



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

July 28, 2010

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

SUBJECT: TURKEY POINT NUCLEAR PLANT – INTEGRATED INSPECTION REPORT  
05000250/2010003 AND 05000251/2010003

Dear Mr. Nazar:

On June 30, 2010, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Turkey Point Units 3 and 4. The enclosed inspection report documents the inspection results, which were discussed on July 19, 2010, with Mr. Kiley and other members of your staff.

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

The report documents one NRC identified and one self-revealing finding of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Turkey Point. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at Turkey Point.

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Sincerely,

***/RA/***

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

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

Enclosure: Inspection Report 05000250/2010003 and 05000251/2010003  
w/Attachment: Supplemental Information

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Letter to Mano Nazar from Daniel W. Rich dated July 28, 2010

SUBJECT: TURKEY POINT NUCLEAR PLANT – INTEGRATED INSPECTION REPORT  
05000250/2010003 AND 05000251/2010003

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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: 05000250/2010003, 05000251/2010003

Licensee: Florida Power & Light Company (FP&L)

Facility: Turkey Point Nuclear Plant, Units 3 & 4

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

Dates: April 1 to June 30, 2010

Inspectors: J. Stewart, Senior Resident Inspector  
M. Barillas, Resident Inspector  
A. Nielsen, Health Physicist (2RS8)  
G. Kuzo, Senior Health Physicist (2RS8)  
J. Hamman, Reactor Inspector (1R17)  
S. Ninh, Senior Project Engineer (1R17)  
J. Eargle, Reactor Inspector (1R17)  
A. Alen, Reactor Inspector (1R17)

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000250/2010-003, 05000251/2010-003; 4/1/2010 – 6/30/2010; Turkey Point Nuclear Power Plant, Units 3 and 4; Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation, Followup of Events

The report covered a three month period of inspection by resident inspectors and region based health physicists. Two Green NCVs were identified. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP); the cross-cutting aspect was determined using IMC 305, Operating Reactor Assessment Program; and that findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December, 2006.

### A. NRC-Identified & Self-Revealing Findings

#### Cornerstone: Initiating Events

- Green. A Self-Revealing Non-cited Violation of Technical Specification 3.1.3.1.b requirements was identified on Unit 3 when position indication for two rod control cluster assemblies (RCCs) drifted out of tolerance with the associated rod group position indication. Contrary to technical specification requirements, rod positions were neither re-aligned with the group counter nor was reactor power reduced to less than 90 percent within the allowed one hour action time with a potential consequence of challenging accident analysis assumptions. The issue was documented in the corrective action program as CR 2010-14724.

The finding was more than minor because if inaccurate rod position indication was left uncorrected, there was a possibility of an adverse affect of an actual rod misalignment beyond that assumed in accident analyses. The Initiating Events cornerstone was affected because rod position alignment assures that accident analysis assumptions are maintained. The inspectors evaluated the finding using NRC Inspection Manual 0609, Attachment 0609.04, Initial Screening and Characterization of Findings and classified the finding of very low safety significance (Green) using the Transient Initiator tool. The cross-cutting aspect of Human Performance, Decision Making (H.1.a) was affected when supervisory personnel did not implement their roles and authorities to ensure safety by implementing Technical Specification requirements. (4OA3)

Enclosure

Cornerstone: Public Radiation Safety (RS)

- Green The inspectors identified a Green non-cited violation (NCV) of 10 CFR Part 20.1501(a) for the failure to perform adequate surveys to meet the requirements of 10 CFR Part 20 Appendix G. 10 CFR Part 20 Appendix G states that shippers of radioactive waste must identify and quantify radionuclides contained in each waste container. Specifically, the inspectors determined that the use of resin samples to characterize three shipments of mechanical filters in calendar years 2008 and 2009 was inadequate to ensure proper identification and quantification of the radionuclides present in each container. The licensee entered the issue into their corrective action program as condition report (CR) number 2009-32955.

The finding is more than minor because it is associated with the Public Radiation Safety cornerstone attribute of Programs and Processes and adversely affects the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was assessed using the Public Radiation Safety Significance Determination Process (SDP). Based on the fact that subsequent follow up analyses demonstrated that none of the filter waste was under-classified, the finding was determined to be of very low safety significance (Green). This finding has a crosscutting aspect of Human Performance, Decision Making [H.1(b)], because the decision to use resin samples to characterize filter shipments was based on incorrect assumptions, i.e., that spent resin samples would be representative of the filter waste stream, and those assumptions were not demonstrated to be conservative prior to implementation. (Section 2RS8)

B. Licensee Identified Violations

None

## REPORT DETAILS

### Summary of Plant Status:

Unit 3: Unit 3 started the period at full power. Reactor power was reduced to 90 percent on June 23 to repair a secondary system pump then returned to full power on June 24 and was at full power for the rest of the inspection period.

Unit 4 operated at full power throughout the inspection period.

#### 1. REACTOR SAFETY

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

#### 1R01 Adverse Weather Protection (02.01 Summer Readiness of Offsite and Alternate AC Power Systems, 02.02 Readiness for Extreme Weather Conditions, and 02.04 Readiness to Cope with External Flooding)

##### a. Inspection Scope

During the week of May 24, the inspectors reviewed and verified the status of licensee actions in preparation for hot weather and hurricane season. The inspectors reviewed licensee procedures 0-ONOP-103.3, Severe Weather Preparations; 0-ADM-116, Hurricane Season Preparation; 0-ADM-216, PTN and PTF Shared System Work Control and Switchyard Access; 0-SMM-102.1, Flood Protection Stoplog and Penetration Seal Inspection; 0-EPIP-20106, Natural Emergencies; and 0-EPIP-20101, Duties of Emergency Coordinator in making their assessment. Licensee procedure 0-ONOP-004.6, Degraded Switchyard Voltage, was reviewed and discussed with operators to assure that actions planned if switchyard voltage was outside of limits or could not be predicted (post-trip) were appropriate. Licensee procedure 0-ADM-225, Online Risk Assessment and Management was reviewed to verify that appropriate actions were specified for risk management of degraded grid conditions. The inspectors performed site walk downs and tours of vulnerable areas (listed below) to verify that no activities would prevent the licensee from making timely storm preparations, if needed. The inspectors reviewed the Hurricane Season Preparation open items list and verified that the open exemptions were being documented in the corrective action program with a plan to correct them prior to a hurricane event. The following areas of the site were specifically inspected:

- Unit 3 and Unit 4 C bus transformer areas (02.01)
- Unit 3 and Unit 4 startup transformers (02.01)
- Main switchyard (02.02)
- Intake area (02.02)
- Unit 3 4160 volt switchgear rooms (02.02, 02.04)
- Unit 3 and unit 4 spent fuel cooling pump rooms (02.04)

b. Findings

No findings were identified.

1R01 Adverse Weather Protection (02.03, Evaluate Readiness for Impending Adverse Weather Conditions)

a. Inspection Scope

The inspectors evaluated the implementation of off-normal procedure 0-ONOP-011.1, Intake Canal High Temperature when the intake cooling water exceeded 96 degrees F which coincided with high containment ambient temperatures during the week of June 14. The inspectors verified that Technical Specification 3.6.1.5 high temperature equivalent hours were recorded and tracked.

b. Findings

No findings were identified.

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, High head safety injection alignment (outside containment) using licensee procedure 4-NOP-062, "Safety Injection", following venting performed due to gas intrusion (CR 2010-9497, CR 2010-7918) April 13, 2010
- Unit 4, 4B Emergency Diesel Generator and the station blackout cross-tie when 4A EDG was removed from service for maintenance overhaul. The walkdown was done using licensee lineups specified in 4-OP-023, Emergency Diesel Generator
- Unit 3 and Unit 4, Equipment Operability Verification with An Emergency Diesel Generator Inoperable, 0-OSP-023.3, when 3B EDG diesel oil transfer pump failed to auto start on June 7, 2010

b. Findings

No findings were identified.

## .2 Complete System Walkdown

### a. Inspection Scope

The inspectors performed a detailed review of the alignment and condition of system 062, Unit 4 safety injection, to verify that the existing alignment was consistent with the design. To determine the correct system alignment, the inspectors reviewed Turkey Point Technical Specifications (TS); licensee procedure 4-OSP-202.1, Safety Injection Flowpath Verification; procedure 4-NOP-062, Unit 4 Safety Injection; piping and instrumentation drawing 5614-M-3062; the design basis document; and the FSAR. The inspectors walked down supports and restraints associated with selected piping of the safety injection pumps. During the walkdown, the inspectors reviewed the following:

- Valves were correctly positioned and did not exhibit leakage that would impact the functions of any given valve. The inspectors verified that dry boric acid was logged and had a work request associated with the component.
- Electrical power was available as required.
- Major system components were correctly labeled, lubricated, cooled, ventilated, etc.
- Hangers and supports were correctly installed and functional.
- Essential support systems were operational.
- Ancillary equipment or debris did not interfere with system performance.
- Tagging clearances were appropriate.
- Valves were locked as required by the locked valve program.

Design and equipment issues were reviewed to determine if the identified deficiencies significantly impacted the system's functions. Items included in this review were the temporary modifications, system health report, the system description, pump vibration data, condition reports, and outstanding maintenance work orders (WOs). In addition, the inspectors reviewed the licensee's corrective action program to ensure that the licensee was identifying and resolving equipment alignment problems in a timely manner.

### b. Findings

No findings were identified.

## 1R05 Fire Protection

### a. Inspection Scope

#### .1 Fire Area Walkdowns

The inspectors toured the following six plant areas to evaluate conditions related to control of transient combustibles and ignition sources and the material condition and operational status of fire protection systems including fire barriers used to prevent fire damage 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 following areas were inspected:

- 3A emergency diesel generator room
- Auxiliary building breezeway
- Main control room
- 3B emergency diesel generator room
- Unit 3 charging pump room
- Auxiliary building hallway

b. Findings

No findings were identified.

.2 Annual Fire Drill

a. Inspection Scope

On April 20 and again on May 20, 2010, the inspectors observed the licensee fire brigade's response to a simulated fire on the control room roof. Two groups of responders were observed, one on each occasion. The inspectors verified that control room communications with the fire brigade were established and announcement of the fire location and sounding of alarms were made in a timely manner. The inspectors verified that the drill was administered in accordance with licensee procedures FPAD-027, Fire Brigade and Mutual Aid Drill Scenario Development and 0-ONOP-016.10, Pre-Fire Plan Guidelines and Safe Shutdown Manual Actions. The inspectors checked the brigade's communications, ability to set-up and execute fire operations, and their use of fire fighting equipment. The inspectors verified that the licensee implemented the aspects as described below when the brigade simulated the firefighting activities during the post-drill critique.

- The brigade, including the fire brigade leader, consisted of a minimum of five team members. On May 20 eight brigade members responded.
- The team members acquired and donned the appropriate turnout gear.
- Self contained breathing apparatus (SCBA) were available and properly donned. Actual use of breathing air was not done and the inspectors verified that individuals had practiced using air during annual SCBA training.
- Control Room personnel verified and announced the fire location. The fire alarm was sounded and fire brigade personnel were dispatched.
- Fire brigade leader maintained control. Members were briefed (including potential hazards), discussed plan of attack, received assignments, and performed communications checks.
- Fire brigade arrived at the scene in a timely manner, taking the appropriate access route specified in the strategies and procedures.
- Command and control was established near the fire location. Communications were established with the control room personnel.
- Communications were effective between the control room, command post, plant operators and fire brigade response teams.

- Fire hose lines were capable of reaching the fire area; the lines were laid out without flow restrictions and were simulated as being charged. In one case, a fire hose not properly laid out was corrected by the responders.
- The fire brigade arrived with sufficient fire fighting equipment to perform its fire fighting duties. Offsite notification and request for assistance were simulated.
- The drill scenario was followed and the drill acceptance criteria were met.
- A post-drill critique was held to identify strengths and areas for improvement. In one case, operations supervisors did not attend the critique because shift turnover was being conducted.
- All fire-fighting equipment associated with the drill was returned to a state of readiness following completion of the drill.

b. Findings

No findings were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors conducted walkdowns of the following two areas subject to internal flooding to ensure that flood protection measures were in accordance with design specifications. The inspectors reviewed the Updated Final Safety Analysis Report (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 debris. Operability of sump systems including alarms was verified by review of completed licensee procedure O-PMI-065.05, Residual Heat Removal Room Sump Functional Test. Manhole inspections were completed, including checking for accumulated water and cable integrity problems. When water was identified in manhole 403, the inspectors verified that safety related components were of the appropriate design and that safety was not adversely affected.

- Unit 3 Residual Heat Removal (RHR) Pump Rooms
- Unit 4 Residual Heat Removal (RHR) Pump Rooms
- Manholes 403 and 731 (direct inspection)
- Manholes 420, 421, 423, 424 (review of records)

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program

.1 Resident Inspector Quarterly Review

a. Inspection Scope

On June 10, 2010, the inspectors observed and assessed licensed operator performance in the plant specific simulator. The simulated events were done using Emergency Preparedness Second Quarter Drill which involved a simulated loss of control room annunciators for more than 15 minutes, a lockout of safety electrical bus 3B, a fire in the Unit 3 auxiliary transformer, and a steam generator tube rupture. Operators responded to the events using off-normal procedure 3-ONOP-097, Loss of Control Room Annunciators; and plant emergency procedures 3-EOP-E-0, Reactor Trip Safety Injection; 3-EOP-ES-0.1, Reactor Trip Response; and 3-ECA-03.1, Steam Generator Tube Rupture, Loss of Reactor Coolant, Subcooled Recovery.

Event classifications (Unusual Event and Alert) were checked for proper classification and simulated state notification in accordance with licensee procedures 0-EPIP-20101, Duties of the Emergency Coordinator; and 0-EPIP-20134, Offsite Notifications and Protective Action Recommendations. The simulator board configurations were compared with actual plant control board configurations concerning recent plant 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 supervision, including ability to identify and implement appropriate TS actions and emergency plan classification and notification
- Crew overall performance and interactions
- Evaluator's critique and findings

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.

- CR 2010-8402, 3A qualified safety parameter display system (QSPDS), reactor vessel level temperature element TE-3-6493 failed requiring entry into the 30 day technical specification action. System Health Report for System 42, QSPDS, dated March 31, 2010, which included the a(1) action plan was reviewed.
- CR 2008-31372, Unit 4C Main Steam Line snubber failure

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 O-ADM-068, Work Week 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:

- April 9, risk management during recovery from maintenance on heater drain valve 4-1510A
- April 28, risk management during maintenance on 4A emergency diesel generator
- May 6, risk management for High aggregate risk due to extended out of service time for 4A emergency diesel generator
- May 17, risk management during maintenance on the Unit 3 startup transformer
- June 8, risk assessment and management after 3B emergency diesel generator was removed from service due to a failed fuel oil transfer pump (CR 2010-14915)
- June 30, risk management for Train 2 AFW when Train 1 AFW was declared inoperable for nitrogen backup line leak repair

b. Findings

No findings were identified.

## 1R15 Operability Evaluations

### a. Inspection Scope

For the five operability evaluations described in the condition reports (CR) 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 final safety analysis report 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.

- CR 2010-9904, Standby Steam Generator Feed Pump B trouble alarm locked in without reflash due to alarm circuit issues
- CR 2010-8936, Lube oil leak identified during 4A EDG 24 hour run from main oil pump
- CR 2010-6908 and 2007-38576 regarding 4A EDG turbo oil pump oil leak
- CR 2010-7918, operability of Unit 4 high head safety injection following identification of a void at point P-29 in the discharge piping. The review included structural evaluation in Numerical Applications Inc. Report NAI-1507-001, Evaluation of As-found Gas in Turkey Point Unit 4 Location P-29, and FPL Engineering Technical Response Memorandum, EDI-ENG-027, Attachment 2, Acceptance of safety injection supports for transient loads, dated 4-13-2010.
- CR 2010-10137, 3B Component Cooling Water Pump outboard mechanical seal leak

### b. Findings

No findings were identified.

## 1R17 Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

### a. Inspection Scope

The inspectors reviewed selected samples of evaluations to confirm that the licensee had appropriately considered the conditions under which changes to the facility, Updated Final Safety Analysis Report (UFSAR), or procedures may be made, and tests conducted, without prior NRC approval. The inspectors reviewed evaluations for eight changes and additional information, such as drawings, calculations, supporting analyses, the UFSAR, and Technical Specifications (TS) to confirm that the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The eight evaluations reviewed are listed in the List of Documents Reviewed.

The inspectors reviewed samples of changes for which the licensee had determined that evaluations were not required, to confirm that the licensee's conclusions to "screen out"

these changes were correct and consistent with 10CFR50.59. The fourteen “screened out” changes reviewed are listed in the List of Documents Reviewed.

The inspectors evaluated engineering design change packages for twelve material, component, and design based modifications to evaluate the modifications for adverse effects on system availability, reliability, and functional capability. The twelve modifications reviewed are as follows:

- PCM 08-025, Steam Dump to Atmosphere
- PCM 09-023, RPS Undervoltage Time Delay
- PCM 07-081, Containment Spray Pump Seal Modification
- MSP 08-013, RHR Room Sump Level Control
- PCM 06-103, CCW TCV-3-144 Replacement
- PCM 08-012, Containment Spray Pump Material Changes
- PCM 07-087, 4B Diesel Oil Storage Tank Sample Valve Addition
- MSP 08-151, Unit 3 Emergency Diesel Generator Day Tank Level
- PCM 08-006, Replacement of Unit 3 480V Under-Voltage Relays and Tripping of HDP's for SI
- PCN 08-012, CS Pump Material Changes
- PCN 07-087, 4B DOST Sample Valve ADD'N
- PCN 08-151, Unit 3 EDG Day Tank Level Switches Setpoint Change

Documents reviewed included procedures, engineering calculations, modification design and implementation packages, work orders, site drawings, corrective action documents, applicable sections of the living UFSAR, supporting analyses, TS, and design basis information. The inspectors additionally reviewed test documentation to ensure adequacy in scope and conclusion. The inspectors review was also intended to verify that all details were incorporated in licensing and design basis documents and associated plant procedures.

The inspectors also reviewed selected condition reports and the licensee's recent self-assessment associated with modifications and screening/evaluation issues to confirm that problems were identified at an appropriate threshold, were entered into the corrective action process, and appropriate corrective actions had been initiated and tracked to completion.

b. Findings

No findings were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the two temporary system modifications and one permanent plant modification listed below to ensure that that the modifications did not adversely affect safety system availability or reliability. The inspectors reviewed plant modifications for systems that were ranked high in risk for departures from design basis

and for inadvertent changes that could challenge the systems to fulfill their safety function. For the permanent modification, the inspectors reviewed the licensee's 10 CFR 50.59 screening to assure that NRC approval was not required prior to installation of the modification. The inspectors specifically checked material compatibility of added components, seismic qualification, adverse containment effects, and structural integrity. The inspectors conducted plant tours and discussed system status with engineering and operations personnel to check for the existence of modifications that had not been appropriately identified and evaluated.

- Temporary change 10-016 to 3-OP-023, Emergency Diesel Generator, to allow filling of the EDG air flasks from a nitrogen trailer during piping replacement
- Temporary air handling unit staged in auxiliary building hallway for cooling the containment spray pump room
- Permanent Modification PCM 08-030, Unit 4 Rod Position Indication System Replacement

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.

- Unit 4: Satisfactory leak check under work order 40007951, following repair of a lubricating oil leak on the 4A emergency diesel generator (4K4A) main pressure pump discharge line (CR 2010-11424)
- Unit 4: Compressor run and leak check following 4A emergency diesel generator electric air compressor monthly preventive maintenance, done in accordance with 4-PMM-022.16, under work order 39015247-02
- Common: Satisfactory testing of the control room emergency ventilation using 0-OSP-025.1, Control Room Emergency Ventilation System Operability Test following replacement of relays per Work Order 39012972-01. Both channels of actuation circuitry were verified tested by the inspectors.
- Unit 3: 3B Component Cooling Water Pump inboard and outboard bearing replacements and outboard mechanical seal replacements under WO: 40003304-01, 40003304-02, and 37003677-01
- Unit 3: 3A intake cooling water pump tested using 3-OSP-019.1, Intake Cooling Water Inservice Test, following pump replacement under work order 38019976-01.

b. Findings

No findings were identified.

1R22 Surveillance Testinga. Inspection Scope

The inspectors either reviewed or witnessed the following six surveillance tests to verify that the tests met the technical specification 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 positions/status required for the system to perform its safety function. Two inservice testings (IST) were validated using the licensee's Inservice Testing Program Fourth Ten Year Interval, dated March 11, 2004. The inspectors verified that surveillance issues were documented in the corrective action program.

- 4-OSP-023.2, Unit 4A Diesel Generator 24 Hour Full Load Test
- 3-OSP-047.1, Unit 3B Charging Pump Inservice Test (IST)
- 0-OSP-074.3, Standby Steam Generator Feedwater Pumps Availability Test, Section 7.2, Operation of standby steam generator feedwater pump B in recirculation
- 3-OSP-206.2, Unit 3, Quarterly Inservice Valve Testing, Section 7.4.19 and 7.4.20 Stroke test of pressurizer power operated relief valve, block valves, MOV-3-535 and 536 (IST)
- 3-OSP-206.2, Quarterly Inservice Valve Testing, section 7.10, Residual Heat Removal, pump A suction isolation valve 3-752A (IST)
- 4-OSP-075.7, Auxiliary Feedwater Train 2 Backup Nitrogen Test

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation.1 Simulator Based Training Evolutiona. Inspection Scope

On June 10, 2010, the inspectors observed an operating crew in the plant simulator and technical support center (TSC) staff during the second quarter emergency plan drill of the site emergency response organization. The drill included a loss of plant annunciators and declaration of an Unusual Event. Subsequently, a ground was simulated on the 3B 4160 volt safety bus resulting in loss of the bus with an accompanying reactor trip. A fire in the auxiliary transformer resulted in an alert declaration. The inspectors verified proper staffing of the emergency response facilities. Later, an unisolable steam leak was simulated on the A main steam line followed by a steam generator tube rupture. The inspectors observed the Site Area Emergency declaration due to the loss of two of the fission product barriers. During the drill, the

inspectors assessed operator actions to verify that emergency classification, notification, and protective action recommendations 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. The inspectors also observed whether the initial activation of the emergency response centers was timely and as specified in the licensee's emergency plan. Technical Specifications required actions during the drill were reviewed to assess correct implementation. 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

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

a. Inspection Scope

The inspectors reviewed a licensee evaluation of radionuclide concentrations in resin and filter waste streams and the effect of using 10 CFR Part 61 analyses derived from resin samples to characterize shipments of radioactive filters. These evaluations were performed and reviewed in response to Unresolved Item (URI) 2009005-02. This URI is now closed.

b. Findings

Introduction: The inspectors identified a Green non-cited violation (NCV) of 10 CFR Part 20.1501(a) for the failure to perform adequate surveys to meet the requirements of 10 CFR Part 20 Appendix G which states that shippers of radioactive waste must identify and quantify radionuclides contained in each waste container. Specifically, the inspectors determined that the use of resin samples to characterize shipments of mechanical filters was inadequate to ensure proper identification and quantification of the radionuclides present in each container.

Description: During a review of the records package for radioactive waste shipment number 2009-063, the inspectors noted that the filters in the shipment had been characterized using a 10 CFR Part 61 analysis labeled "06 filter blend." Further inspection determined that the samples used to create "06 filter blend" were actually samples of spent resin, rather than representative samples of the filters themselves. This is contrary to the guidance in NRC's Branch Technical Position (BTP) on Waste Classification (1983) and Information Notice 86-20, "Low-Level Radioactive Waste Scaling Factors, 10 CFR Part 61." These documents describe resin and filters as separate waste streams that require independent, representative, sampling of each. This is due to the different properties of ion exchange resins and mechanical filters

which tend to collect radioactive contaminants in differing concentrations. A subsequent analysis performed by the licensee confirmed that significant differences existed between “06 filter blend” and a newly created filter waste stream composed of milipore filter samples of reactor coolant system water and spent fuel pool water. The BTP allows the use of indirect methods (e.g. scaling factors or gross radioactivity measurements) to classify waste with the caveat that the results be accurate to within a factor of 10. Of the 30 radionuclides detected in both “06 filter blend” and the new milipore filter samples, 10 of these had scaling factor differences exceeding a factor of 10. An additional 10 radionuclides could not be compared since they were detected in one waste stream and not the other. The results indicate that “06 filter blend” was not representative of the mechanical filter waste stream. An analysis was also performed to evaluate whether any of the three affected filter shipments (2008-001, 2008-003, and 2009-063) had been mis-classified per 10 CFR Part 61 (criteria for burial) or 10 CFR Part 71 (compliance with Department of Transportation regulations). The analysis results were reviewed by the inspectors and by a licensee-contracted vendor. It was determined that the three shipments were correctly classified and shipped, however shipment 2008-001 required additional filter averaging to comply with 10 CFR Part 61 Class “C” limits. The inspectors also noted that although the waste classification remained the same in all three cases, the specific radionuclides that contributed the most to waste classification were different, i.e., filters characterized using “06 filter blend” were Class “C” based mostly on Ni-63 concentration whereas filters classified using the new filter waste stream were Class “C” based on transuranic concentration. Therefore, the radionuclide distributions for the containers listed on NRC Form 541 “Uniform Low-Level Radioactive Waste Manifest” for shipments 2008-001, 2008-003, and 2009-063 were not accurate.

Analysis: The inspectors determined that the failure to use representative samples, per BTP guidance, to characterize radioactive waste shipments was a performance deficiency and was reasonably within the licensee’s ability to foresee and correct. The finding is more than minor because it is associated with the Public Radiation Safety cornerstone attribute of Programs and Processes and adversely affects the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. Analyses performed to characterize shipments of radioactive waste must be accurate in order to ensure compliance with burial criteria and to ensure first-responders (in the event of an accident) and the general public remain safe while the packages are in-transit. The finding was assessed using the Public Radiation Safety Significance Determination Process (SDP). Based on the fact that none of the filter waste was under-classified, the finding was determined to be of very low safety significance (Green). The inspectors noted that the licensee made changes to how the filter waste stream is sampled as part of their corrective actions. This finding has a crosscutting aspect of Human Performance, Decision Making [H.1(b)], because the decision to use resin samples to characterize mechanical filter shipments was based on incorrect assumptions, i.e., that spent resin samples would be representative of the filter waste stream, and those assumptions were not demonstrated to be conservative prior to implementation.

Enforcement: 10 CFR Part 20.1501(a) states, in part, “Each licensee shall make or cause to be made, surveys that – (1) May be necessary for the licensee to comply with

the regulations in this part.” 10 CFR Part 20, Appendix G (I)(C) states, in part, “The shipper of radioactive waste shall provide the following information on the uniform manifest regarding the waste and each disposal container of waste in the shipment: (10) The identities and activities of individual radionuclides contained in each container.” Contrary to this, three shipments of radioactive filters (2008-001, 2008-003, and 2009-063) were sent for waste processing without the licensee having performed adequate surveys to determine the identities and quantities of individual radionuclides contained in each container. Because this violation was of very low safety significance and was entered into the licensee’s corrective action program (CR 2009-32955), this violation is being treated as an NCV, consistent with the Enforcement Policy: NCV 05000250, 251/2010003-01: Failure to perform adequate surveys to ensure proper estimation of radionuclide concentrations in mechanical filter waste shipments.

#### 4. OTHER ACTIVITIES

##### 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, a reactor coolant system unidentified leakage was checked on a daily basis to verify no substantive or unexplained changes.

###### b. Findings

No findings were identified.

###### .2 Annual Sample Review

###### a. Inspection Scope

The inspectors selected the following two condition reports for detailed review and discussion with the licensee. The condition reports were reviewed to ensure that an appropriate evaluation was performed and appropriate corrective actions were specified and prioritized. Other attributes checked included disposition of operability and resolution of the problem including cause determination and corrective actions. The inspectors evaluated the condition reports in accordance with the requirements of the licensee’s corrective actions process as specified in licensee procedures PI-AA-204, Condition Identification and Screening Process, and PI-AA-205, Condition Evaluation and Corrective Action. The inspectors reviewed the cumulative effects of the operator workarounds that were in place to verify that those effects could not increase an initiating event frequency, affect multiple mitigating systems, or affect the ability of operators to properly respond to plant transients and accidents. The inspectors also reviewed

operator workarounds to verify that the licensee was identifying operator workaround problems at an appropriate threshold and entering them in the corrective action program.

- CR 2010-12515, CO2 fire extinguisher out of CO2 (supplemental CR 2010-13915 actions were verified)
- CR 2010-13740: During normal start of 4A emergency diesel generator, the low fuel oil pressure alarm annunciated

b. Findings

No findings were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, the inspectors reviewed the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector corrective actions item screening discussed in section 4OA2.1 above, plant status reviews, plant tours, document reviews, and licensee trending efforts. Among the documents reviewed was the Turkey Point Station Performance Improvement Health Report, 1<sup>st</sup> Quarter 2010, dated May 14, 2010. The inspectors' review nominally considered the six month period of January through June 2010. Corrective actions associated with a sample of the issues identified in the licensee's corrective action program were reviewed for adequacy.

b. Assessment and Observations

No findings were identified. .

4OA3 Follow-up of Events

a. Inspection Scope

The inspectors reviewed the licensee's personnel performance during an unplanned trip of the Unit 3 B condensate pump resulting in power reduction on June 3, 2010.

b. Findings

Introduction: (Green) A Self-Revealing Non-cited Violation of Technical Specification requirements was identified when rod position indication for two rod control cluster assemblies (RCCs) drifted out of tolerance with the associated rod group position indication. Contrary to technical specification requirements, rod positions were neither re-aligned with the group counter nor was reactor power reduced to less than 90 percent within the specified one hour action time.

Description: On June 3, 2010, the 3B condensate pump tripped causing a small perturbation that resulted in reactor power being reduced to 97 percent. Afterwards, at 2045 hours, the rod position indication for RCCs M8 and H4 drifted to 219 steps with the Group D demand at 206 (a misalignment of 13 steps). Technical Specification 3.1.3.1 allows a rod misalignment of 12 steps when reactor power is greater than 90 percent. The Action statement requires that within one hour, (before 2145 hours) alignment be restored to within the allowed 12 steps or reduce reactor power to less than 90 percent. There is also a third option to place the plant in hot standby within the next six hours if RCC alignment cannot be attained.

When the misalignment was noted, the operators entered off-normal procedures for misaligned control rods and attempted to obtain a flux map that would verify actual rod position. Because of problems with the flux mapper, the Unit Supervisor (instead of the Shift Technical Advisor) attempted to complete the flux mapping. In the first flux map attempt, an unsatisfactory trace was obtained and the Shift Manager directed a second attempt. The second attempt failed due to paper jam. At 2138 hours, the Shift Manager directed the Shift Technical Advisor (licensed) to reduce reactor power to less than 90 percent to comply with Technical Specification requirements. The down power was briefed and then completed at 2205 hours. During this time, the Unit Supervisor attempted to obtain a satisfactory flux map. The licensee documented the informal switching of roles between the shift technical advisor and the unit supervisor in CR 2010-16169.

Analysis: Failure to properly implement technical specification requirements for rod position misalignment and either restore proper alignment or reduce reactor power within the required action time was a performance deficiency. The finding was more than minor because if inaccurate rod position indication is left uncorrected, there is an increased potential for an actual rod misalignment being uncorrected affecting accident analysis assumptions. The Initiating Events cornerstone was affected because rod position alignment assures that accident analysis assumptions affecting power distribution and shutdown margin are maintained. The inspectors evaluated the finding using NRC Inspection Manual 0609, Attachment 0609.04, Initial Screening and Characterization of Findings (because the finding had not been screened) and classified the finding to be of very low safety significance (Green) using the Transient Initiator tool. The cross-cutting aspect of Human Performance, Decision Making (H.1.a) was affected when supervisory personnel did not implement their roles and authorities to assure safety by implementing Technical Specification requirements within allowed time limits.

Enforcement: Technical Specification 3.1.3.1.b requires that with more than one full length rod misaligned from the group step counter by more than 12 steps and THERMAL POWER greater than 90 percent of rated thermal power, within 1 hour, reduce thermal power to less than 90 percent and confirm that all indicated rod positions are within the allowed rod misalignment (18 steps). Contrary to the above, on June 3, 2010, with Unit 3 at 97 percent power at 2045 hours, rod positions for RCCs M8 and H4 were misaligned from the group counter in excess of 12 steps and power was not reduced to less than 90 percent within 1 hour. The occurrence was self-revealing to the operators who completed action to reduce power to less than 90 percent at 2205 hours (one hour and 20 minutes). The issue was documented in the corrective action program as CR 2010-14724. Because this issue is of very low safety significance and has been entered

into the licensee's corrective action program, the violation is being treated as a Non-cited Violation consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000250, 251/2010-03-02, Failure to Implement TS Requirements Regarding Rod Position Indication.

40A6 Exit

Exit Meeting Summary

The resident inspectors presented the inspection results to Mr. Kiley and other members of licensee management on July 19, 2010. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary information. The licensee did not identify any proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee personnel:

N. Bach, Chemistry Manager  
C. Cashwell, Radiation Protection Manager  
R. Coffey, Maintenance Manager  
M. Crosby, Quality Manager  
J. Garcia, Engineering Manager  
M. Epstein, Emergency Preparedness Manager (Acting)  
M. Kiley, Site Vice-President  
J. Patterson, Fire Protection Supervisor  
P. Rubin, Plant General Manager  
R. Tomonto, Licensing Manager  
S. Shafer, Assistant Operations Manager  
R. Wright, Operations Manager

#### NRC personnel:

L. Wert, Director, Division of Reactor Projects  
M. Sykes, Chief, Reactor Projects Branch 3

### LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

#### Closed

05000250, 251/2009-05-02	URI	Inappropriate characterization of RCS filters for transportation and disposal (Section 2RS8)
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#### Opened and Closed

05000250, 251/2010-03-01	NCV	Failure to perform adequate surveys to ensure proper estimation of radionuclide concentrations in mechanical filter waste shipments (Section 2RS8)
05000250, 251/2010-03-02	NCV	Failure to implement TS requirements regarding rod position indication (Section 4OA3)

## LIST OF DOCUMENTS/DATA REVIEWED

### Section 1R17: Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications

#### Full Evaluations

PTN-ENG-SEJ-08-008, Loss of Normal Feedwater Design Basis Analysis  
JPN-PTN-SEMS-90-041, Acceptability of As Found Condition for RHR System Check Valve  
PTN-ENG-SENS-07-032, Evaluation for RHR System with Reactor Cavity Filled  
PTN-ENG-SEMS-04-013, Intake Cooling Water Pump Submergence Limit  
JPN-PTN-SEMS-96-038, 10CFR 50.59 Evaluation for Unit 3 Steam Generators' Secondary Side  
Foreign Objects  
JPN-PTN-SEMS-96-003, Safety 10CFR50.59 Evaluation for Unit 4 Steam Generator's Secondary Side Foreign Objects  
TSA 08-004, Spent Fuel Pool Alternate Power  
TSA 07-015, Spent Fuel Pool Alternate Power at Testing

#### Screened Out Items

PTN-ENG-SEMS-06-03T, Ultra Low Sulfur Diesel Fuel Oil  
PTN-ENG-SEFS-02-0002, Extended Maintenance Interval on Emergency Diesel Generator  
PCM 06-103, CCW TCV-3-144 Replacement  
MSP 08-013, RHR Room Sump Level Control  
PTN-ENG-SEFT-07-003, Units 3 & 4 Time to Core Uncovery  
PC/N 08-012, CS Pump Material Changes  
PC/N 07-087, 4B DOST Sample Valve ADD'N  
PC/N 08-151, Unit 3 EDG Day Tank Level Switches Setpoint Change  
PC/N 08-031, Unit 3 EDG A & B Radiator Replacement  
PCM 08-006, Replacement of Unit 3 480V Under-Voltage Relays and Tripping of HDP's for SI  
PCM 07-089, RHR Heat Exchanger Structural Capability of OMS  
PCM 08-025, Steam Dump to Atmosphere  
PCM 09-023, RPS Undervoltage Time Delay  
PCM 07-081, Containment Spray Pump Seal Modification

#### Modifications

PCM 08-025, Steam Dump to Atmosphere  
PCM 09-023, RPS Undervoltage Time Delay  
PCM 07-081, Containment Spray Pump Seal Modification  
MSP 08-013, RHR Room Sump Level Control  
PCM 08-25, Steam Dump to Atmosphere  
PCM 06-103, CCW TCV-3-144 Replacement  
PCM 08-012, Containment Spray Pump Material Changes  
PCM 07-087, 4B Diesel Oil Storage Tank Sample Valve Addition

MSP 08-151, Unit 3 Emergency Diesel Generator Day Tank Level  
 PCM 08-006, Replacement of Unit 3 480V Under-Voltage Relays and Tripping of HDP's for SI  
 PC/N 08-012, CS Pump Material Changes, Rev. 0  
 PC/N 08-151, Unit 3 EDG Day Tank Level Switches Setpoint Change, Rev. 0  
 PC/M 88-521, Unit 3 & 4 Drawing Update For System 023 Emergency Diesel Generator, Rev. 0  
 PCM 06-103, Component Cooling Water TCV-3-144  
 PCM 07-089, RHR Heat Exchanger Structural Capability for OMS  
 MSP 08-103, RHR Rooms Sump Level Controller Replacement

### Basis Documents

Technical Specifications, Current  
 Technical Specifications Bases, Current  
 Updated Final Safety Analysis Report, Current  
 Technical Requirements Manual, Current

### Condition Reports

CR 2006-29672, Capability of the OMS to prevent RHR Heat Exchanger over pressurization in Modes 5 and 6, 10/17/2006  
 CR 2007-24790, Capability of the OMS to prevent RHR Heat Exchanger over pressurization in Modes 5 and 6, 8/16/2007  
 CR 2008-24035, Tracking CR for MSP 08-013 Unit 4 RHR Sump Controller Replacement, 7/26/2008  
 2009-35767, Tracking CR for resolution of areas identified in NRC Inspection Readiness Quick Hit Self-Assessment per CR2009-27649, 12/29/2009  
 2010-10371, Mathematical Error in MSP 08-012, 4/20/2010  
 2010-10701, MSP 08-012 CS Impeller Screw Lubrication, 4/22/2010  
 2010-11862, SPEC-M-004 Guidance for Lubricating Studs, 5/04/2010  
 2010-10468, Deficiencies in 0-NCZP-022.1, 4/21/2010  
 2010-10695, Missing QA Record Calculation PTN-4FSC-07-7006, 4/22/2010  
 2006-37510, Valve 4-70-362B Sheared Off, 12/29/2006  
 2008-30300, 3B EDG CMM: LS-3-1561B Setpoint Change, 10/01/2008  
 2007-29944, Discrepancy In Acceptance Criteria Between PC/M No. 88-521 And 3-PMI-023.1, 9/24/2007

### Procedures

3-NOP-041.01A, 3A Reactor Coolant Pump Operations, Rev. 0  
 3-GOP-305, Hot Standby to Cold Shutdown, Revised 6/29/2009  
 4-ARP-097.CR, Control Room Annunciator Response, 12/20/2008  
 4-ARP-097.CR, Control Room Annunciator Response, 3/23/2010  
 3-NOP-030, Component Cooling Water System, Rev. 5  
 3-ONOP-100, Fast Load Reduction, Revised 8/13/2009  
 3-ONOP-071.2, Steam Generator Tube Leakage, Revised 12/11/2009  
 4-ARP-097.CR.A, Control Room Response – Panel A, Rev. 0A  
 3-ARP-097.CR.A, Control Room Response – Panel A, Rev. 0A  
 0-OSP-201.2, SNPO Daily Logs  
 4-CMM-068.2, Containment Spray Pump Disassembly, Repair and Assembly, 11/19/2009

0-CMM-068.2, Containment Spray Pump Disassembly, Repair and Assembly, 1/22/2009  
 0-NCZP-022.1, Fuel Oil Inventory Data Collection, 10/28/2009  
 4-OP-022, Emergency Diesel Generator Fuel Oil System, 3/09/2010  
 0-OSP-205, Verification of Administratively Controlled Valves, Locks, And Switches, 11/18/2009  
 0-OSP-023.1, Diesel Generator Operability Test, 11/17/2009  
 3-PMI-023.1, Unit 3 Emergency Diesel Generator Instrumentation Calibration, 10/06/2008  
 3-PMI-023.1, Unit 3 Emergency Diesel Generator Instrumentation Calibration, 4/10/2008  
 3-PMI-023.1, Unit 3 Emergency Diesel Generator Instrumentation Calibration, 7/10/2007  
 3-ARP-097.CR.F, Control Room Annunciator Response Panel F, 4/15/2010  
 0-ADM-737, Post Maintenance Testing, Rev. 0  
 0-ADM-503, Temporary System Alteration, Rev. 0  
 4-GME-033.01, SFP Cooling Pump 4P212B Independent Power Source Installation and Removal, Rev. 0

### Work Orders

WO 39013313-01, U4 RHR HX Room sump alarms and pump test, 2/24/2010  
 WO 39013360-01, 4A RHR sump "A" alarms and pump test, 3/12/2010  
 WO 39013316-01, 4B RHR sump "B" alarms and pump test, 2/25/2010  
 WO 35018980-01, Valve Replacement, 4/11/2009  
 34020792, Pump Burned Up, 11/25/2004  
 37022996, PCM 07-081 CSP New Mech Pump Seals, 4/15/2008  
 37026019, PCM 07-081 CSP New Mech Pump Seal 4P214, 4/14/2008  
 20047737, Pump Has Shown Degraded Performance/Install New Pump, 9/19/1991  
 37001591, Valve 4-70-362B Stem Sheared, 1/23/2009

### Calculations

Calculation No. 07-0858-C-001, RHR Heat Exchanger tube side evaluation for increased pressure, Rev. 0  
 M12-183-11, Component Cooling Water System Hydraulic Calculation, Rev. 0  
 07-045, Hydraulic Analysis of Replacement Valve TCV-144 Replacement, Rev. B  
 PTN-4FSC-07-7006, Installation of an Additional Sample Valve for the 4B DOST, Downstream Of Sample Valve 4-70-362B, Rev. 0  
 21701-538-J01, Emergency Diesel Generator 3A and 3B Fuel Oil Daytank Transfer Pump Level Control and Alarms, Rev. 5  
 21701-538-J01, Emergency Diesel Generator 3A and 3B Fuel Oil Daytank Transfer Pump Level Control and Alarms, Rev. 4

### Drawings

5614-M-3064, Safety Injection Accumulator System Inside Containment (Sheet 1), Rev 33  
 5613-M-3050, Residual Heat Removal System (Sheet 1), Rev. 35  
 5614-E-25, Reactor Auxiliaries RHR Room 4A Area Sump Pumps 4A & 4B (SH 25B), Rev. 3  
 5614-E-25, Reactor Auxiliaries RHR Room 4B Area Sump Pumps 4A & 4B (SH 25C), Rev. 3  
 5614-E-25, Reactor Auxiliaries RHR Room Heat Exchanger Area Sump pumps 4A & 4B (SH 25A), Rev. 3  
 5614-E-25, Reactor Auxiliaries Miscellaneous Alarms (SH 89A), Rev. 3  
 5610-C-271, 4A RHR Alternate Sump Cover Details (SH 11), Rev. 11

5414-M-313/08-013, Instrument Setpoint List (SH 1-3), Rev. 0  
 5610-M-3000, Legend and General Notes (SH 2), Rev. 8  
 5613-M-3047, Chemical and Volume Control System Charging and Letdown (SH 1), Rev. 21  
 5613-M-3030, Component Cooling Water System (SH 2), Rev. 11  
 5610-M-450-72, Component Cooling Water pump performance curves, Rev. 1  
 5614-M-3022, Emergency Diesel Engine and Oil System EDG 4B Fuel System, Rev. 7  
 5614-P-869, Diesel Oil System, Rev. 2  
 5613-M-3022, Emergency Diesel Engine and Oil System DG 3A Fuel Oil, Rev. 21  
 5613-M-3022, Emergency Diesel Engine and Oil System DG 3B Fuel Oil, Rev. 16  
 5613-T-LI, Unit No. 3 Logic Diagram, Rev. 2  
 5610-M-16-42, EDG Radiator Top or Bottom Tank Assembly, Rev. 1  
 5610-M-16-42, EDG Radiator Core and Header Assembly, Rev. 2  
 5610-M-16-42, Emergency Diesel Generator Radiator Core Header Details, Rev. 0  
 5610-M-16-42, Emergency Diesel Generator Backing Bars, Rev. 0  
 5610-M-16-42, Emergency Diesel Generator Backing Bar Details, Rev. 0  
 5610-M-16-42, Emergency Diesel Generator Radiator Frame Assembly Details, Rev. 0  
 5614-M-736, Mechanical EDG 4A & 4B Diesel Oil & Service Air P & I Diagram, Rev. 3  
 5610-T-E1591, Operating Diagram Electrical Distribution, Rev. 60

#### Other Documents

JPN-PTN-SEMP-95-038, Engineering evaluation for Design Basis Review of the RHR System relief valve RV\_\*\_706, Rev. 1  
 WCAP-14258, Turkey Point Units 3 and 4 Steam Generator Parametric Loose Object Evaluation Licensing Report, Rev. 1  
 ENG-QI 5.7 (Nuclear Engineering Quality Instruction), "Steam Generator Integrity Program" V000889, Siemens, Multiranger Model 100/200 Instruction Manual, Rev. 0  
 Rpt: 9640-501-031408, Circuit by Scheme Index: 4B0751 and 4B0752, as of 10/24/2007  
 SPEC-M-121, Component Cooling Water TCV3/4-144, Rev. 0  
 TR-5322-48, Effects of replacement TCV-3-144 on stress problem CCW-09 Pipe Stress and Support Loading, Rev. 3  
 PTN-ENG-SEMS-08-054, Functional Testing for TCV-3-144, Rev. 0  
 TP 08-015, Functional Testing for TCV-3-144, 8/12/2009  
 ENG-QI 1.0, Quality Instruction Nuclear Engineering Design Control, Rev. 26  
 ENG-QI 2.1, 10CFR50.59 Applicability/Screening/Evaluation, Rev. 10  
 SPEC-M-004, Maintenance Bolting Specification for St. Lucie Units 1 & 2 and Turkey Point Units 3 & 4, Rev. 14  
 WCAP-14258, Turkey Point Units 3 And 4 Steam Generator Parametric Loose Object Evaluation Licensing Report, Rev. 1  
 VTM V000075, Installation, Operation, & Maintenance Instruction For The Containment Spray Pumps, 07/28/2008  
 EEE 093293, Item Equivalency Evaluation for Unit 3 EDG Radiators, 3/06/2006  
 5613-M-313, Turkey Point Unit 3 Setpoint List, Rev. 58  
 5610-M-22-1, Unit 3 EDG Diesel Fuel Oil Tank Curve, 6/01/2001  
 CRN M-12499, Change Request Notice To Allow Use Of Valve SC 0052131, 11/11/2008  
 3-OSP-030.9, Component Cooling Water System Flow Balance, 4/7/2009  
 4-OSP-030.9, Component Cooling Water System Flow Balance, 11/21/2009

CRs Initiated as a Result of Inspection

CR 2010-10371, Mathematical Error in MSP 08-012  
 CR 2010-10468, Improvements/Deficiencies in NCZP-022.1  
 CR 2010-10634, Re-evaluation of NRC commitment – RHR Check Valve 60 Month Inspection  
 CR 2010-10643, NRC 50.59/Modification Inspection: Basis for 800gpm maximum flow through TCV-\*-144  
 CR 2010-10645, 2010 NRC 50.59/Modification Inspection: Annunciator Response Procedure does not reflect CCW flow limits for TCV-144 flow path  
 CR 2010-10695, Missing QA Record Calculation PTN-4FSC-0707006  
 CR 2010-10697, 2010 NRC 50.59/Modification: Provide objective evidence of conditions in CR 2006-29672 applied to components other than RHR HX  
 CR 2010-10701, Status of Unit 3 Containment Spray Pump Impeller Screw  
 CR 2010-10948, Editorial Inconsistency in PTN-ENG-SEFG-08-008 for Revision of the LONF/LOAV Design Basis Analysis  
 CR 2010-10952, Housekeeping – remove strap of insulation from 3A RHR pump room  
 CR 2010-11682, SPEC-M-004 Guidance for Lubricating Studs  
 CR 2010-11808, Acceptance criteria Unit 4 and Unit 3 NRHX CCW flow SNPO logs does not match 3-NOP-030 and 4-NOP-030, Component Cooling Water System  
 CR 2010-11860, Procedure 4-NOP-068 Not Updated to Reflect All Requirements of PC/M 07-081  
 CR 2010-11951, PC/M 07-081 Did Not Identify All Required Changes to 0-OSP-207.2  
 CR 2010-12056, WO 39013039 Task 01 could not be located for inspector review – considered a lost QA record

Section 2RS8: Radioactive Material Processing and TransportationProcedures, Manuals, and Guides

10 CFR 61 Compliance and Radioactive Waste/Material Shipment Classification and Characterization, 12/26/07

Shipping Records and Radwaste Data

Shipment 2008-001, Mechanical Filters, 1/9/08  
 Shipment 2008-003, Mechanical Filters, 1/23/08  
 Shipment 2009-036, Mechanical Filters, 6/16/09  
 10 CFR Part 61 Analysis for Filter Liner L505814-11  
 10 CFR Part 61 Analysis for Filter Liner L507584-7  
 Analysis of 10CFR61 Strategy and Use for Shipment of Radioactive Waste Filters

CAP Documents

CR 2009-32955