



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

January 30, 2013

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

**SUBJECT: TURKEY POINT NUCLEAR PLANT – NRC INTEGRATED INSPECTION  
REPORT 05000250/2012005 AND 05000251/2012005**

Dear Mr. Nazar:

On December 31, 2012, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Turkey Point Nuclear Plant Units 3 and 4. The enclosed integrated inspection report documents the inspection findings, which were discussed on January 16, 2013, with Mr. Kiley and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

One self-revealing finding of very low safety significance (Green) was identified during this inspection. This finding did not involve a violation of NRC regulatory requirements.

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 report, with the basis of your disagreement, to the Regional Administrator, Region II and the NRC Resident Inspector at Turkey Point Nuclear Plant.

M. Nazar

2

In accordance with 10 CFR 2.790 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 NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

***/RA/***

Shane Sandal, Acting Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000250/2012005, 05000251/2012005  
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

M. Nazar

2

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Letter to Mano Nazar from Shane Sandal dated January 30, 2013

SUBJECT: TURKEY POINT NUCLEAR PLANT – NRC INTEGRATED INSPECTION  
REPORT 05000250/2012005 AND 05000251/2012005

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 50-250, 50-251

License Nos.: DPR-31, DPR-41

Report No: 05000250/2012005, 05000251/2012005

Licensee: Florida Power & Light Company (FPL)

Facility: Turkey Point Nuclear Plant, Units 3 & 4

Location: 9760 S. W. 344th Street  
Homestead, FL 33035

Dates: October 1, 2012 to December 31, 2012

Inspectors: J. Stewart, Senior Resident Inspector  
T. Hoeg, Senior Resident Inspector  
P. Capehart, Senior Operations Engineer  
C. Fletcher, Senior Reactor Inspector  
M. Barillas, Resident Inspector  
A. Vargas, Reactor Inspector  
M. Coursey, Reactor Inspector  
R. Taylor, Senior Project Engineer  
D. Mas-Peñaranda, Project Engineer  
A. Zoulis, Senior Risk Analyst  
J. Laughlin, Emergency Preparedness Inspector  
G. Kuzo, Senior Health Physicist  
W. Pursley, Health Physicist

Approved by: S. Sandal, Acting Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000250/2012005, 05000251/2012005; 10/01/2012 – 12/31/2012; Turkey Point Nuclear Power Plant, Units 3 and 4; Licensed Operator Requalification Program

The report covered a three month period of inspection by resident inspectors and region based inspectors. One Green Finding was identified. The significance of inspection findings are identified by their color i.e. (greater than Green, or Green, White, Yellow, or Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated June 2, 2011. The cross-cutting aspect was determined using IMC 310, Components Within the Cross-Cutting Areas" dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated June 7, 2012. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

Cornerstone: Initiating Events

- Green: A self-revealing finding was identified when the licensee failed to follow procedure 0-ADM-222, Drain and Vent Rig Controls, while installing a temporary drain hose on Turkey Point Unit 4 in-service equipment. Operations and maintenance workers failed to verify a drain line flow path was isolated on the 1B feed water heater prior to removing a pipe valve cap that resulted in an unexpected lowering of condenser vacuum. Operators took action to close the open drain line isolation valve and terminate the plant transient. The licensee captured this condition in their corrective action program as AR 1819010.

The licensee's failure to verify the closed position of 1B feed water heater drain valve 4-30-128, as required by procedure 0-ADM-222, prior to removing the pipe cap was a performance deficiency. The inspectors determined the performance deficiency was more than minor using IMC 0612, Appendix B, Issue Screening, because the performance deficiency was associated with the configuration control attribute of the initiating events cornerstone, and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to verify the position of 4-30-128 resulted in lowering condenser vacuum that could have led to a reactor trip and the unavailability of the main condenser. The inspectors evaluated the finding using the significance determination process for findings at power of IMC 0609, Appendix A, Exhibit 1, Transient Initiators. The inspectors determined the finding was of very low safety significance (Green) because the finding did not result in a reactor trip and a loss of mitigation equipment relied upon to transition the plant to a stable shutdown condition. The finding was associated with a cross-cutting aspect in the work practices component of the human performance area because the licensee did not define and effectively communicate expectations, or follow the procedural requirement to physically verify valve position during the drain hose installation work [H.4(b)]. (Section 1R11.2)

Enclosure

## REPORT DETAILS

### Summary of Plant Status:

Unit 3 began the period at 29 percent power while adjustments were made to secondary plant chemistry. Unit 3 reached full power on November 16, 2012, where they remained through the remainder of this inspection period.

Unit 4 began this inspection period at full power. On November 4, 2012, reactor power was reduced to 30 percent to support secondary plant testing. On November 5, 2012, the unit was shut down to begin a refueling and extended power uprate outage.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R04 Equipment Alignment

##### .1 Partial Equipment Walkdowns

###### a. Inspection Scope

The inspectors conducted three partial alignment verifications of the safety-related systems listed below. These inspections included reviews using 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. The inspectors routinely verified that alignment issues were documented in the corrective action program.

- Unit 4 walk down of auxiliary feed water pump C aligned to Train 1 to support maintenance on pump A trip and throttle valve using licensee procedure 4-NOP-075, Auxiliary Feedwater
- Unit 4 walkdown of the residual heat removal pump A aligned for safety injection during maintenance of Pump 4B using licensee procedure 4-OP-050, Residual Heat Removal
- Unit 4 walk down of the Reactor Coolant System level instrumentation during draining of the reactor coolant system using procedure 4-NOP-041.07, Draining the Reactor Coolant System

###### b. Findings

No findings were identified.

Enclosure



1R05 Fire Protection

.1 Fire Area Walkdowns

a. Inspection Scope

The inspectors toured the following three plant areas to evaluate conditions related to control of transient combustibles, ignition sources, and the 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:

- Common: Auxiliary Building Breezeway
- Common: Cable Spreading Room
- Common: Control Room

b. Findings

No findings were identified.

1R08 In-service Inspection (ISI) Activities (IP 71111.08P, Unit 4)

a. Inspection Scope

Non-Destructive Examination Activities and Welding Activities: From November 13-16 and December 10-14, 2012, the inspectors conducted an on-site review of the implementation of the licensee's In-service 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 4. 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, 4<sup>th</sup> Interval, 3<sup>rd</sup> Period and 1<sup>st</sup> Outage), and to verify that indications and defects (if present) were appropriately evaluated in accordance with the requirements of the ASME Code, Section XI, acceptance standards.

The inspectors directly observed and reviewed records for the following NDE mandated by the ASME Code to evaluate 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.

- Visual Testing (VT):
  - Residual Heat Removal (RHR) to Reactor Coolant System (RCS) Loop C Cold Leg Spring Loaded and Constant Weight Hanger, No. SR-499,
  - RHR to RCS Loop C Cold Leg Double Acting Restraint Hanger, No. 8073-H-810-02, and
  - Reactor Vessel Bottom Mounted Instrumentation Penetration No. 1, 10, 7, 6, 25, 29, 24, 27, 47, 32, 16 and 42.
- Augmented VT:
  - Pressurizer Heater Sleeves, No. 4-PRZ-Heater Sleeves,
  - High Head Safety Injection (HHSI) Loop A Inside Containment Pipe to Branch Connection, Weld No. 2-SI-1404-10,
  - HHSI Loop A Inside Containment Pipe to Elbow Connection, Weld No. 2-SI-1404-6,
  - Chemical Volume Control System (CVCS) to RCS Loop C Hot Leg Elbow to Branch Connection, Weld No. 3-CH-1401-37, and
  - CVCS to RCS Loop C Hot Leg Pipe to Elbow Connection, Weld No. 3-CH-1401-34.
- Ultrasonic Testing (UT):
  - RHR to RCS Loop C Cold Leg Elbow to Pipe Weld No. 10-SI-1403-4
- Augmented UT:
  - HHSI Loop A Inside Containment Pipe to Branch Connection, Weld No. 2-SI-1404-10,
  - HHSI Loop A Inside Containment Pipe to Elbow Connection, Weld No. 2-SI-1404-6,
  - CVCS to RCS Loop C Hot Leg Elbow to Branch Connection, Weld No. 3-CH-1401-37, and
  - CVCS to RCS Loop C Hot Leg Pipe to Elbow Connection, Weld No. 3-CH-1401-34.
- Penetrant Testing (PT):
  - HHSI Socket to Pipe, Weld No. 2-SI-2406-2

The inspectors reviewed the welding activities referenced below and reviewed associated documents in order to evaluate compliance with procedures and the ASME Code. The inspectors reviewed the following work order, repair and replacement plan, weld data sheets, welding procedures, procedure qualification records, welder performance qualification records, and NDE reports.

- Work Order (WO) No. 40010356-01, Replace 2" line in Boric Acid Solenoid t CVCS Valve 4-368, Class 2, and
- WO 38015275-01, Instrument Air Valve 4-40-336A and Carbon Steel Piping Replacement with Carbon Steel, Class 2, and
- WO 40078181-01, Removal of HHSI Pipe weld defects, Class 2.

Enclosure

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

PWR Vessel Upper Head Penetration (VUHP) Inspection Activities: For the Unit 4 vessel head, a bare metal visual examination was required this outage pursuant to 10 CFR 50.55a. The inspectors observed portions of the Unit 4 bare metal visual examination and reviewed NDE reports for VUHPs Nos. 7, 19, 28, 33, and 41 to determine if the activities, including the disposition of indications and defects, were conducted in accordance with the requirements of ASME Code Case N-729-1 and 10 CFR 50.55a(g)(6)(ii)(D). In particular, the inspectors evaluated if the required visual examination scope/coverage was achieved and limitations (if applicable) were recorded in accordance with the licensee procedures. Additionally, the inspectors evaluated if the licensee's criteria for visual examination quality and instructions for resolving interference and masking issues were consistent with 10 CFR 50.55a.

The licensee did not identify any relevant indications that were accepted for continued service during the Unit 4 bare metal visual exams. Additionally, the licensee did not perform any welding repairs to the vessel head penetrations since the beginning of the last Unit 4 refueling outage. Therefore, no NRC review was completed for the refueling outage. Therefore, no NRC review was completed for these inspection procedure attributes.

Boric Acid Corrosion Control (BACC) Inspection Activities: The inspectors reviewed the licensee's 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 on-site record review of procedures and the results of the licensee's containment walk-down inspections performed during the current fall refueling outage. The inspectors also interviewed the BACC program owner, conducted an independent walk-down of containment to evaluate compliance with licensee's BACC program requirements, and 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 corrective action programs.

The inspectors reviewed the following engineering evaluations completed for evidence of boric acid identified in systems containing borated water to determine if degraded components were documented in the corrective action program. The inspectors also evaluated the following corrective actions for any degraded components to determine if they met the ASME Section XI Code and/or NRC approved alternative.

- AR 01685161
- AR 01703036
- AR 01709832
- AR 01808584

Steam Generator (SG) Tube Inspection Activities: The NRC 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):

- Interviewed Eddy Current Testing (ET) data analysts and reviewed 5 samples of ET data.
- Compared the numbers and sizes of SG tube flaws/degradation identified against the licensee's previous outage Operational Assessment.
- Reviewed the SG tube ET examination scope and expansion criteria.
- Evaluated if the licensee's SG tube ET 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).
- Reviewed the licensee's repair criteria and processes.
- Verified that Primary-to-secondary leakage (e.g., SG tube leakage) was below three gallons per day, or the detection threshold, during the previous operating cycle.
- Evaluated if the ET 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 Removal (FOSAR) activities.
- Reviewed ET personnel qualifications.

Identification and Resolution of Problems: The inspectors performed a review of a sample of ISI-related problems which were identified by the licensee and entered into the corrective action program as condition reports (ARs). The inspectors reviewed the ARs to confirm 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 10CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. Document reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program

.1 Resident Inspector Quarterly Review- Annual Requalification Operating Test

a. Inspection Scope

On October 28, 2012, the inspectors assessed licensed operator performance in the plant specific simulator during the annual licensed operator annual requalification operating test. The examination was conducted at the Unit 3 extended power up rate initial conditions. Event simulations were accomplished using Simulator Evaluation PTN 750206900, Loss of Vacuum/Dropped Rod/Loss of 3P09/ATWS. Operators responded to the events using off-normal procedures 3-ONOP-014 for loss of condenser vacuum, 3-ONOP-028.3 for the dropped control rod, and 3-ONOP-003.9 for the loss of the vital instrument panel. Emergency procedures used by the crew to safely mitigate the events included 3-EOP-E-0, Reactor Trip and Safety Injection and 3-EOP-E-2, Faulted Steam Generator Isolation; and 3-EOP-FR-S.1, Response to Nuclear Power Generation/ATWS. The inspectors specifically checked the simulated emergency classification of Site Area Emergency was done in accordance with licensee procedure, 0-EPIP-20101, Duties of the Emergency Coordinator.

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 observed the following four focused control room observations and assessed licensed operator performance in the plant and main control room, particularly during periods of heightened activity or risk and where the activities could affect plant

safety. These observations routinely included surveillance testing, response to alarms, communications, and coordination of activities. These observations were conducted to verify operator compliance with station operating protocols, such as use of procedures, control and manipulation of components, and communications. On October 30, 2012, the inspectors did a focused observation which included Unit 3 power ascension to the new extended power up rate condition from 87% power to 89% power per 3-GOP-301, Hot Standby to Power Operation. Specifically, the inspectors verified the operators used the Reactivity Maneuver Plan provided by reactor engineering for a one percent an hour power change rate. The inspectors verified that operators borated and moved rods in a controlled manner to meet Technical Specification limits for axial flux deviation. The inspectors observed power ascension from 89% power to 92% power on November 1, 2012, and 92% power to 95% power ascension on November 2, 2012 in the control room for the new extended power up rate conditions at a power rate change of one percent an hour. On November 1, 2012, the inspectors observed operator response to an unexpected lowering of condenser vacuum transient on unit 4 during preparations on the feed water heater drains for the upcoming unit 4 refueling outage activities. The operators entered off normal operating procedure 4-ONOP-014, Loss of Condenser Vacuum, in response to the event.

During these observations, the inspectors focused on the following conduct of operations attributes:

- 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 such as peer checks
- Documentation of activities, including initials and sign-offs in procedures
- Supervision of activities, including risk and reactivity management oversight

This activity constituted four inspection samples.

b. Findings

Introduction: A Green self-revealing finding was identified when the licensee failed to follow procedure, 0-ADM-222, Drain and Vent Rig Controls, while installing a temporary drain hose on Turkey Point Unit 4 in-service equipment. Specifically, operations and maintenance workers failed to properly verify a drain line flow path was isolated on the 1B feed water heater prior to removing a valve pipe cap that resulted in an unexpected lowering of condenser vacuum.

Description: On November 1, 2012, Turkey Point Nuclear Plant Unit 4 experienced an unexpected lowering of condenser vacuum due to the removal of a drain valve pipe cap on the 1B feed water heater. The non-safety related upstream drain isolation valve (4-30-128) was not physically verified to be in its normal closed position as required by safety-related procedure 0-ADM-222, Drain and Vent Rig Controls, prior to removing the pipe cap. The licensee used procedure 0-ADM-222 as governing guidance to perform

both safety and non-safety related plant operations. Unit 4 was in Mode 1, at 100 percent power when the operator at the controls noticed a drop from 762 to 714 megawatts electric (MWe) and a lowering of condenser vacuum from 27.7" mercury (Hg) to 26.0" Hg. The operations work control department had authorized mechanical maintenance to install a drain hose on the in-service 1B feed water heater shell in preparation for the upcoming refueling outage. Instead of physically verifying the position of valve 4-30-128 as required by procedure 0-ADM-222, the licensee relied on their work clearance control computer tracking system to check the position of the valve and incorrectly concluded that the drain valve was closed. As a result, an air in-leakage path was created by mechanical maintenance when the pipe cap downstream of the valve was removed to connect the drain hose. Off normal operating procedure 4-ONOP-014, Main Condenser Loss of Vacuum, was entered when operators at the controls noticed an unexpected lowering in condenser vacuum. The mechanical maintenance workers immediately notified Operations department they had just installed a drain rig assembly on the feed water heater shell drain valve and coordinated with the operators to close the drain valve which restored vacuum and the plant transient was terminated. The licensee entered this issue into their corrective action program as AR 1819010.

Analysis: The licensee's failure to verify the closed position of 1B feed water heater drain valve 4-30-128, as required by procedure 0-ADM-222, prior to removing the pipe cap was a performance deficiency. The inspectors determined the performance deficiency was more than minor using IMC 0612, Appendix B, Issue Screening, because the performance deficiency was associated with the configuration control attribute of the initiating events cornerstone, and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to verify the position of 4-30-128 resulted in lowering condenser vacuum that could have led to a reactor trip and the unavailability of the main condenser. The inspectors evaluated the finding using the significance determination process for findings at power of IMC 0609, Appendix A, Exhibit 1, Transient Initiators. The inspectors determined the finding was of very low safety significance (Green) because the finding did not result in a reactor trip and a loss of mitigation equipment relied upon to transition the plant to a stable shutdown condition.

The finding was associated with a cross-cutting aspect in the work practices component of the human performance area because the licensee did not define and effectively communicate expectations, or follow the procedural requirement to physically verify valve position during the drain hose installation work. [H.4(b) per IMC 0310]

Enforcement: This finding does not involve enforcement action because no violation of a regulatory requirement was identified. Because this finding did not involve a violation and was of very low safety significance, it is identified as FIN 05000251/2012005-01, Failure to Verify 1B Feed Water Heater Drain Valve Closed.

### .3 Annual Review of Licensee Requalification Examination Results

#### a. Inspection Scope

On November 26, 2012, the licensee completed the annual requalification operating examinations required to be administered to all licensed operators in accordance with 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the individual operating examinations and the crew simulator operating examinations in accordance with Inspection Procedure (IP) 71111.11, "Licensed Operator Requalification Program." These results were compared to the thresholds established in Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Appendix I, "Operator Requalification Human Performance Significance Determination Process."

#### b. Findings

No findings were identified.

### 1R12 Maintenance Effectiveness

#### a. Inspection Scope

The inspectors reviewed the following two equipment problems and associated condition reports 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 0-ADM-728, Maintenance Rule Implementation. The inspectors' efforts focused on maintenance rule scoping, characterization of maintenance problems and failed components, risk significance, determination of a(1) 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 verified that equipment problems were being identified and entered into the corrective action program. The inspectors used licensee maintenance rule data base, system health reports, and the corrective action program as sources of information on tracking and resolution of issues.

- Unit 3 CCW system health reports from fourth quarter of 2011 through the second quarter of 2012 were reviewed. The Unit 3 CCW system health was in yellow a(1) status for the fourth quarter of 2011 and first quarter of 2012 for exceeding 3B CCW pump unavailability criteria due to multiple bearing replacements. During the second quarter of 2012, the Unit 3 CCW system health went to white status.
- AR 01793581, 3B Gamma-Metrics wide range channel reliability does not meet performance criteria.

#### b. Findings

No findings were identified.



1R13 Maintenance Risk Assessments and Emergent Work Controla. Inspection Scope

The inspectors completed in-office reviews 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 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 FPL procedure OP-AA-104-1007, Online Aggregate Risk. The inspectors evaluated the following risk assessments during the inspection:

- October 25: Unit 3 risk assessment when auxiliary feed water train 2 flow control valves FCV-3-2831 and FCV-3-2832 were removed from service for maintenance, B standby steam generator feed water pump was out of service for maintenance, and severe weather threatened the region (Tropical Storm Sandy). The licensee's Green risk characterization was verified using NRC's Standardized Plant Analysis Risk (SPAR) Model for Turkey Point Unit 3 and 4 and risk assessment tool.
- December 5: The performance of the Unit 3 risk assessment was verified and reviewed for accuracy using the licensee risk assessment tool during RCS Flow protection channel tests which requires associated bistables to be tripped. The risk assessment evaluated the aggregate risk. The inspector's observed the use of the tool in the Work Control Center and the Control Room and reviewed the Equipment Out of Service book and Operator Logs to verify the plant configuration. The licensee's Green risk characterization was verified using the NRC's SPAR Model for Turkey Point Unit 3 and 4 and risk assessment tool.
- December 11: Unit 3 risk assessment when 3A ICW/CCW Basket Strainer BS-3-1402 was removed from service for maintenance in conjunction with 4A 4kV bus, 4A emergency diesel generator, and the 4A high head safety injection pump. The licensee's Yellow risk characterization was verified using NRC's Standardized Plant Analysis Risk (SPAR) Model for Turkey Point Unit 3 and 4 and risk assessment tool.
- December 13: Unit 3 risk management when the 3A emergency diesel generator fuel oil transfer pump failed to start during its quarterly surveillance test (AR 1832175)

b. Findings

No findings were identified.

## 1R15 Operability Evaluations

### a. Inspection Scope

For the three operability evaluations described in the action requests (AR) listed below, 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. The inspectors reviewed the UFSAR to verify that 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 plant design basis was being maintained. The inspectors also reviewed a sampling of condition reports to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations.

- AR 1833717, 3C Intake Cooling Water Pump Tripped During Station Blackout Cross-tie Testing
- AR 1816453, 3B Emergency Diesel Generator Low Lube Oil Evaluation
- AR 1820194, Gas Voiding In U4 Containment

### b. Findings

No findings were identified.

## 1R19 Post Maintenance Testing

### a. Inspection Scope

For the five post maintenance tests 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 operable. The inspectors used licensee procedure 0-ADM-737, Post Maintenance Testing, in their assessments. Modifications associated with the extended powerup rate (EPU) are noted.

- Unit 3: 3-OSP-203.2, Train B Engineered Safeguards Integrated Test, sections 7.2 and 7.3 in accordance with engineering change 273225, Emergency Containment Cooler (ECC) Auto-Start Circuit Installation, verifying auto start capability for the swing emergency containment cooler to mitigate a single active failure component and have two ECC units running (EPU)
- Unit 3: RPS relay replacement and post maintenance testing in accordance with WO 40120591-01 and 3-OSP-049.1, Reactor Protection System Logic Test, after replacement of reactor coolant flow loop B relay RC-4-B, when it was found failed in its de-energized state.

- Unit 3: 3A Train PRB-1-A, power range block permissive relay found de-energized per WO 40195473-01. The post maintenance test was performed in accordance with procedures contained in the referenced work order and 3-OSP-049.1, Reactor Protection System Logic Test, after replacement of the power range block permissive relay PRB-1-A.
- Unit 4: RHR 4B oil sample and motor inspection was conducted per WO 40131754-01 prior to the Unit 4 Cycle 17 Refueling outage. Work was performed using plant procedures 0-GME-005.01, 4.16kV Equipment Grounding and Testing and 0-GMP-102.6, Periodic Collection of Oil Samples from Plant Pumps, Motors, and Other Lubricated Components.
- Common: 0-PME-102.08, MOV Grease Inspection and Stem Lubrication Preventive Maintenance Procedure, performed on AFW Pump C, Trip and Throttle Valve, MOV-6459C, greased and lubricated the throttle valve and ensured proper valve stroke in both the open and close directions, per Work Order 40138214-1.

b. Findings

No findings were identified.

1R20 Unit 4 Refueling and Extended Power Uprate Outage 27 (EPU)

a. Inspection Scope

The inspectors observed selected Unit 4 outage activities starting November 1 to determine whether shutdown safety functions were properly maintained as required by technical specifications and plant procedures. The inspectors evaluated specific performance attributes including operator performance, communications, and risk management. The inspectors reviewed procedures and observed selected activities associated with the outage and conducted walkdowns of systems credited to maintain safety margins and defense in depth. The inspectors verified that activities were performed in accordance with the outage plan, plant procedures, and as appropriate, verified that acceptance criteria were met. Conditions adverse to quality documented by the licensee in the corrective action program were checked daily. Also, management activities were monitored to assure adherence to the outage plan and safe resolution of issues. The inspectors specifically evaluated the following activities:

- New fuel receipt and inspections conducted by the licensee
- Review of the licensee's outage plan and risk management activities prior to the plant shutdown
- Overpressurization Mitigation System testing
- RHR alignment and testing
- Plant shutdown and cool down to Mode 3 with Technical Specification limits.
- Early containment entry and inspection
- Containment hatch closure testing within required time limits.

- Prior to the drain down evolution the NRC inspectors verified the level indication valve alignment inside containment and the removal of the pressurizer safety relief valve to provide for an adequate reactor coolant system vent path.
- Drain down of the reactor coolant system to the reactor vessel flange for removal of reactor head
- Reactor head removal and placement on stand
- Spent Fuel Pool heat exchanger room walk down post core offload.

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors either reviewed or witnessed the six surveillance tests listed below to verify that the tests met the TS requirements, the UFSAR, and the licensee's procedural requirements and demonstrated that the systems were operationally ready to perform their intended safety functions. 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 alignment required for the system to perform its safety function. In-service tests (IST) were validated using the licensee's In-service Testing Program, Fourth Ten Year Interval, dated March 11, 2004. The inspectors verified that surveillance issues were documented in the corrective action program. Extended power uprate (EPU) testing was done under NRC Inspection Procedure 71004 guidance.

Containment Isolation Valve Test:

- 3-OSP-206.2, Quarterly In-service Valve Testing – Containment Isolation Valve

Surveillance Test:

- 0-OSP-207.2, Visual Leak Inspection of Systems Outside Containment, Section 7.6.4 Visual Inspection of Unit 4 Volume Control Tank Room
- 0-OSP-005.3, Load Testing of the Station Blackout Cross-Tie
- 4-OSP-050.2A, Residual Heat Removal Train A Test – Standby Alignment
- 3-OSP-075.1, Auxiliary Feedwater Train 1 Operability Verification
- 3-OSP-067.1D, R-3-19 Process Radiation Monitor Test

b. Findings

No findings were identified.

## Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changesa. Inspection Scope

The Nuclear Security and Incident Response (NSIR) headquarters staff performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures (EPIPs) and the Emergency Plan located under ADAMS accession numbers ML12009A082 and ML12184A052, as listed in the Attachment.

The licensee determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, these revisions are subject to future inspection. Documents reviewed are listed in the Attachment. This inspection activity satisfied one inspection sample for the emergency action level and emergency plan changes on an annual basis.

b. Findings

No findings were identified.

## 1EP6 Drill Evaluation

.1 Emergency Preparedness Drilla. Inspection Scope

On October 25, 2012, the inspectors observed an emergency preparedness drill and the performance of the licensee's emergency response organization. The drill included a simulated Unit 3 MIMS alarm followed by a CVCS letdown radiation monitor R-20 alarm due to fuel cladding damage, requiring an Unusual Event declaration and notification to state of Florida, county officials, and the NRC per 0-EPIP-20101, Duties of the Emergency Coordinator. The scenario progressed to a fire at the intake at 3C ICW pump requiring an Alert notification to the state of Florida and simulated notification to the NRC. The drill scenario progressed to a Site Area Emergency and ended with a General Emergency. The inspectors observed the crew in the plant simulator including simulated implementation of emergency procedures and staff in the Technical Support Center (TSC) using the event classification guidelines and emergency response procedures. During the drill, the inspectors observed the simulator and TSC staff verify that emergency classification and notifications were made in accordance with the licensee emergency plan implementing procedure 0-EPIP-20101. Licensee identified critique items were reviewed and observations were discussed with the licensee to verify that drill issues were identified and captured in the corrective action program.

b. Findings

No findings were identified.

2. Simulator Based Training Evolution

a. Inspection Scope

On October 15, 2012, the inspectors observed an operating crew in the plant simulator. The simulation included a steam generator tube leak, a loss of offsite power and a loss of vital AC power in accordance with the licensee's initial/continuing Training Evaluation Scenario 750207603, Loss of Vital AC/Excess RCS Leakage. Plant operators responded to the simulated loss of offsite power with the declaration of an Unusual Event (SU5). With the subsequent failure of one emergency diesel generator, the classification was escalated to an Alert classification (SA5) requiring activation of the emergency response organization. During the drill, the inspectors assessed operator actions to verify that emergency classification and simulated notification to local officials were made in accordance with the emergency plan implementing procedures and 10 CFR 50.72 requirements. The inspectors reviewed the event classifications and notifications to ensure these were made in accordance with licensee procedure, 0-EPIP-20101, Attachments 1 and 2, Turkey Point Classification Tables. Drill critique items were discussed with the licensee and reviewed to verify that drill issues were identified and captured in the licensee's corrective action program.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety (OS) and Public Radiation Safety (PS)

2RS1 Radiological Hazard Assessment and Exposure Controls

a. Inspection Scope

Inspection Planning: The inspectors reviewed licensee Performance Indicator (PI) data for the Occupational Exposure Cornerstone. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results.

Radiological Hazard Assessment: During facility tours, the inspectors directly observed postings and physical controls for radiation area, high radiation area (HRA), and airborne radioactivity locations established within the Unit 4 (U4) containment, Unit 3 (U3) and U4 auxiliary buildings, and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates or directly observed conduct of licensee radiation surveys for selected equipment and areas within Radiologically Controlled Area (RCA) locations. Established radiological controls were evaluated for selected U4 Refueling Cycle 27 Outage (U4R27) tasks including reactor

Enclosure

sump and steam generator (SG) maintenance activities. The inspectors reviewed and evaluated surveys conducted and records maintained for selected RCA areas and/or refueling outage tasks including surveys for alpha emitters, hot particles, airborne radioactivity, potential dose rate gradients, and upcoming pre-task surveys. The inspectors also discussed changes to plant operations that could contribute to changing radiological conditions since the last inspection.

Instructions to Workers: During facility tours, the inspectors observed and evaluated the adequacy of container labeling and area postings for the previous and current outage activities. For selected outage jobs, the inspectors attended pre-job briefings and reviewed radiation work permit (RWP) details to assess communication of radiological control requirements and current radiological conditions to workers. Electronic Dosimeter (ED) alarm logs were reviewed and workers' responses to dose and dose rate alarms during selected work activities were evaluated. ED alarm set-points and worker stay times were evaluated against radiation survey results.

Contamination and Radioactive Material Control: The inspectors observed surveys of material and personnel being released from the RCA using small article monitor (SAM), personnel contamination monitor, and portal monitor instrumentation. SAM equipment sensitivity, alarm set-points, and release program guidance were discussed with licensee staff. The inspectors also reviewed records of leak tests on selected sealed sources, discussed nationally tracked source transactions with licensee staff, and verified sources within select storage locations. The inspectors also reviewed and discussed with staff processes for release of turbine building components and materials being replaced as part of the ongoing extended power up-rate activities.

Radiological Hazards Control and Work Coverage: Licensee controls for areas where dose rates could change significantly as a result of plant shutdown and refueling operations were reviewed and discussed. The inspectors reviewed RWPs for work within airborne radioactivity areas. For potential HRA tasks involving significant dose rate gradients, e.g., bottom mounted instrumentation maintenance conducted within the reactor sump, the inspectors evaluated the use and placement of whole body and extremity dosimetry to monitor worker exposure. Controls and their implementation for storage of irradiated material within the U4 spent fuel pool (SFP) were reviewed and discussed with responsible licensee representatives.

Risk-Significant High Radiation Area and Very High Radiation Area Controls: The inspectors evaluated access barrier effectiveness of Locked High Radiation Area (LHRA) and Very High Radiation Area (VHRA) controls for selected U4 containment building and U3 and 4 reactor auxiliary building (RAB) locations. Procedures for LHRA and VHRA controls were discussed with health physics (HP) supervisors.

Radiation Worker Performance and Radiation Protection Technician Proficiency: Occupational worker adherence to selected RWPs and Radiation Protection Technician (RPT) proficiency in providing U4 containment and RAB job coverage were evaluated through direct observations and discussions with licensee staff.

Problem Identification and Resolution: Corrective Action Program (CAP) documents associated with radiological hazard assessment and control were reviewed and assessed. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with Performance Improvement procedure (PI)-AA-01, Corrective Action Program and Condition Reporting, Revision (Rev.) 3 and PI-AA-204, Condition Identification and Screening Process, Rev. 18. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results.

Radiation protection activities were evaluated against the requirements of Updated Final Safety Analysis Report (UFSAR) Section 11; Technical Specifications (TS) Sections 6.8 Procedures and Programs and 6.12 HRA; 10 CFR Parts 19 and 20; and approved licensee procedures. Licensee programs for monitoring materials and personnel released from the RCA were evaluated against 10 CFR Part 20 and IE Circular 81-07, Control of Radioactively Contaminated Material. Documents reviewed are listed in the Attachment.

The inspectors completed one sample as required by inspection procedure 71124.01.

b. Findings

No findings were identified.

2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

a. Inspection Scope

Waste Processing System Program Review: The inspectors reviewed and discussed the status and proposed changes to the radioactive waste processing systems relative to the current Updated Final Safety Analysis Report (UFSAR) and Process Control Program (PCP) documents. The inspectors discussed component function, recent or proposed processing system changes, and radioactive waste (radwaste) program implementation with licensee staff.

For dry active waste (DAW) generated during recent Unit 3 reactor sump and RWST maintenance activities, the inspectors evaluated analyses for hard-to-detect nuclides, reviewed the use of scaling factors, and discussed quality assurance (QA) activities for the waste stream characterizations by the current vendor analysis laboratory. The waste stream sampling methodologies and the resultant data used in select shipping and waste processing activities were evaluated and discussed with responsible radwaste staff.

Radioactive Material Storage: During walk-downs of radioactive material and radioactive waste storage areas, the inspectors observed the physical condition and labeling of storage containers and the posting of Radioactive Material Areas. The inspectors also reviewed licensee procedural guidance for storage and monitoring of radioactive material. Radiologically Controlled Area (RCA) storage areas evaluated included select Unit 3 and Unit 4 auxiliary building locations, Dry Storage Warehouse,

Enclosure



main RCA yard material and waste storage areas, ISFSI facility, and the Radio Tower Road EPU Material Processing area.

Radioactive Waste System Area Walkdowns: During inspector walk-downs, accessible sections of the liquid and solid radioactive waste (radwaste) processing systems were assessed for material condition and conformance with system design diagrams. Inspected equipment included radwaste processing and holdup tanks; radwaste system transfer piping, resin and filter components; dewatering system equipment and liquid radioactive waste control panel equipment. In addition, the inspectors reviewed the completion status of selected work order packages associated with liquid waste processing equipment.

Transportation: During the onsite inspection, the inspectors directly observed and evaluated proficiency of the responsible staff during preparation of waste and material shipments. Training provided to radioactive waste staff responsible for preparation of the shipments to meet Department of Transportation (DOT) regulations was evaluated. Additional shipping records were reviewed for consistency with licensee procedures and compliance with NRC and DOT regulations. The inspectors reviewed emergency response information, DOT shipping package classification, and waste classification, radiation survey results. Licensee procedures for labeling containers stored onsite were evaluated. In addition, training status for selected individuals currently involved in radioactive material shipping activities was reviewed.

Problem Identification and Resolution: The inspectors reviewed selected Corrective Action Program (CAP) documentation in the areas of radwaste processing and radwaste /radioactive material shipping. The inspectors evaluated the licensee's ability to identify and resolve identified issues in accordance with Performance Improvement procedure (PI)-AA-01, Corrective Action Program and Condition Reporting, Rev. 3, and PI-AA-204, Condition Identification and Screening Process, Rev 18. The inspectors also evaluated the scope of the licensee's internal audit program.

Radwaste processing activities and equipment configuration were reviewed for compliance with the licensee's Process Control Program (PCP), UFSAR Chapter 11; TS 6.8.1, Procedures and Programs, and approved procedures. Waste stream characterization analyses were reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 61, and guidance provided in the Branch Technical Position on Waste Classification (1983). Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 71, and 49 CFR Parts 172-178. Training activities were assessed against 49 CFR Part 172 Subpart H. Documents reviewed are listed in the Attachment

The inspectors completed one sample as required by inspection procedure 71124.08.

b. Findings

No findings were identified

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator (PI) Verification

###### a. Inspection Scope

Occupational Radiation Safety Cornerstone: The inspectors reviewed the Occupational Exposure Control Effectiveness PI results for the Occupational Radiation Safety Cornerstone from April 1, 2011, through November 30, 2012. For the assessment period, the inspectors reviewed electronic dosimeter (ED) alarm logs and selected Action Request (AR) / Condition Request (CR) documents related to controls for exposure significant areas and events. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in the Attachment.

Public Radiation Safety Cornerstone: The inspectors reviewed the Radiological Control Effluent Release Occurrences PI results for the Public Radiation Safety Cornerstone from April 1, 2011, through November 30, 2012. For the assessment period, the inspectors reviewed cumulative and projected doses to the public and ARs related to Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual issues. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in the Attachment.

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

###### 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 summaries of condition reports and by reviewing the licensee's electronic condition report 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 Semiannual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action documents including work request documents, attended shift plant status meetings, and discussed plant operations with the operating staff to identify trends that could indicate the existence of a more significant safety issue. This review was focused on repetitive equipment issues or problems that were not being promptly addressed and corrected. The inspectors review nominally considered the six month period from July 1 to December 31, 2012, but some examples expanded further back in time.

The review also included documents outside the corrective action program, such as system health reports, maintenance rule status reports, daily quality summary reports, the engineering log, surveillance tests, and maintenance lists. The inspectors compared their observations with those in the licensee's trending reports, including station and operations department trending reports.

b. Findings

No findings were identified. The inspectors did not identify any trends not observed by the licensee's trending activities.

40A3 Event Follow-up

.1 (Closed) Licensee Event Report (LER) 50-250/2012-003-00 Condition Prohibited by Technical Specifications Due to Instrument Valve Mispositioning

While performing the Unit 3 Main Turbine Valve Alignment in preparation for turbine startup prior to entering Mode 1, operators discovered the turbine pressure transmitters PT-3-446 and PT-3-447 inadvertently isolated. The operator immediately notified the control room and the licensee entered Technical Specifications action statement 3.0.3 because two instrument channels were inoperable. The root isolation valves to the pressure transmitters were found closed and the operators subsequently opened the valves exiting the action statement. It was determined that the valves were newly installed and mispositioned during the performance of an Engineering Modification. The root cause analysis documented in AR 1791236 identified a weakness in the Change Request Notice process that failed to identify plant procedure 3-NOP-089, Main Turbine, as an effected document. The licensee took additional actions to correct and prevent this from occurring in the future. The inspector did not identify any performance deficiency and determined that the technical specification non-compliance was of minor significance since it was self-revealing and did not have the potential to lead to a more significant safety concern. The LER is closed.

.2 (Closed) Licensee Event Report (LER) 50-250/2012-004-00 Condition Prohibited by Technical Specifications Due to Instrument Process Line Reversal During Replacement

After increasing power on Unit 3 and entering Mode 1, operators discovered the flow transmitter 3-FT-476, Channel IV Steam Generator 3A Main Feedwater Flow, was reading lower than expected compared to the other channels. The operator wrote an AR and a work request was issued to troubleshoot the issue. After further evaluation, the channel was declared inoperable and the unit entered Technical Specifications Limiting Condition of Operation 3.3.1, Table 3.3-1, Functional Unit 12 Action 6 which allows continued operation provided the inoperable channel is placed in the tripped condition within 6 hours. An investigation by maintenance personnel discovered the high and low sides of the process tubing for the transmitter 3-FT-476 were reversed. The process tubing was repaired and the site exited the action statement and restored the instrument channel. The process tubing for 3-FT-476 was reversed during the recent refueling outage work completed on May 19, 2012. The root cause analysis documented in AR 1800833 identified a weakness in the work instruction and inadequate post maintenance testing. The inspectors documented a self-revealing, non-cited violation (NCV 50-250,251/2012-004-01) of Turkey Point Technical Specification (TS) 3.3.1 Reactor Trip System Instrumentation in Inspection Report 05000250/2012004 and 05000251/20120004. No new findings were identified in the inspector's review of the LER and root cause analysis. The LER is closed.

4OA5 Other Activities

.1 Unit 3 Power Uprate, Inspection Procedure 71004

a. Inspection Scope

The inspectors observed selected plant testing and other power ascension activities during the implementation of the (2350 MWt to 2644 MWt) extended power uprate. The inspectors observed control room and in-plant activities during the ascension to the new 100% power level at various plateau levels, and walked down plant systems to ensure adverse conditions were both identified, and if warranted, entered into the corrective action program of resolution.

- Observed power escalation from 235 MWe to 239 MWe over one hour in accordance with licensee procedure 3-GOP-301, Hot Standby to Power Operations

The inspectors also reviewed operator actions, applicable procedure changes, and reviewed selected plant design changes and other inspection activities conducted under the normal baseline inspection program, to ensure an adequate sample of risk-significant attributes required by the governing procedure were evaluated. This included changes to plant emergency operating procedure, as well as associated operator briefings and training to address those actions resulting from a revised steam generator tube rupture analysis.

b. Findings

No findings were identified.

.2 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the plant inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours. These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspection activities.

b. Findings

No findings were identified.

.3 (Discussed) Temporary Instruction (TI) 2515/182 - Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 1

a. Inspection Scope

Leakage from buried and underground pipes has resulted in ground water contamination incidents with associated heightened NRC and public interest. The industry issued a guidance document, Nuclear Energy Institute (NEI) 09-14, "Guideline for the Management of Buried Piping Integrity," (ADAMS Accession No. ML1030901420), to describe the goals and required actions (commitments made by the licensee) resulting from this underground piping and tank initiative. On December 31, 2010, NEI issued Revision 1 to NEI 09-14, "Guidance for the Management of Underground Piping and Tank Integrity," (ADAMS Accession No. ML110700122), with an expanded scope of components which included underground piping that was not in direct contact with the soil and underground tanks. On November 17, 2011, the NRC issued TI-2515/182 "Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks," to gather information related to the industry's implementation of this initiative.

The inspectors reviewed the licensee's programs for buried pipe and underground piping and tanks in accordance with TI-2515/182 to determine if the program attributes and completion dates identified in Sections 3.3 A and 3.3 B of NEI 09-14, Revision 1 were contained in the licensee's program and implementing procedures. For the buried pipe and underground piping program attributes, with completion dates that had passed, the inspectors reviewed records to determine if the attribute was in fact complete and to determine if the attribute was accomplished in a manner which reflected good or poor practices in program management.

b. Observations and Findings

The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraphs 03.01.a through 03.01.c of TI-2515/182 and was found to meet all applicable aspects of NEI 09-14 Revision 1, as set forth in Table 1 of the TI. Based upon the scope of the review described above, Phase I of TI-2515/182 was complete. No findings were identified.

.4 (Closed) Temporary Instruction 2515/188 – Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns

a. Inspection Scope

From September 18-19, 2012, the inspectors independently performed their walkdown of the Unit 3 Battery Rack Room and the 4160V Switchgear Room and verified that the licensee confirmed that the following seismic features associated with the 3B Battery Rack, Sequencer 3C23A-Cabinet, and the Switchgear Room 3B-Air Handling Unit, were free of potential adverse seismic conditions:

- Anchorage was free of bent, broken, missing or loose hardware
- Anchorage was free of corrosion that is more than mild surface oxidation
- Anchorage was free of visible cracks in the concrete near the anchors
- Anchorage configuration was consistent with plant documentation
- SSCs will not be damaged from impact by nearby equipment or structures.
- Overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls are secure and not likely to collapse onto the equipment
- Attached lines have adequate flexibility to avoid damage
- The area appears to be free of potentially adverse seismic interactions that could cause flooding or spray in the area
- The area appears to be free of potentially adverse seismic interactions that could cause a fire in the area
- The area appears to be free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)

Additionally, inspectors verified that items that could allow the spent fuel pool to drain down rapidly were added to the Seismic Walkdown Equipment List (SWEL) and these items were walked down by the licensee.

b. Observations and Findings

Observations made during the walkdown that could not be determined to be acceptable were entered into the licensee's corrective action program for evaluation. For example, some electrical cabinets associated with items on the SWEL could not be opened due to protected train requirements. It is the licensee's intention to inspect those items at the first opportune time (most likely the next outage for each respective unit). No findings were identified.

.5 Independent Spent Fuel Storage Installation (ISFSI) Walkdown (IP 60855.1)

a. Inspection Scope

On October 10, 2012, the inspectors toured the independent spent fuel storage installation and observed plant operators perform their daily walk down using the listed procedure. The inspectors observed each cask building temperature indicator and passive ventilation system to be free of any obstruction thus 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 security access controls to the ISFSI area to be functional.

- 0-OSP-200.5, Miscellaneous Test, Checks, and Operating Evolutions.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The resident inspectors presented the inspection results to Mr. Kiley and other members of licensee management on January 16, 2013. 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: SUPPLEMENTAL INFORMATION

Enclosure

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel:

G. Alexander, FPL Engineering  
C. Cashwell, Radiation Protection Manager  
M. Crosby, Quality Manager  
P. Czaya, Licensing  
M. Epstein, Emergency Preparedness Manager  
A. Figueroa, Design Engineer  
J. Garcia, Engineering Manager  
M. Jones, Operations Manager  
M. Kiley, Site Vice-President  
E. Korkowski, SG Program Manager  
E. Lyons, Welding/Repair Replacement  
G. Melin, Assistant Operations Manager  
G. Mendoza, Chemistry Manager  
E. McCartney, Plant General Manager  
S. Mihalakea, Licensing  
J. Noble, Boric Acid  
J. Pallin, Maintenance Manager  
J. Patterson, Fire Protection Supervisor  
K. Remington, Engineering  
D. Slivon, ISI  
D. Sluzka, Work Controls Manager  
P. Tienmann, Licensing  
R. Tomonto, Licensing Manager

#### NRC

S. Stewart, Senior Resident Inspector  
M. Barillas, Resident Inspector

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

#### Opened and Closed

05000251, 2012005-01	FIN	Failure to Verify 1B Feedwater Heater Drain Valve Closed (Section 1R11.2)
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#### Closed

05000250, 251/2515/188	TI	Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns (Section 4OA5.4)
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05000250/2012-003-00	LER	Condition Prohibited by Technical Specifications Due to Instrument Valve Mispositioning (Section 4OA3.1)
05000250/2012-004-00	LER	Condition Prohibited by Technical Specifications Due to Instrument Process Line Reversal During Replacement (Section 4OA3.2)

Discussed

05000250, 251/2515/182	TI	Temporary Instruction (TI) -2515/182 - Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 1 (Section 4OA5.3)
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**LIST OF DOCUMENTS REVIEWED**

**Section 1R08: Inservice Inspection (ISI) Activities**

Corrective Action

AR 01830766  
 AR 01831425  
 AR 01832447  
 AR 01832447  
 AR 01832447  
 AR 01832474  
 AR 1634492  
 AR 1635252  
 AR 1639272  
 AR 1709153  
 AR 1709832  
 AR 1823585  
 AR 1823799  
 AR 1823915  
 AR 2008-14563

Procedures

Areva Document # 03-1246524, Instructions for Plug Inspection, Rev. 11  
 Areva Document # 51-5029214-10 Qualified Eddy Current Techniques for Turkey Point (PTN) Units 3 & 4  
 Areva Examination Technique Specification Sheet 1 for PTN4-EOC26 Rev. 0  
 Areva Examination Technique Specification Sheet 2 for PTN4-EOC26 Rev. 0  
 Areva Examination Technique Specification Sheet 3 for PTN4-EOC26 Rev. 0  
 Areva Examination Technique Specification Sheet 4 for PTN4-EOC26 Rev. 0  
 NDE 3.3, Liquid Penetrant Examination Solvent Removable, Visible Dye Technique, Rev. 13  
 NDE 3.5, Liquid Penetrant Examination in Accordance with Construction Codes, Rev. 4  
 NDE 4.15, Visual Examination ASME Section XI Code Case N-722-1 and N-729-1, Rev. 3  
 NDE 4.2, Visual Examination VT-2 Conducted During System Pressure Test, Rev. 10

NDE 4.3, Visual Examination VT-3, Rev. 11

NDE 5.31, Ultrasonic Examination Technique for Thermal Fatigue Cracking in Piping  $\geq 1.5"$  to  $\leq 4"$  Diameter (MRP-146), Rev. 1

NDE 5.4, Ultrasonic Examination of Austenitic Piping Welds, Rev. 19

#### Drawings

5614-H-509, RHR (IC) Sheet 16B and 16C, Rev. 1

ISI-002, UT Calibration Block Piping 18" Diameter, Rev. 6

UT-44, 3"-SS Pipe Standard, No. HT-2P3278, Rev. 0

#### Other Documents

0-ADM-537, Boric Acid Corrosion Control Program, Rev. 6

Areva Document # 03-9195093, Florida Power and Light Turkey Point Unit 4 Secondary Side Inspection On-Site Report, Rev. 0

Areva Personnel Certification, D. Austin

Areva Personnel Certification, G. Chapman

Areva Personnel Certification, T. Allen

Bonney Forge CMTR No. 311480, Heat No. 44027

Boric Acid Corrosion Control Program Quick Hot Self Assessment Plan and Report, 8/1-30/2011

Curtis Wright Personnel Certification, J. Timm

Curtis Wright Personnel Certification, K. Nelson

Curtis Wright Personnel Certification, T. Moore

General Electric UT Probe Certificate of Conformity, S/N SI0071

Ladish Valves CMTR No. 1003598

Lambert Macgill Thomas Personnel Certification, B. Kissack

Lambert Macgill Thomas Personnel Certification, J. Fuller

Lambert Macgill Thomas Personnel Certification, M. Shoemaker

Magnaflux Dual Purpose Penetrant Batch No. 965028 Certification

Magnaflux Spotcheck Developer Batch No. 08F02K, 08M01K Certification

Panametrics/Epoch 4 UT Instrument Linearity Record, S/N 081574301

PTN Nuclear Assurance Quality Report No. 97-00636, Dimensional Verification of CSI UT Blocks

PTN-ENG-SESJ-10-052, Condition Monitoring and Operational Assessment for the Turkey Point Unit 4 Steam Generators Based on Eddy Current Examination End of Cycle 24, November 2009, Rev. 0

PTN-ENG-SESJ-102-096, Degradation Assessment for Turkey Point Unit 3 and 4 Steam Generators, Update for the Turkey Point Unit 4 End-of-Cycle 25 Refueling Outage, Rev. 0

PTN-ENG-SESJ-12-029, Degradation Assessment for Turkey Point Unit 3 and 4 Steam Generators, Update for the Turkey Point Unit 4 End-of-Cycle 26 Refueling Outage, Rev. 01

Sandvik Certified Materials Test Report (CMTR) No. A/09-859488, Heat No. 521700, Stainless Steel

Temperature Indicator Calibration Form, Serial No. 263086

Ultragel Certified Test Report, Batch No. 07125

UT Calibration Standard Mill Test Report, No. J2009

## **Section 1EP4: Emergency Action Level and Emergency Plan Changes**

### Change Packages

Radiological Emergency Plan, Revisions 54 and 55

0-EPIP-20126, "Off-site Dose Calculations," Revision 1

0-EPIP-20132, "Technical Support Center (TSC) Activation and Operation," Revision 2A

0-EPIP-20133, "Operations Support Center (OSC) Activation and Operation," Revision 1

0-EPIP-20101, "Duties of Emergency Coordinator," Revision 6

## **Section 2RS01: Radiological Hazard Assessment and Exposure Controls**

### Procedures and Guidance Documents

0-ADM-023, Inventory Control and Accounting of Radioactive Sources, Rev. 2

0-HPA-001, Radiation Work Permit Initiation and Termination, Rev. 3

0-ADM-600, Radiation Protection Manual, Rev. 1

0-ADM-605, Control of Radioactive Material, Rev. 1

0-HPA-031.2, Multibadge Exposure Monitoring, 0A

0-HPS-021.3, Identification, Survey, and Release of Material for Unrestricted Use, Rev. 4

RP-AA-100-1001, Radiation Protection Conduct of Operations Guideline, Rev. 1

RP-AA-101-2004, Method for Monitoring and Assigning Effective Dose Equivalent (EDE) for High Dose Gradient Work, Rev. 2

RP-SR-101-1003, Personnel Contamination Monitoring and Decontamination, Rev. 3

RP-SR-102-1001, Area Radiological Surveys and Analysis, Rev. 2

RP-SR-103-1001, Posting Requirements for Radiological Hazards, Rev. 5

RP-SR-103-1002, High Radiation Area Controls, Rev. 3

RP-TP-101-1000, Exposure Investigations, Rev. 0A

RP-TP-103-1003, RP Survey Requirements for Extended Power Uprate Secondary Side Components and Material, Rev. 0A

RP-TP-107-1001, Storage of Highly Radioactive Material in the Reactor Cavity or Spent Fuel Pool, Rev. 0

### Records and Data Reviewed

Quick Hit Self-Assessment, "Crud Burst Control Self Assessment," 02/24/12

Turkey Point Nuclear Oversight Report, PTN-12-002-Radiation Protection and Radwaste Audit, 03/15/12

Quick Hit Self-Assessment, Inadequate Collective Radiation Exposure Performance Improvements, Ammended 11/18/11

Focused Self Assessment #01715112, Alpha Monitoring Program, dated 05/25/12

2012 NSTS Annual Inventory Reconciliation, Dated 01/18/12

Radioactive Source Leak Test Results, Dated 10/26/12

U3 Spent Fuel Pool Status of Cells with Trash Baskets and With Loose Trash, Dated 11/27/12

HP 14.14. HP Radioactive Source Inventory Report, Dated 11/15/12

U4R27 Outage Radiation Protection Shift Turnover, dated 12/11/12

Lesson Plan, PTN 2402904, "Pre-Outage Training for RP Personnel." Dated 09/26/12

Air Calculation Sheet, (ACS) A/S Log Ref No. P0-12-6331, U4 RCB 'A' S/G Platform, Dated 12/09/12

ACS, A/S Log Ref No. P0-12-6375, U4 RCB 'A' S/G Platform, Dated 12/10/12

ACS, A/S Log Ref No. P0-12-6453, U4 RCB 'A' S/G Platform, Dated 12/11/12

ACS, A/S Log Ref No. P0-12-6330, U4 RCB 'B' S/G Platform, Dated 12/09/12

ACS, A/S Log Ref No. P0-12-6384, U4 RCB 'B' S/G Platform, Dated 12/10/12

ACS, A/S Log Ref No. P0-12-6455, U4 RCB 'B' S/G Platform, Dated 12/11/12  
 ACS, A/S Log Ref No. P0-12-6333, U4 RCB 'C' S/G Platform, Dated 12/09/12  
 ACS, A/S Log Ref No. P0-12-6457, U4 RCB 'C' S/G Platform, Dated 12/11/12  
 ACS, A/S Log Ref No. P0-12-6445, U4 RCB Rx Sump Flow Level Test, Dated 12/11/12  
 ACS, A/S Log Ref No. P0-12-6550, U4 RCB Rx Sump Outside, Dated 12/12/12  
 ACS, A/S Log Ref No. P0-12-6517, U4 RCB Rx Sump General Area, Dated 12/12/12  
 HP-44:76, Survey Log No. 12-12406, Unit-4 'A' Steam Generator, Dated 12/04/12  
 HP-44:76, Survey Log No. 12-12420, Unit-4 'C' Steam Generator, Dated 12/04/12  
 HP-47:48, Survey Log No. 12-12917, Unit-4 'C' Steam Generator, Dated 12/11/12  
 HP-47:48, Survey Log No. 12-12923, Unit-4 'C' Steam Generator, Dated 12/12/12  
 HP-44:65, Survey Log No. 12-10831, Unit 4 Reactor Sump Initial Survey, Dated 11/07/12  
 HP-44:65, Survey Log No. 12-10958, Unit 4 Reactor Sump Insulation Survey, Dated 11/09/12  
 HP-44:65, Survey Log No. 12-12843, Unit 4 Reactor Sump Survey, Dated 12/10/12  
 HP-44:65, Survey Log No. 12-12968, Unit 4 Reactor Sump Survey, Dated 12/12/12  
 HP-21, Dose Rate Alarm Check-List, AR#01831518, Dated 12-10-12  
 HP-108.1, EDE Multibadge Data Sheet, dated 12/12/12  
 HRA Briefing and Entry Log, dated 12/12/12  
 RP-TP-103-1002-F10, "High Radiation Area Controls," LHRA Key Inventory Form, undated  
 RP Shift HRA/LHRA/VHRA Restricted Key Inventory Logs, Dated 12/13/12  
 RWP No. 12-4002, Radiation Protection Outage Containment Activities, Rev 3  
 RWP No. 12-4023, Reactor Sump – Legacy Boron Cleaning and Repairs, Rev. 3  
 RWP No. 12-4024, Bottom Mounted Instrumentation Project (BMI), Rev. 3  
 RWP No. 12-4102, U4R27 Thimble Tube Replacement Work on 58', Rev 2  
 RWP No. 12-4205, Outage Locked High Radiation Area Work, Rev 3  
 SEN0016A- RWP and Task Descriptions, Dated 11/19/12

#### Corrective Action Program (CAP) Documents

Action Request (AR) 1702878, Alpha Contamination Issues  
 AR 01824368, Review of TLD Separations  
 AR 01664707, Site Dose Delta Between Estimate and Actual  
 AR 01696554, Recovery Plan For Increased Dose Rates From U3 Crud Burst  
 AR 01668099, U3 SFP Handling Tool Found Unlocked  
 AR 01745321, RP Technician not Meeting Dosimetry Use Expectations  
 AR 01689935, Unauthorized Issuance of Radioactive Sources W/O RP Escort  
 AR 01766800, CS-137 Source S/N 72504 is Leaking Unable to Perform PM  
 AR 01774679, RWP Radiation Setpoints Very High  
 AR 01712443, Radiation Area Boundary Greater Than 5 Mr/Hr

### **Section 2RS08: Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation**

#### Procedures and Guidance Documents

Administrative Procedure (ADM)-605, Control of Radioactive Material, Revision (Rev.) 1  
 Florida Power & Light, Turkey Point Nuclear Station Nuclear Training Department, Lesson  
 Package Number (No.) 2400080, Radioactive Material Shipping, 08/31/11  
 0-HPA-045, Process Control Program, Rev. 0  
 RP-AA-108-1002, Shipment of Radioactive Material, Rev. 1  
 RP-AA-108-1003, Radioactive Materials Surveys for Shipment, Rev. 1

RP-AA-108-1004, Packaging Radioactive Materials for Shipment, Rev. 0  
 0-NCOP-501, DTS-WPS Media Sluice, Rev. 1  
 0-NCOP-502, DTS Media Dewatering, 5/20/10  
 0-HPS-040.5, 10 CFR61 Compliance and Radioactive Waste/Material Shipment Classification and Characterization, 06/22/10

#### Records and Data Reviewed

Radioactive Waste Manifest Tracking Log, Calendar Year (CY) 2011 and Year-to-Date (YTD) 2012  
 Radioactive Material Shipment Tracking Log, Calendar Year (CY) 2011 and Year-to-Date (YTD) 2012  
 Radioactive Material Shipment (M)-12-149, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 1 Metal Box UniTech Used Material 40' SeaLand Container, 12/12/12  
 Radioactive Waste Shipment, (W)-12-043, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 2 Metal Boxes 2012, Dry Active Waste (DAW), 12/12/12  
 Radioactive Waste Shipment, W-12-029, UN3321, Radioactive material, low specific activity (LSA-II), 7 Fissile Excepted, 2 Metal Boxes, 2012 DAW, 07/26/12  
 Radioactive Waste Shipment, W-12-028, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 1 Metal Box, 2012 DAW, 1 Metal Box RWST-Sump DAW, 07/24/12  
 Radioactive Waste Shipment, W-12-026, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 12 Metal Boxes, DAW in 20 foot (') Sealand Container 07/12/12  
 Radioactive Material Shipment, M-12-091, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 1 Metal Box AREVA 9011352, 06/28/12  
 Radioactive Material Shipment, M-12-069, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 1 Metal Box UniTech Used Material, 40' SeaLand Container, 05/26/12  
 Radioactive Material Shipment, M-12-006, UN3321, Radioactive material, low specific activity(LSA-II), 7 Fissile Excepted, 1 Metal Box, Spent Fuel Pool Handling Tool, 02/17/12  
 10 CFR Part 61 Analysis for 2012 Dry Active Waste (DAW), 07/16/2012  
 10 CFR Part 61 Analysis for 2012 Unit 3 Reactor Sump DAW, 07/16/2012  
 10 CFR Part 61 Analysis for 2012 RWST DAW, 07/20/2012  
 Work Request Number (WR) 94010128, 3B RCDT pump keeps tripping off  
 WR 400059695, Annunciator did not flash while testing alarm panel  
 WR 94059695, Control switch for CV-3-4658A will not go to close  
 WR 94036557, LCV-4-1003B limit switch shows closed when valve is open

#### Corrective Action Program (CAP) Documents

Turkey Point Nuclear Oversight Report No. PTN-12-002, Radiological Protection and Radwaste, 03/15/2012  
 AR 01790284, Eight pieces of M&TE were disposed of as radwaste  
 AR 01809883, Waste class not marked on container in accordance with disposal facility waste acceptance criteria  
 AR 01748532, Replace secondary liner in radwaste skid  
 AR 01772330, Radioactive shipment egress prevented by west end of NAB  
 AR 01770861, RWST waste seal and will require additional handling prior to shipment

AR 01715311, Informational radiological posting not removed from non-radiologically contaminated equipment  
 AR 01700085, Delay in receipt of radioactive material shipment,  
 AR 1747168, Initial Cavity survey After Draining  
 AR 1760652, Locked High Radiation Area Not Secured Properly  
 AR 1823307, Boilermaker Moved Locked HRA Sign  
 AR 1788351, Inadequate HRA Postings  
 AR 1752780, Individual Did Not Acknowledge Dose Rate Alarm on Sentinel

#### Procedures and Guidance Documents

0-ADM-032, NRC Performance Indicators Turkey Point, Rev. 4

#### Records and Data Reviewed

Annual Radioactive Effluent Release Report, January 2011 through December 2011  
 AR 01643894, Documentation of unplanned release  
 AR 01687974, Inability to close liquid release L-2011-111 B-MT  
 Annual Radioactive Effluent Release Report Gaseous Effluent, Site Ground Releases, as of December 12, 2012  
 0-NCOP-006, Gas Gamma Beta Dose Summary Sheet, December 2011  
 0-NCOP-006, Liquid Dose Summary Sheet, December 2011  
 0-NCOP-006, Gas Gamma Beta Dose Summary Sheet, November 2012  
 0-NCOP-006, Liquid Dose Summary Sheet, November 2012  
 PTN Quarterly PI Reports, Dated 2<sup>nd</sup> Qtr 2011 to September 2012  
 List of Dose and Dose Rate alarms for the periods 04/02/11 - 11/20/12  
 Exposure Investigation Reports, dated from 04/01/11 through 12/12/12

#### **Section 40A5.1: Temporary Instruction 2515/182**

##### Procedures

ER-AA-102, Buried Piping Program, Rev. 1  
 ER-AA-102-1000, Buried Piping Examination Procedure, Rev. 01

#### Corrective Action Documents

AR 01725397  
 AR 01729680  
 AR 01770176  
 AR 01802204  
 AR 1674259

#### Other Documents

Buried Piping Program Health Report, 1 Quarter 2011  
 Buried Piping Program Health Report, 1 Quarter 2012  
 Buried Piping Program Health Report, 2 Quarter 2011  
 Buried Piping Program Health Report, 2 Quarter 2012  
 Buried Piping Program Health Report, 3 Quarter 2011  
 Buried Piping Program Health Report, 3 Quarter 2012  
 Buried Piping Program Health Report, 4 Quarter 2011  
 NEI 09-14 Prioritization of Underground Piping, June 2012

Quick Hit Self Assessment Report, 2011 Fleet Buried Piping Program Self-Assessment,  
10/3/2011  
Quick Hit Self Assessment Report, QHSA for NRC Buried Piping Inspection TI-182, September  
14-19, 2012  
Report No. 1016456, Recommendation for an Effective Program to Control Degradation of  
Buried Piping, December 2008  
Schedule for Buried and Underground Piping Examinations  
Turkey Point Buried Piping Program Basis Document, Revision 0  
Turkey Point Power Station Underground Piping and Tanks Examination Plan, Rev. 0  
Unit 3 Circulating Water Pipe NDE Inspection, August 2012

**Section 4OA5.4: Temporary Instruction 2515/188**

EPRI 1025286 "Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task  
Force Recommendation 2.3  
Turkey Point Seismic Walkdown Equipment List (SWEL) 1 and 2  
Various Seismic Evaluation Training Course Certifications  
Area Walk-By Checklist and Seismic Walkdown Checklist for Areas 347 and 368