ARs to confirm that the licensee had appropriately described the scope of the problem and had initiated corrective actions. The review also included the licensee's consideration and assessment of operating experience events applicable to the plant. The inspectors performed this review to ensure compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. As a specific example, the AR associated with the leakage that was discovered on the pressurizer heater sleeve #11 and associated one cycle justification and relief request, were included in the documents reviewed by the inspectors. The corrective measures associated with the heater sleeve #11 repair were reviewed in order to ensure that the methodology used to repair the heater sleeve met the applicable requirements of 10 CFR 50.59 and 10 CFR 50.55a.

The inspectors also observed a sample of the examinations performed on the Unit 3 reactor vessel internals that were conducted in response to the industry guidelines contained in the Materials Reliability Program (MRP) -227-A Inspection Guidelines. Inspectors used the samples to determine if the examinations were in accordance with the MRP-227-A and plant corrective action process requirements. The licensee had developed a plant-specific document, WCAP-17040-NP, that provides guidance for performing the MRP-227-A reactor vessel internals inspections. The inspectors conducted observations while remote visual examinations were conducted on the lower core barrel girth welds. The inspectors also reviewed video recordings of the thermal shield flexure examinations. A review of video recordings was also conducted for the lower radial key and keyway supports of the core barrel. Several anomalies on the lower radial key supports were recorded and entered into the plant's corrective action process. A review of the Westinghouse Letter LTR-14-34, Rev. 0, provides conclusions that the recorded indications will not affect the structural integrity or functionality of the lower radial key supports.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program

Resident Inspector Quarterly Review

.1 Simulator Observations

a. Inspection Scope

The inspectors performed the following inspection sample of a simulator observation and assessed licensed operator performance while training. These observations included procedural use and adherence, response to alarms, communications, command and control, and coordination and control of the reactor plant operations.

On April 21, 2014, the inspectors assessed licensed operator performance in the plant-specific simulator during "just in time training" for an upcoming reactor startup, turbine latching, and reactor power ascension. The training scenario was started with the unit in Mode 2 at 2 percent reactor power preparing to latch the turbine and place it on line and increasing reactor power in accordance with procedure 3-NOP-089, Main Turbine Operation.

During these simulator observations, the simulator board configurations were compared with actual plant control board configurations concerning recent power up rate modifications. The inspectors specifically evaluated the following attributes related to operating crew performance and the licensee evaluation:

- 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 operating procedures and emergency plan implementing procedures
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by shift supervisor, including ability to identify and implement appropriate TS actions and emergency plan classification and notification
- Crew overall performance and interactions
- Evaluator's control of the scenario and post scenario evaluation of crew performance

b. Findings

No findings were identified.

.2 Control Room Observations

a. Inspection Scope

The inspectors performed the following two focused control room observations and assessed licensed operator performance in the control room. These observations included daily routine surveillance testing, response to alarms, communications, shift turnovers, and coordination of plant activities. These observations were conducted to verify operator compliance with station operating guidelines, such as use of procedures, control and manipulation of components, and communications. On May 20, 2014, the inspectors did a focused observation on Unit 3 consisting of a reactor coolant system primary water boration per 0-OP-046, Enclosure 6, "Chemical Volume Control System Boron Concentration Control." Specifically, the inspectors observed the reactor operators performing the pre-job brief per 0-ADM-200, Attachment 7, "Planned Reactivity Manipulations for Maintaining Steady State Plant Conditions" and verified the operators complied with the applicable procedure during the evolution. On April 21, 2014, the inspectors did a focused observation on Unit 4 consisting of a reactor coolant system primary water dilution per 0-OP-046, Enclosure 6, "Chemical Volume Control System Boron Concentration Control." Specifically, the inspectors observed the reactor operators performing the pre-job brief per 0-ADM-200, Attachment 7, "Planned Reactivity Manipulations for Maintaining Steady State Plant Conditions" and verified the operators complied with the applicable procedure during the evolution.

The inspectors focused on the following conduct of operations attributes as appropriate:

- Operator compliance and use of procedures
- Control board manipulations
- Communication between crew members
- Use and interpretation of plant instruments, indications and alarms
- Use of human error prevention techniques
- Documentation of activities, including initials and sign-offs in procedures
- Supervision of activities, including risk and reactivity management

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed known equipment problems associated with the Unit 3 Containment Spray system and Unit 4 Component Cooling Water (CCW) system affecting the maintenance rule program and equipment performance history trends

associated with the equipment. Specifically, the inspectors reviewed action requests 01778815, 01780275, 01778925, and 01783154 for Containment Spray and action requests 01942421, 01814515, and 01931761 for CCW.

The inspectors reviewed the licensee's activities to meet the requirements of 10 CFR 50.65, Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, and licensee procedure NAP-415, "Maintenance Rule Program Administration." The inspectors focused on maintenance rule scoping, characterization of maintenance problems and failed components, risk significance, determination of a(1) or a(2) performance criteria classification, corrective actions, and the appropriateness of established performance goals and monitoring criteria. The inspectors also interviewed responsible engineers and observed or reviewed corrective maintenance activities. The inspectors verified that equipment problems were being identified and appropriately entered into the licensee's CAP. The inspectors used the licensee maintenance rule data base, system health reports, maintenance rule unavailability status reports, and the CAP as sources of information on tracking and resolution of issues.

- Unit 3 Containment Spray System
- Unit 4 Component Cooling Water System

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors completed in-office reviews and control room inspections of the licensee's risk assessment of six 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 procedures 0-ADM-068, "Work Week Management;" WM-AA-1000, "Work Activity Risk Management;" and O-ADM-225, "On Line Risk Assessment and Management." The inspectors also reviewed the effectiveness of the licensee's contingency actions to mitigate increased risk resulting from the degraded equipment and the licensee assessment of aggregate risk using procedure OP-AA-104-1007, "Online Aggregate Risk." The inspectors discussed the on-line risk monitor (OLRM) results with the control room operators and verified all applicable out of service equipment was included in the OLRM calculation. The inspectors evaluated the following six risk assessments during the inspection period:

- 3B CCW Heat Exchanger, B Auxiliary Feed Water (AFW) Pump, and 4B High Head Safety Injection (HHSI) Pump Out of Service (OOS)
- 4C Service Water Pump, 4C CCW Pump, and 4CD Instrument Air Compressor OOS

- 3C Service Water Pump, 3B Emergency Diesel Generator, and 3A2 Battery Charger OOS
- 3A Vital DC Inverter, 3A CCW Heat Exchanger, and 3A Residual Heat Removal Pump OOS
- 3A CCW Heat Exchanger, 3A CCW Pump, 3A ICW Pump, and 3C Emergency Containment Cooler OOS
- 3B CCW Heat Exchanger, 3A ICW Pump, and 3A HHSI pump OOS

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments

a. Inspection Scope

The inspectors evaluated the technical adequacy of licensee evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred for the five operability evaluations described in the ARs listed below. The inspectors reviewed applicable sections of the UFSAR to determine if the system or component remained available to perform its intended function. In addition, when applicable, the inspectors reviewed compensatory measures implemented to verify that the affected equipment remained capable of performing its design function. The inspectors also reviewed a sampling of condition reports to verify that the licensee was routinely identifying and correcting any deficiencies associated with operability evaluations.

- AR 1951577, Unit 4 Adverse Trend on Flow Instrument FT-4-414
- AR 01885829, Unit 3 Pipe Support 3-MSH-3A Degraded
- AR 01948740, Unit 3 Main Turbine Stop Valve Failed to Close
- AR 01962023, Unit 4 Radiation Monitor R12 High Moisture
- AR 1972265, 4C Intake Cooling Water Pump Packing Gland Temperature.

b. Findings

No findings were identified.

1R18 Plant Modifications

Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed a temporary leak repair technical evaluation for repairing a body to bonnet flange leak on Unit 4 check valve 4-875A. The check valve was found leaking at a gasketed mechanical joint resulting in dry boric acid formation on and around the valve. The licensee performed the repair in accordance with Procedure 0-

ADM-723, On-Line Temporary Leak Repairs. The licensee utilized Furmanite Services Company to engineer and design a repair method to seal the leaking mechanical joint while the unit remained in Mode 3 operation. The inspectors reviewed the 10 CFR 50.59 screening and technical evaluation to verify that the modification had not affected system operability or availability. The inspectors reviewed associated plant drawings, analysis, and UFSAR documents impacted by this modification and discussed the changes with licensee personnel to verify that the repair was consistent with the work order and associated documents. The inspectors observed portions of the repair and reviewed photographs of the repair and surrounding area to determine if conditions resulted in any potential unsafe conditions not described in the repair documentation. Additionally, the inspectors reviewed and verified that any conditions associated with the repair were being identified and entered into the CAP. Specifically, AR 01965050, Evaluation for Temporary Repair of Body to Bonnet Leak on 4-875A.

- WO 40312542, Valve 4-875A Furmanite Repair

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the five post maintenance tests and associated work orders (WOs) listed below, the inspectors reviewed the test procedures and either witnessed the testing 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 operable. The inspectors verified that the requirements in licensee procedure 0-ADM-737, “Post Maintenance Testing,” were incorporated into the test requirements. The inspectors reviewed the following WOs consisting of five inspection samples:

- WO 40207317, Restoration of 3D Inverter
- WO 40307214, 3A Component Cooling Water Heat Exchanger Restoration
- WO 40131864, 3B Emergency Diesel Generator Fuel Oil Pump Replacement
- WO 40138438, 3B Emergency Diesel Generator Starting Air Flask Maintenance
- WO 40312547, 4-485A Furmanite Repair

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities

.1 Unit 3 Refueling Outage PT3-27

a. Inspection Scope

Outage Planning, Control and Risk Assessment

During daily outage planning activities by the licensee, the inspectors reviewed the risk reduction methodology employed by the licensee during various refueling outage (RFO) PT3-27 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 PT3-27 in accordance with administrative procedure ADM-051, "Outage Risk Assessment and Control," to verify if a defense in depth concept was in place to ensure safe operations and avoid unnecessary risk. In addition, the inspectors regularly monitored outage planning and control activities in the OCC, and interviewed responsible OCC management personnel during the outage to ensure system, structure, and component configurations, and work scope were consistent with TS requirements, site procedures, and outage risk controls.

Monitoring of Shutdown Activities

The inspectors performed walkdowns of important systems and components used for decay heat removal from 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 as follows:

- Walked down selected safety-related equipment clearance orders
- Verified operability of reactor coolant system 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 workers fatigue rule was properly managed

Refueling Activities and Containment Closure

The inspectors witnessed selected fuel handling operations being performed in accordance with TS and applicable operating procedures from the main control room and refueling floor inside the containment building. The inspectors also examined licensee activities to control and track the position of each fuel assembly. The inspectors evaluated the licensee's ability to close the containment equipment, personnel, and emergency hatches in a timely manner per procedure 2-MMP-68.02, Containment Closure.

Monitoring of Plant Heatup and Containment Closure Activities

The inspectors examined the applicable technical specifications, license conditions, and verified administrative prerequisites were being met prior to reactor plant mode changes. The inspectors reviewed measured reactor coolant system leak rates, and verified containment integrity was properly established. The inspectors performed a containment closeout inspection prior to the reactor plant startup to verify no evidence of leakage or debris left in containment that could affect plant operations.

Reactor Startup and Mode Changes

On April 24, 2014, the inspectors observed the Unit 3 reactor startup and turbine synchronization to the electrical grid and associated Mode changes. The inspectors reviewed the recorded reactor startup physics data in order to determine it was as calculated by the licensee reactor engineering staff. The inspectors determined the startup and Mode changes were performed in accordance with licensee procedures 0-OSP-040.16, Initial Criticality After Refueling Outage and Nuclear Design Verification, and 3-GOP-301, Mode 3 to Power Operations.

Corrective Action Program

The inspectors reviewed ARs generated during PT3-27 to evaluate the licensee's threshold for initiating ARs. The inspectors reviewed CRs to verify priorities, mode holds, and significance levels were assigned as required. Resolution and implementation of corrective actions of several ARs 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.

.2 Unit 4 Planned Maintenance Outage

a. Inspection Scope

Outage Planning, Control and Risk Assessment

On May 25, 2014, Unit 4 was shutdown to Mode 3 for a planned maintenance outage to repair a body to bonnet closure flange leak on check valve 4-875A. The repair and modification is further discussed in this report section 1R18. The inspectors reviewed the risk reduction methods employed by the licensee during the planned outage including outage control center (OCC) morning meetings, operations daily team meetings, protected train implementation, and schedule performance update meetings. The inspectors examined the licensee implementation of shutdown safety assessments in accordance with administrative procedure ADM-51, "Outage Risk Assessment and Control," to verify if a defense in depth concept was in place to ensure safe operations and avoid unnecessary risk. In addition, the inspectors regularly monitored outage planning and control activities in the OCC, and interviewed responsible OCC management personnel during the outage to ensure system, structure, and component configurations, and work scope were consistent with TS requirements, site procedures, and outage risk controls.

Monitoring of Shutdown Activities

The inspectors observed the reactor plant shutdown to hot standby from the control room. The inspectors verified the shutdown was performed in accordance with operations procedure 4-GOP-103, Power Operation to Hot Standby. The inspectors performed walkdowns of important systems and components used for decay heat removal from the reactor coolant system during the shutdown period including the secondary steam plant, intake cooling water system, and component cooling water 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 as follows:

- Verified operability of reactor coolant system pressure, level, flow, and temperature instruments during various modes of operation
- Verified electrical systems availability and alignment
- Examined foreign material exclusion (FME) controls put in place inside containment

Monitoring of Plant Heatup and Startup Activities

The inspectors examined the applicable TS, license conditions, and verified administrative prerequisites were being met prior to reactor plant mode changes. The inspectors reviewed measured reactor coolant system leak rates, and verified

containment integrity was properly established. The inspectors performed a containment closeout inspection prior to the reactor plant startup to verify no evidence of leakage or debris left in containment that could affect plant operations. The results of the estimated critical core calculations and low power physics testing were discussed with the reactor engineers and control room operators to ensure the core operating parameters were consistent with the core design. The inspectors witnessed the reactor start up and portions of the power ascension to full power.

Reactor Startup and Mode Changes

On May 28, 2014, the inspectors observed the Unit 4 reactor startup and associated mode changes. The inspectors reviewed the recorded reactor startup physics data in order to determine it was as calculated by the licensee reactor engineering staff. The inspectors determined the startup and mode changes were performed in accordance with licensee procedure 3-GOP-301, Mode 3 to Power Operations.

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors either reviewed or observed the following seven surveillance tests to verify that the tests met the TS requirements, the UFSAR description, the licensee's procedural requirements, and demonstrated the systems were capable of performing their intended safety functions and 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 status required for the system to perform its safety function. The inspectors verified that any surveillance deficiencies were documented in the licensee's CAP. The inspectors reviewed the following tests:

Surveillance Test:
- 3-OSP-203.2, 3B Engineered Safeguards Features Integrated Test
- 3-OSP-028.5, Control Rod Drive Coolers Operational Test
- 3-OSP-023.1, 3B EDG monthly Test
- 3-OSP-023.1, 3A EDG monthly Test

In-Service Tests:
- 3-OSP-051.5, CV-3-2821 Containment Sump Isolation Valve Local Leak Rate Test (IST)
- 3-OSP-055.1, Emergency Containment Cooler Test (IST)

RCS Leak Detection Test:
- 4-OSP-041.1, Unit 4 Reactor Coolant System Leak Rate Calculation

b. Findings

Introduction: A Green NRC identified non-cited violation (NCV) of TS 6.8.1, Procedures, was identified when the licensee failed to fully implement procedure 4-OSP-041.1, Reactor Coolant System Leak Rate Calculation. Specifically, the licensee did not perform a Unit 4 reactor coolant system leak rate statistical calculation to determine the change in the average unidentified RCS leak rate which resulted in failing to perform a Level 3 RCS leak rate investigation.

Description: Unit 4 reactor plant returned to online operation and synchronized to the electrical grid on April 17, 2013, following a long planned refueling outage and extended power uprate. Since returning to service, the Unit 4 RCS system unidentified leak rate averaged approximately 0.02 gpm. On February 8, 2014, the Unit 4 containment particulate radiation monitor R-4-11 failed to function properly due to condensation entering its paper drive assembly. The source of the condensation was due to an increased humidity level in the containment building. The licensee entered containment a number of times to find the source of the increased humidity level without success. The licensee was unable to find any active leaks that may have contributed to, or caused, the higher than normal humidity levels in the containment building with a limited search outside the bio-wall during power operation.

During the timeframe of April 7-25, 2014, the Unit 4 unidentified RCS leakage increased and fluctuated between 0.05 and 0.08 gpm requiring the licensee to perform Level 1 and Level 2 leak rate investigations per licensee procedure 4-OSP-041.1, Reactor Coolant System Leak Rate Calculation. The leak rate investigations included containment entries for visual inspections, containment sump chemistry analysis, containment atmosphere radiation monitoring, and containment pressure and temperature monitoring. The inspectors monitored the licensee's actions in their attempt to find the source of the leakage. During the week of April 28, 2014, the Unit 4 RCS unidentified leak rate measured consecutively greater than 0.07 gpm. The inspectors determined that the consecutive unidentified leak rate was statistically significant and calculated the mean value plus the standard deviation value and found that a Level 3 leak rate investigation was required per NRC Manual Chapter 2515, Appendix D, Plant Status. The inspectors requested the licensee to provide them with their statistical leak rate calculator results and found that the licensee's leak rate calculator was not working and unavailable for use. The inspectors determined that licensee procedure 4-OSP-041.1, Section 7.1.2 required the licensee to periodically determine if a RCS leak rate investigation was required using a statistical calculator. The inspectors determined that the licensee had not performed a statistical calculation for several weeks because the statistical calculator program software had failed and became unavailable since February 3, 2014. The licensee entered this condition in their CAP as AR 01962745. The licensee acknowledged the inspectors observation and confirmed that the Unit 4 unidentified leak rate mean and standard deviation calculations required them to perform a Level 3 RCS leak rate investigation. The licensee performed the investigation and found an RCS leak on the body to bonnet flange mechanical joint of check valve 4-875A located on the RCS cold leg injection line. The licensee planned and performed a maintenance outage on May 25-29, 2014, to repair the leaking valve with a furmanite

injection per work order 40312542. The valve and surrounding area was cleaned of boric acid and evaluated for structural integrity. The repair was completed satisfactorily and the unit returned to full power on May 30, 2014.

Analysis: The failure to fully implement procedure 4-OSP-041.1 and perform a Level 3 unidentified RCS leak rate investigation was a performance deficiency. The performance deficiency was more than minor because it was associated with the initiating events cornerstone attribute of human performance and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inspectors determined that the licensee's failure to implement the procedure directly resulted in not performing an RCS Level 3 leak rate investigation. The finding was screened using IMC 0609, Significance Determination Process, Attachment 0609.04, Initial Characterization of Findings, Tables 2 and 3, dated July 1, 2012, and Appendix A, The Significance Determination Process (SDP) for Findings At-Power, Exhibit 1 for Initiating Events , dated July 1, 2012. The inspectors determined the finding was of very low safety significance because after a reasonable assessment of the degradation, the inspectors determined the finding would not have likely affected other systems used to mitigate a LOCA resulting in total loss of their function. This finding was associated with a cross-cutting aspect in the procedure adherence component in the human performance area because the licensee failed to fully implement the RCS leak rate calculation procedure (H.8).

Enforcement: Technical Specification 6.8.1 requires that procedures required by the FPL Quality Assurance Topical Report (QATR) be implemented. The QATR includes procedures listed in Appendix A of NRC Regulatory Guide 1.33, Revision 2, dated February 1978, which includes procedures for surveillance testing such as RCS leak rate calculations. The licensee implements this requirement using procedure 4-OSP-041.1, Reactor Coolant System Leak Rate Calculation. 4-OSP-041.1, step 7.1.2.16, required a statistical leak rate calculation to be performed. Contrary to this requirement, during the week of April 28, 2014, the licensee did not perform the calculation when the leak rate exceeded the mean plus 3 sigma statistical threshold limit requiring a more comprehensive leak rate investigation. The licensee subsequently performed the calculation and the required investigation which identified an RCS leak at a check valve body to bonnet flange mechanical joint. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy, because it was of very low safety significance and was entered in the licensee's corrective action program as AR 01962745. (NCV 05000251/2014003-01, Failure to Implement a Surveillance Procedure to Perform a RCS Unidentified Leak Rate Statistical Calculation).

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

Barrier Integrity Cornerstone

a. Inspection Scope

The inspectors reviewed licensee submittals for the Unit 3 and Unit 4 performance indicators (PI) listed below for the period April 1, 2013, through March 31, 2014, 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 procedure 0-ADM-032, "NRC Performance Indicators Turkey Point," 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 3 reactor coolant system leakage
- Unit 4 reactor coolant system leakage
- Unit 3 reactor coolant system activity
- Unit 4 reactor coolant system activity

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution

.1 Daily Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a screening of items entered daily into the licensee's corrective action program. This review was accomplished by reviewing daily printed summaries of ARs and by reviewing the licensee's electronic AR database. Additionally, RCS unidentified leakage was checked on a daily basis to verify no substantive or unexplained changes.

b. Findings

No findings were identified.

.2 Annual Sample: 3B Emergency Diesel Generator Exhaust Cracked Welds

a. Inspection Scope

The inspectors selected AR 01964132, 3B Emergency Diesel Generator Exhaust Cracked Welds, for a more in-depth review of the circumstances and the corrective actions that followed. The action request report was reviewed to ensure that an appropriate evaluation was performed and corrective actions were specified and prioritized in accordance with the licensee's program. Other attributes checked included disposition of operability and resolution of the problem including cause determination, past operability determination, and corrective actions. The inspectors interviewed plant personnel and evaluated the condition report in accordance with the requirements of the licensee's corrective actions process as specified in licensee's procedures PI-AA-204, Condition Identification and Screening Process, and PI-AA-205, Condition Evaluation and Corrective Action.

b. Findings and Observations

No inspector findings were identified. The licensee identified three cracked welds on the lower rectangular exhaust flange from the turbo charger assembly. The flange assembly is subjected to low pressure hot gasses that are directed to the exhaust piping and silencer on the roof of the EDG building to the outside atmosphere. The inspectors noted that the licensee evaluation concluded there was no consequence associated with the weld cracks since the welds provided no structural loading and provided only a combustion gas exhaust path and leak tight barrier subjected to atmospheric back pressure.

Immediate corrective actions for this event included non-destructive examination of the welds, a walkdown of the exhaust piping by engineering, and an engineering evaluation of the as-found conditions. The engineering evaluation provided guidance to perform weld repairs to the cracked welds including flaw removal and rewelding instructions. The licensee determined the cause of the cracking was due to age related vibration and fatigue.

.3 Semi-Annual Trend

a. Inspection Scope

The inspectors performed a review of the licensee's records including action requests, work orders, and narrative logs to asses a number of recent air conditioning failures associated with various safety related areas of the reactor plant between December 2013 and March 2014. The inspector reviewed the licensee common cause evaluation report associated with action request 01944816, Adverse Trend on Plant Related Heating Ventilation and Air Conditioning (HVAC) Systems. The inspectors' review was focused on the repetitive nature of several safety-related area HVAC failures affecting the Unit 3 control room, Unit 3 and 4 DC inverter equipment rooms, and the technical support

center. The inspectors evaluated the effectiveness of the licensee's corrective actions and the significance of the problems including attributes such as accurate documentation, reportability, corrective actions, and problem resolution.

b. Findings and Observations

No inspector findings were identified. The license determined that the common cause for the air conditioning reliability and failure issues was due to refrigerant leaks and was the result of inadequate preventive maintenance. The inspectors noted that the licensee lacked periodic maintenance activities to check adequate refrigerant levels, check for refrigerant leaks, and monitor condenser coil conditions. The common cause also noted that in some cases not all mechanical maintenance personnel are properly trained or qualified as air conditioning mechanics.

The licensee corrected the HVAC conditions as they were identified and due to redundancy of the air conditioning systems, no adverse effects resulted from the air conditioning failures. The licensee created nine corrective actions that were in place or planned to be completed by July 13, 2014. The corrective actions included but were not limited to revising maintenance procedures to include refrigerant leakage checks and training of maintenance personnel on HVAC and refrigeration systems. The inspectors did not identify any additional trends not observed by the licensee's trending activities.

4OA3 Follow-up of Events and Notice of Enforcement Discretion (IP 71153)

.1 (Closed) Licensee Event Report (LER) 05000250/2014-002-00, Reactor Coolant System Pressure Boundary Leakage at Pressurizer Heater Sleeve Attachment Weld

a. Inspection Scope

The LER documented the RCS pressure boundary leakage identified from the annular space surrounding pressurizer heater sleeve 11. The inspectors reviewed the LER and the associated corrective action document (AR 1949021) to verify the accuracy and completeness of the LER and the appropriateness of the licensee's corrective actions. The inspectors also reviewed the LER and AR to identify any licensee performance deficiencies associated with the issue.

b. Findings

On March 17, 2014, while Unit 3 was operating in Mode 5 in preparation for a refueling outage, the licensee performed scheduled visual inspections inside containment and observed boric acid deposits on the bottom of the pressurizer. On March 19, 2014, the licensee determined that the boric acid deposits were due to primary coolant leakage from the annular space surrounding the heater sleeve at penetration 11. The remaining heater sleeves were visually inspected and found to be free of leakage. The licensee performed a half-nozzle repair of heater sleeve 11 which relocated the reactor coolant system pressure boundary to the outside of the pressurizer lower head at the heater sleeve penetration. After removal of the heater element, the licensee confirmed through

eddy current testing that there were no indications of flaws in the heater sleeve and concluded that the through-wall leak path was in the partial penetration weld joining the heater sleeve to the stainless steel cladding on the inside surface of the pressurizer. The licensee also inserted a borescope into the heater sleeve and did not identify any cracking inside the pressurizer vessel at the heater sleeve weld joint. A quantitative characterization of the flaw was not completed since there were no available non-destructive examination methods capable of testing the partial penetration weld where it was located. The licensee requested and was granted a relief request by the NRC to leave the flaw in place for one operating cycle until a more extensive analysis could be completed (ADAMS Accession No. ML14106A050). The inspectors utilized available risk-informed tools to assess the safety significance of the leakage from the number 11 pressurizer heater sleeve and concluded that this event was of very low safety significance.

Technical Specification (TS) 3.4.6.2 limiting condition for operation (LCO) required that primary coolant operational leakage shall be limited to “No Pressure Boundary Leakage” when in Modes 1 through 4. The action statement of TS 3.4.6.2 required that the plant be placed in hot standby (Mode 3) within 6 hours and in cold shutdown (Mode 5) within the following 30 hours. Although the beginning time of the pressure boundary leakage from the number 11 pressurizer heater sleeve could not be precisely determined, the inspectors concluded that the leakage had reasonably existed during the previous Unit 3 operating cycle for greater than the six hour TS action statement time limit to place Unit 3 in Mode 3. Therefore, contrary to the above, during the previous operating cycle which ended on March 17, 2014, Unit 3 operated in Mode 1 and was not placed in Mode 3 within six hours with primary coolant pressure boundary leakage from the number 11 pressurizer heater sleeve. The inspectors concluded that the violation would normally be characterized as Severity Level IV based on its very low safety significance. There had not been any perceptible changes in containment parameters (i.e., radiation levels, humidity or floor drain sump levels) to indicate that a leak existed. The inspectors reviewed the root cause analysis of the event and concluded that the pressure boundary leakage could not have been avoided or otherwise detected by the licensee’s quality assurance program or other related control measures prior to the licensee’s discovery of the condition on March 17, 2014. As discussed in Section 2.2.4.d of the Enforcement Policy, a violation involving no performance deficiency is considered an exception to using only the operating reactor assessment program. Therefore, in consultation with the Office of Enforcement, the NRC has concluded that the exercise of enforcement discretion is warranted in accordance with Section 3.5 of the Enforcement Policy, because the violation resulted from matters not within the licensee’s control. Accordingly, this violation will not be documented or considered in the NRC’s assessment process, but has been assigned an Enforcement Action number, EA-14-124, to document the granting of enforcement discretion. This issue is documented in the licensee’s CAP as AR 1949021. Corrective action involved a half-nozzle repair of heater sleeve 11 which relocated the reactor coolant system pressure boundary to the outside of the pressurizer at the heater sleeve penetration, a visual inspection of the remaining 77 heaters in the Unit 3 pressurizer to ensure no other heater sleeve penetration leaks, and a visual inspection of the half-nozzle repair with Unit 3 at normal operating pressure and normal operating temperature. The LER is closed.

4OA5 Other Activities

.1 Independent Spent Fuel Storage Facility (ISFSI) Walk down (IP 60855.1)

a. Inspection Scope

On June 18, 2014, the inspector conducted a walk down of the ISFSI protected 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 and radiation protection access controls to the ISFSI area to be satisfactory.

b. Findings

No findings were identified.

4OA6 Meetings

The resident inspectors presented the inspection results to Mr. Kiley and other members of licensee management on July 2, 2014. 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.

ATTACHMENT: SUPPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:
F. Banks, Quality Manager
C. Cashwell, Radiation Protection Manager
T. Conboy, Plant General Manager
P. Czaya, Licensing
C. Domingos, Engineering Director
T. Eck, Security Manager
M. Poteat, Emergency Preparedness Manager
D. Funk, Operations Manager
O. Hanek, Licensing Engineer
M. Jones, System Engineering Manager
A. Katz, Maintenance Manager
M. Kiley, Site Vice-President
S. Mihalakea, Licensing
N. Rios, Chemistry Manager
D. Sluszka, Work Controls Manager
B. Stamp, Training Manager
R. Tomonto, Licensing Manager
M. Wayland, Operations Director
G. Alexander, Supervisor Fleet NDE Programs
M. Joseph, Engineer, CSI
J. Nobel, NDE/ISI Engineer
D. Slivoin, Engineer, CSI

NRC Personnel:
S. Sandal, Senior Project Engineer
M. Riches, Project Engineer
J. Jenkins, NRC, NRR
J. Poehler, NRC, NRR

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000251/2014003-01	NCV	Failure to Implement a Surveillance Procedure to Perform a RCS Unidentified Leak Rate Statistical Calculation. (Section 1R22)

Closed

05000250/2014-002-00	LER	Reactor Coolant System Pressure Boundary Leakage at Pressurizer Heater Sleeve Attachment Weld (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

Action Requests:

01957363	01957420	01968650
01966973	01957443	01969705
01966937	01957561	01968447
01957365	01957678	01963062
01967045	01957830	01963157
01966474	01957847	01974448
01964494	01974363	01974540
01964586	01973502	01969694
01964244	01972451	01969691
01964420	01972476	01960403
01964183	01968160	01960413

Section 1R04: Equipment Alignment
P&ID 5613-M-3022, Emergency Diesel Engine and Oil System
4-NOP-023, Emergency Diesel Generator
4-NOP-022, Emergency Diesel Generator Fuel Oil System
3-NOP-023, Emergency Diesel Generator
3-NOP-022, Emergency Diesel Generator Fuel Oil System
P&ID 5613-M-3019, Intake Cooling Water System

Section 1R05: Fire Protection
0-ONOP-016.10, Pre-Fire Plan Guidelines and Safe Shutdown Manual Actions

Section 1R06: Flood Protection Measures
Drawing 5610-C-1695, Network of Barriers for External Flood Protection
0-SMM-102.1, Flood Protection Stop Log and Penetration Seal Inspection

Section 1R06: Inservice Inspection Activities (Inspection Procedure 71111.08P, Unit 3)
Calculations
32-9221002-000, TP-3 Pressurizer Heater Sleeve Penetration Modification One Cycle Justification, Rev. 000

Licensee Identified Corrective Action Documents
AR 01949021, Evidence of Leakage at Pressurizer Heater Sleeve, 3/17/14
AR 01952036, Main Steam Support Indications, 3/26/14
AR 01947844, U-3 RCS Leak Rate Investigation, 3/13/14

AR 01902914, Dry Boric Acid on Gland Seal Water Connection, 3A-RHR Pump, 9/10/13
AR 01910194, Packing Leak on 03/HCV-3-121, 11/5/13

NRC Identified Corrective Action Documents
AR 01951965, Brownish Dry boric Acid at Packing on Valve 3-120E, Regen-Heat Exchanger Outlet Drain Valve, 3/26/14
AR 01951802, NRC identified Boric Acid at the packing are of valve MOV-3-866A, Safety Injection to RCS Hot Leg Motor Operated Valve, System 62, 3/26/14
AR 01951934, Boric Acid on the Reactor Head and Reactor Head Insulation, 3/26/14

Drawings
5613-P-654-S, Sheet 2, Main Steam System, System 72, Outside Containment Stress Problem MSIV-01, Rev. 8
5613-H-654, Sheets 15 “A” thru “F,” Main Steam System, (OC) Stress Problem MSO, Rev. 1
5613-P-764-S, Sheet 1, High Head safety Injection System, System 62 Inside Containment Stress Problem 029, Rev. 10
5613-P-764-S, Sheet 2, High Head Safety Injection System, System 62 Inside Containment Stress Problem 029, Rev. 7
5613-P-648-S, Sheet 2, High Head Safety Injection System, System 62 inside Containment Stress Problem 012, Rev. 8
5610-M-410-108, FP&L Turkey Point Units 3 & 4, Pressurizer General Assembly, Rev. 3
681J252, Pressurizer Lower Head assembly and Details, 8/24/66
02-8068686B, Sht. 1, Turkey Point Unit-3, RVH Penetration Map, Rev. 000
5613-P-178, Turkey Point, Main Feedwater System, Penetration 27C to SG 3E210C, Rev. 4

Other Documents
ASME Section XI, Division I, Article IWF-2430, Additional Examinations, 2008 Ed.
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LMT-QA-46 Rev. 3, Curtiss Wright-Flow Control Company, Personnel Certification for MT,PT,UT,VT-1, VT-2 and VT-3, Level II Examiner, ID# - 601, 11/12/13
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LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access and Management System
AFW	Auxiliary Feedwater
AR	Action Request
ASME	American Society of Mechanical Engineers
BACC	Boric Acid Corrosion Control
BPVC	Boiler and Pressure Code
CAP	Corrective Action Program
CCW	Component Cooling Water
CET	Core Exit Thermocouple
CFR	Code of Federal Regulations
CR	Condition Report
CRDM	Control Rod Drive Mechanism
ECT	Eddy Current Testing
EPRI	Electric Power Research Institute
FME	Foreign Material Exclusion
SFP	Spent Fuel Pool
ICW	Intake Cooling Water
EDG	Emergency Diesel Generator
HVAC	Heating Ventilation and Air Conditioning
IMC	Inspection Manual Chapter
ISI	Inservice Inspection
IST	Inservice Testing
LER	Licensee Event Report
LCO	Limiting Condition of Operation
NEI	Nuclear Energy Institute
NDE	Non-destructive Examination
LOCA	Loss of Coolant Accident
OCC	Outage Control Center
OOS	Out of Service
OSP	Operations Surveillance Procedure
NAP	Nuclear Administrative Procedure
NCV	Non-cited Violation
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PI	Performance Indicator
PT	Penetrant Testing
QA	Quality Assurance
QATR	Quality Assurance Topical Report
P&ID	Piping and Instrumentation Drawing
RCE	Root Cause Evaluation
RCP	Reactor Coolant Pump
RTP	Rated Thermal Power
RCS	Reactor Coolant System
SDP	Significance Determination Process
SG	Steam Generator
TS	Technical Specifications
UT	Ultrasonic Testing

U3	Unit 3
U4	Unit 4
UFSAR	Updated Final Safety Analysis Report
VT	Visual Testing
WO	Work Order
GOP	General Operating Procedure
ONOP	Off Normal Operating Procedure