



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 800
ATLANTA, GEORGIA 30303-1257

October 27, 2016

Mr. Mano K. Nazar
President and Chief Nuclear Officer
Nuclear Division
Florida Power and Light
Mail Stop NT3/JW
15430 Endeavor Drive
Jupiter, FL 33478

**SUBJECT: TURKEY POINT NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000250/2016007 AND
05000251/2016007**

Dear Mr. Nazar:

On September 13, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a biennial problem identification and resolution inspection at your Turkey Point Nuclear Plant Units 3 and 4. On August 25, 2016, the NRC inspection team discussed the preliminary results of this inspection with Mr. Summers and other members of your staff. Following completion of additional safety culture review a final exit was held by telephone with Mr. Voorhees on September 13, 2016, to provide the results of the safety culture review. The results of this inspection are documented in the enclosed inspection report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the inspectors' observations, your employees are willing to raise concerns related to nuclear safety through at least one of the several means available. The inspectors also conducted structured interviews within the Operations' department. Based upon those results, the inspectors did not identify indications that a chilled work environment exists, however, the inspectors determined that some safety culture areas in the Operations department appear to be in decline and/or potentially degraded.

NRC inspectors documented two findings of very low safety significance (Green) in this report. These findings involved violations of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement; and the NRC resident inspector at Turkey Point Nuclear Generating Station Units 3 and 4.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Bradley J. Davis, Acting Chief
Reactor Projects Branch 7
Division of Reactor Projects

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

Enclosure: Inspection Report 05000250/2016007 and 05000251/2016007
w/Attachment: Supplemental Information

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Letter to Mano K. Nazar from Bradley Davis dated October 27, 2016

SUBJECT: TURKEY POINT NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000250/2016007 AND
05000251/2016007

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-250, 50-251

License No.: DPR-31, DPR-41

Report No.: 05000250/2016007 and 05000251/2016007

Licensee: Florida Power & Light Company (FPL)

Facility: Turkey Point Nuclear Plant, Units 3 and 4

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

Dates: August 8 - 12, 2016
August 22 - 26, 2016
August 30 – September 1, 2016

Inspectors: R. Taylor, Senior Project Inspector, Team Leader
R. Patterson, Reactor Inspector
C. Rivera, Fuel Facilities Inspector
J. Rivera, Health Physics Inspector
N. Covert, Senior Construction Inspector

Approved by: Bradley Davis, Chief,
Reactor Projects Branch 7
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000250/2016007, 05000251/2016007; August 8 – September 13, 2016; Turkey Point Nuclear Plant, Units 3 and 4; Biennial Inspection of the Problem Identification and Resolution Program.

The inspection was conducted by one senior project inspector, one reactor inspector, a fuel facilities inspector, a health physics inspector, and a senior construction inspector. Two findings of very low safety significance (Green) were identified during this inspection. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP) dated April 29, 2015. The cross-cutting aspects were determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements were dispositioned in accordance with the NRC's Enforcement Policy dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

Identification and Resolution of Problems

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few number of deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. Generally, prioritization and evaluation of issues were adequate, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner. However, the inspectors did identify deficiencies in the areas of identification of problems and effectiveness of corrective actions.

The inspectors determined that overall audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations.

The inspectors also conducted structured interviews within the Operations' department. Based upon those results, the inspectors determined that licensee management emphasized the need for employees to identify and report problems using the appropriate methods, including the CAP and Employee Concerns Program (ECP). However, it was noted that operators interviewed did not have confidence in the resolution in CAP and ECP. The inspectors did not identify indications that a chilled work environment existed; however, the inspectors determined that some safety culture areas in the Operations department appeared to be in decline and/or potentially degraded. (Section 4OA2.4)

NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green: The NRC identified a non-cited violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the licensee's failure to provide adequate procedural guidance to ensure that the temperature in the Load Center Switchgear Room (LCSWGR) remains below the design temperature of 104 °F. The licensee entered the issue into the corrective action program and updated the procedure to include a specific guidance to the operator during a loss of air conditioning.

This performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to provide adequate procedural guidance to prevent operators from opening the east door (el. 18') in the 3A Switchgear Room (SWGR) when the Emergency Diesel Generator (EDG) 3A is operating (i.e., under Loss of Offsite Power conditions) would cause temperatures to rise above the room design temperature of 104 °F. The team determined the finding to be of very low safety significance (Green) because the finding was a deficiency affecting the design of a mitigating structure, system, or component (SSC), and the SSC maintained its operability or functionality. This finding was not assigned a cross-cutting aspect because the issue did not reflect present licensee performance. (Section 4OA2)

- Green: The NRC identified a non-cited violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to correct an identified condition adverse to quality involving a failure of charging system check valve 3-312A to fully seat due to internal component wear. The licensee entered the issue into the corrective action program and took corrective actions to replace the valve's internal components.

This performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions to address internal component degradation of check valve 3-312A adversely impacts the capability of charging system to isolate and provide back leakage protection to the Chemical Volume and Control System (CVCS) from the Reactor Coolant System (RCS). The team determined the finding to be of very low safety significance (Green) because the valve's safety related function of opening to provide a boration flowpath to the RCS was maintained. This finding was not assigned a cross-cutting aspect because the issue did not reflect present licensee performance. (Section 4OA2)

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

.1 Corrective Action Program Effectiveness

a. Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of action requests (ARs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed ARs that had been issued between June 2014 and July 2016, including a detailed review of selected ARs associated with the following risk-significant systems: Emergency Diesel System, Chemical Volume and Control System (CVCS), and Intake Cooling Water System. Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed selected common causes and generic concerns associated with root cause evaluations to determine if they had been appropriately addressed. To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the inspectors selected a representative number of ARs that were identified and assigned to the major plant departments, including emergency preparedness, health physics, chemistry, and security. These ARs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions. The inspectors reviewed selected ARs, verified corrective actions were implemented, and attended meetings where ARs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors conducted plant walk-downs of equipment associated with the selected systems and other plant areas to assess the material condition and to look for any deficiencies that had not been previously entered into the CAP. The inspectors reviewed ARs, maintenance history, completed work orders (WOs) for the systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a two-year period of time; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-dependent issues.

Control room walk-downs were also performed to assess the main control room deficiency list and to ascertain if deficiencies were entered into the CAP. Operator workarounds and operator burden screenings were reviewed, and the inspectors verified compensatory measures for deficient equipment which were being implemented in the field.

The inspectors conducted a detailed review of selected ARs to assess the adequacy of the root-cause and apparent-cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the ARs and the guidance in licensee procedure PI-AA-100-1005, "Root Cause Analysis," and PI-AA-100-1007, "Apparent Cause Evaluation." The inspectors assessed if the licensee had adequately determined the cause(s) of identified problems, and had adequately addressed operability, reportability, common cause, generic concerns, extent of condition, and extent of cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

The inspectors reviewed selected industry operating experience items, including NRC generic communications to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The inspectors reviewed site trend reports to determine if the licensee effectively trended identified issues and initiated appropriate corrective actions when adverse trends were identified.

The inspector's reviewed licensee audits and self-assessments, including those which focused on problem identification and resolution programs and processes, to verify that findings were entered into the CAP and to verify that these audits and assessments were consistent with the NRC's assessment of the licensee's CAP. The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included Management Review Committee (MRC) meetings and Nuclear Safety Culture Monitoring Panel meeting.

Documents reviewed are listed in the Attachment.

b. Assessment

Problem Identification

The inspectors determined that the licensee was generally effective in identifying problems and entering them into the CAP and there was a low threshold for entering issues into the CAP. This conclusion was based on a review of the requirements for initiating ARs as described in licensee procedure PI-AA-204, "Condition Identification and Screening Process," management's expectation that employees were encouraged to initiate ARs for any reason, and the relatively few number of deficiencies identified by inspectors during plant walkdowns not already entered into the CAP. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues.

Based on reviews and walkdowns of accessible portions of the selected systems, the inspectors determined that system deficiencies were being identified and placed in the CAP.

Problem Prioritization and Evaluation

Based on the review of ARs sampled, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the AR significance determination guidance in PI-AA-204, "Condition Identification and Screening Process." The inspectors determined that adequate consideration was given to system or component operability and associated plant risk.

The inspectors determined that station personnel had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures and assigned cause determinations were appropriate, considering the significance of the issues being evaluated. A variety of formal causal-analysis techniques were used depending on the type and complexity of the issue consistent with procedures PI-AA-100-1005 and PI-AA-100-1007.

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected. For significant conditions adverse to quality, the inspectors determined that corrective actions directly addressed the cause and effectively prevented recurrence because a review of performance indicators, ARs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

c. Findings

1. Failure to Provide Adequate Guidance to Prevent LCSWGR Heat-up

Introduction: The NRC identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to provide adequate procedural guidance to ensure that the temperature in the Load Center Switchgear Room (LCSWGR) remains below the design temperature of 104 °F.

Description: In December of 2011, the Component Design Basis Inspection identified a deficiency associated with the adequacy of licensee's evaluation of a loss of all air conditioning to the LCSWGRs. The Unit 3 LCSWGRs are provided with a two train air conditioning system to remove the heat dissipated by electrical safety-related equipment during normal plant operation and emergency conditions. In the event that the air conditioning system is rendered non-functional by hazards such as fire, high winds, missiles, and heavy load drops, Updated Final Safety Analysis Report (UFSAR) Section, 9.16.3 states, in part, that reliability and independence is provided by a wall-mounted cooling fan located in the west wall of the building. For the event of a total loss of air conditioning, Procedure 3-NOP-070, "Vital Load Center and Switchgear Rooms Chilled Water Air Conditioning System," Rev. 10, provides guidance for operators to initiate alternate cooling by placing the exhaust fan in service which includes opening all doors

to the exterior of the building. Enclosure 8 of the procedure states, "if any room temperature approaches 95°F immediately notify the shift manager because the design limit as stated in the UFSAR is 100°F for the switchgear room and 104°F for the load center room."

The team noted that Calculation PTN-BFJM-91-047, Rev. 0, "Safety Assessment for Load Center and Switchgear Rooms HVAC Safety Classification," Section 4.3.3 states, in part, "for the Unit 3 LCSWGR, opening the east door in 3A SWGR (el. 18') is not desirable while the EDGs are operating (i.e., under Loss of Offsite Power (LOOP) conditions) due to the EDG radiator fans blowing hot air (140°F) on the east face of the LCSWGR. As such, an alternate "A" flowpath is modelled during LOOP conditions."

Opening the east door in the 3A Switchgear Room (SWGR) under LOOP conditions would result in a quick temperature rise above the switchgear and load center rooms' design temperature of 104°F respectively. Specifically, procedure 3-NOP-070 did not provide adequate guidance to prevent the operators from opening the east door of the 3A SWGR which resulted in inadequate guidance to mitigate a complete loss of air conditioning to the Unit 3 load center and switchgear rooms. This issue was entered into the licensee's corrective action program as AR 2152029.

Analysis: The failure to provide adequate guidance in procedure 3-NOP-070, "Vital Load Center and Switchgear Rooms Chilled Water Air Conditioning System," to ensure that the temperature in the LCSWGR remains below the design temperature of 104 °F is a performance deficiency. This performance deficiency was determined to be more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems Cornerstone and if left uncorrected could adversely affect the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to provide adequate guidance in procedure 3-NOP-070 to prevent operators from opening the east door (el. 18') in the 3A SWGR when the EDG 3A is operating (i.e., under LOOP conditions) would cause temperatures to rise above the room design temperature of 104 °F.

The team screened this finding using IMC 0609, Att. 4, "Initial Characterization of Findings," issued June 19, 2012, for Mitigating Systems, and IMC 0609, App. A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012, and determined the finding to be of very low safety significance (Green) because the finding was a deficiency affecting the design of a mitigating SSC, and the SSC maintained its operability or functionality. This finding was not assigned a cross-cutting aspect because the deficiency is not indicative of current licensee performance.

Enforcement: Title 10 of CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," required in part, that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings." Contrary to the above, in 2011 the licensee failed to update procedure 3-NOP-070, "Vital Load Center and Switchgear Rooms Chilled Water Air Conditioning System," Rev. 10, to provide specific guidance to operators on which doors to open to provide a flow path for cooling of the SWGR as analyzed in calculation PTN-

BFJM-91-047, "Safety Assessment for Load Center and Switchgear Rooms HVAC Safety Classification," Rev. 0. The licensee implemented corrective actions to update the procedure to provide adequate cooling in the event of a loss of all cooling to the LCSWGR. This violation is being treated as an NCV, consistent with Section 2.3.2a of the Enforcement Policy. The violation was entered into the licensee's CAP as condition report CR 2152029. (NCV 05000250, 251/2016007-01, "Failure to Provide Adequate Guidance to Prevent LCSWGR Heat-up")

2. Failure to Correct Reactor Coolant Loop Check Valve 312-A Failure to Fully Seat

Introduction: The NRC identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to correct an identified condition adverse to quality involving a failure of charging system check valve 3-312A to fully seat due to internal component wear.

Description: On October 16, 2010 the licensee documented an adverse condition in which valve 3-312A failed its In-Service Testing closure test due to excessive back leakage. Radiography performed on the valve indicated that the check valve was not fully seated in the closed direction. The licensee initiated AR 587621 which dispositioned the valve as operable but degraded after mechanical agitation appeared to indicate the valve had fully seated. Subsequently, AR 587621 was canceled with justification of issue being resolved because no back leakage was observed after mechanical agitation. However, the licensee's ASME OM 98 commitment required the valve be opened and inspected or performance of an additional radiograph to ensure internal component clearances were not exceeded, which would allow the valve to fully seat in the closed direction. By not taking the appropriate measures to ensure that critical component clearances were not exceeded, the licensee failed to take appropriate corrective actions to repair the valve and subsequently demonstrate its ability to fully seat.

Subsequently, on October 31, 2015, valve 3-312A again failed its IST closure test due to excessive back leakage. The observed excessive back leakage resulted in the valve being declared a degraded critical component due to the reduced back leakage protection of the CVCS system from RCS pressure. The licensee documented the condition adverse quality and initiated AR 2087510 and performed an equipment apparent cause evaluation (EACE). The EACE concluded that the failure of valve 3-312A to fully close was caused by valve vibration/oscillation and service wear which lead to critical clearances being exceeded. The sum total of all the clearances allowed the outer diameter edge of the upper disc seat surface to lodge below the inner diameter edge of the upper body seat surface. The determination was validated by radiography results prior to disassembly and physical inspection during disassembly. The licensee took immediate corrective actions of valve disassembly and replacement of the disc, disc arm, bushings, and hinge pin.

Based on the issue described above, the inspectors determined that the licensee did not adequately correct an identified condition adverse to quality when check valve 312-A failed to fully seat in 2010. The valve remained degraded for a period of 5 years.

Analysis: The licensee's failure to take appropriate corrective actions to address the October 2010 failure of valve 3-312A to fully seat as is a performance deficiency. The performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions to address degraded check valve 3-312A adversely impacted the capability of the charging system to isolate and provide back leakage protection to the CVCS system from the RCS.

The team screened this finding using IMC 0609, Att. 4, "Initial Characterization of Findings," issued June 19, 2012, for Mitigating Systems, and IMC 0609, App. A, "The Significance Determination Process (SDP) for Findings At-Power," issued June 19, 2012, and determined the finding to be of very low safety significance (Green) due to the deficiency not affecting the design of the mitigating SSC and it maintained its operability because the safety related function of the valve to open and provide a boration flowpath to the RCS was maintained. This finding was not assigned a cross-cutting aspect because the deficiency is not indicative of current licensee performance.

Enforcement: 10 CFR 50 Appendix B Criterion XVI, "Corrective Actions", states in part, that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformance's are promptly identified and corrected. Contrary to the above, the licensee failed to correct a condition adverse to quality regarding a failure of valve 3-312A to fully seat allowing back-leakage from the RCS to the charging system. Specifically, on October 16, 2010, check valve 3-312-A failed to fully seat and the licensee failed to take appropriate corrective actions as prescribed in ASME OM code. Subsequently, on November 17, 2015, valve 3-312A failed an in-service closure test with the same identified condition as the 2010 failure. The degraded condition existed from October 16, 2010 to November 17, 2015. The licensee corrected the condition by disassembling the valve and replacing the disc, disc arm, bushings, and hinge pin. The licensee's failure to initially correct the condition is documented in AR 2152029. This violation is treated as an NCV, consistent with section 2.3.2a of the enforcement policy. (NCV 05000251,250/2016-007-02, "Failure to Correct Reactor Coolant Loop Check Valve 312-A's Failure to Fully Seat")

.2 Use of Operating Experience

a. Inspection Scope

The inspectors examined licensee programs for reviewing industry operating experience, reviewed licensee procedure PI-AA-102, "Operating Experience Program," and reviewed the licensee's operating experience database to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the inspectors selected operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.) which had been issued since July 2014 to verify whether the licensee had appropriately evaluated each notification for applicability to the Turkey Point Nuclear plant, and whether issues identified through these reviews were entered into the CAP.

Documents reviewed are listed in the Attachment.

b. Assessment

Based on a review of documentation related to the licensee's review of operating experience issues, the inspectors determined that the licensee was generally effective in screening operating experience for applicability to the plant. Industry operating experience (OE) was evaluated by plant OE Coordinators and relevant information was then forwarded to the applicable department for further action or informational purposes. Operating experience issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in root cause evaluations in accordance with licensee procedure PI-AA-102, "Operating Experience Program."

c. Findings

No findings were identified.

.3 Self-Assessments and Audits

a. Inspection Scope

The inspectors reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self-assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure O-ADM-533, "CAP Guidance and Performance Assessment and Trending Analysis," Revision 9.

Documents reviewed are listed in the Attachment.

b. Assessment

The inspectors determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspector's independent review. The inspectors verified that ARs were created to document all areas for improvement and findings resulting from the self-assessments and verified that actions were completed consistently with those recommendations. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends, as evidenced by the ARs reviewed that were initiated as a result of adverse trends.

c. Findings

No findings were identified.

.4 Safety-Conscious Work Environment

a. Inspection Scope

This section of the PI&R inspection was performed in accordance with IP 93100, "Safety Conscious Work Environment Issue of Concern Follow-up," dated April 9, 2015. The objectives of IP 93100 were to determine: (1) if indications of a chilled work environment exist; (2) if employees are reluctant to raise safety or regulatory issues; or (3) if employees are being discouraged from raising safety or regulatory issues.

The inspectors interviewed multiple levels of staff and management in the Operations department, interviewed program owners for the Employee Concerns program (ECP) and the Nuclear Safety Culture Monitoring Panel (NSCMP), and reviewed programmatic procedures and corrective action program documents. The team specifically performed structured interviews for approximately half of the 42 licensed operators, which included reactor operators, senior reactor operators, and shift managers. The interviews were conducted to determine if any conditions existed that would cause operators to be reluctant to raise safety concerns. The interview questions were focused on:

1. employees' willingness to raise concerns without fear of retaliation;
2. confidence in the effectiveness of the CAP;
3. confidence in the effectiveness of the ECP;
4. the work environment with an emphasis of safety over production values and actions and;
5. employees' perception of management actions taken to improve the environment for raising concerns.

The inspectors asked questions regarding the willingness to use the programs and perception of effectiveness for different reporting avenues, which included management, CAP, ECP, and the NRC. Specifically, the inspectors interviewed workers regarding their knowledge of the CAP at Turkey Point and their willingness to write action requests or raise safety concerns. The inspectors interviewed the ECP coordinator and discussed some ECP issues to verify that concerns were properly reviewed and that identified deficiencies were resolved and entered into the CAP when appropriate. The inspectors also reviewed the site's procedures for the NSCMP, including meeting minutes from previous meetings, and interviewed the panel chairperson.

Documents reviewed are listed in the Attachment.

b. Assessment

Based on the interviews conducted, the inspectors determined that licensee management emphasized the need for employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. The inspectors also noted that plant staff believed these methods were readily accessible to all employees; however, it was noted that operators interviewed did not have confidence in the resolution of CAP and ECP issues.

The inspectors did not identify any indications that a chilled work environment existed in the Operations department and they did not identify any reluctance on the part of the operations' staff to report safety concerns. However, based upon the interview results,

the inspectors determined that some safety culture areas in the Operations department appeared to be in decline and/or potentially degraded. Specifically, the inspectors noted that five areas, found in NUREG-2165, "Safety Culture Common Language," dated March 2014, had feedback that were either neutral or negative. The five areas were:

- (LA) Leadership Safety Values and Actions, in which leaders demonstrate a commitment to safety in their decisions and behaviors;
- (PI) Problem Identification and Resolution, where issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance;
- (RC) Environment for Raising Concerns; a safety conscious work environment (SCWE) is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination;
- (CO) Effective Safety Communication, in which communications maintain a focus on safety; and
- (WE) Respectful Work Environment, defined as trust and respect permeate the organization.

The inspectors briefed the interview results and the safety culture areas that had exhibited a declining trend. The licensee documented the concerns in AR 2157318, and created actions to determine the appropriate causal evaluation and corrective actions.

The inspectors also reviewed the licensee's Nuclear Safety Culture Program, including procedure AD-AA-103, "Nuclear Safety Culture Program," Rev. 8; reviewed the NSCMP meeting minutes and ARs; and performed interviews of the chairperson and meeting attendees. The inspectors identified some issues with the timeliness of the ARs reviewed during the NSCMP and the site's threshold for coding and trending ARs associated with a safety culture attribute. The inspectors were concerned that the NSCMP would be missing opportunities to identify trends, direct specific actions to address challenges, or initiate Nuclear Safety Culture improvement team actions, per procedure AD-AA-103. In addition, these missed opportunities have the potential to result in a lag in the ability of the licensee to identify and resolve a negative safety culture trend, verses being on the leading of side of trend where corrective actions could be taken prior to safety culture areas becoming degraded.

The inspectors briefed the results of the NSCMP review and observations with licensee management. The licensee documented the concerns in AR 2154979, and created actions to perform an evaluation, determine what changes are needed to correct the issues, and to implement those changes at Turkey Point Nuclear Plant.

c. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On August 25, 2016, the inspectors presented the preliminary inspection results to Mr. Summers and other members of the site staff. The inspectors confirmed that all

proprietary information examined during the inspection had been returned to the licensee. A re-exit was conducted with Mr. Voorhees via telephone on September 13, 2016, to discuss the final results of the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

J. Alvarez, Continuous Improvement
K. Arsenault, Boric Acid Coordinator
P. Barns, System Engineer Manager
R. Byrd, Engineer
C. Cabrera, Chemistry Department Team Leader
J. Chamy, Chemistry Manager
A. Cromarte, Performance Improvement
M. Guth, Licensing Manager
W. Hinson, Radiation Protection
P. Jordan, Chemistry Tech
D. Lettdown, Systems Engineer
S. Mihalakea, Licensing
J. Mobray, Engineering
K. O'Hare, Program Improvement Manager
C. Ortiz, Chemistry Analyst
J. Pallin, Engineering Director
B. Stamp, Operations Director
T. Summers, Site Vice President
B. Ridgy, Chemistry supervisor
J. Voorhees, Corporate ECP Manager

NRC personnel:

LIST OF REPORT ITEMS

Opened and Closed

05000250, 251/2016007-01	NCV	Failure to Provide Adequate Guidance to Prevent LCSWGR Heat-up (Section 4OA2.1.C.1)
05000250, 251/2016007-02	NCV	Failure to Correct Reactor Coolant Loop Check Valve 312-A's Failure to Fully Seat (Section 4OA2.1.C.2)

LIST OF DOCUMENTS REVIEWED

Procedures:

PI-AA-100-1005, Root Cause Analysis, Rev. 15
PI-AA-104-1000, Condition Reporting, Rev. 11
PI-AA-100-1006, Common Cause Evaluation, Rev. 12
0-ADM-537, Boric Acid Corrosion Control Program, Rev. 11A
EN-AA-100-1002, Design Verification, Rev. 3
MA-AA-203-1001, Work Order Planning, Rev. 7
PI-AA-100-1000, Work Activity Risk Management, Rev. 8
EN-AA-203-1002, Operability Determinations/Functionality Assessments, Rev.22
0-ADM-115, Notification of Plant Events, Rev. 8B
0-ADM-117, Equipment Important to Emergency Response, Rev. 7
0-ADM-216, PTN and PTF Shared System Work Control and Switchyard Access, Rev. 12
0-PME-090.03, Maintenance of Isophase Bus, Neutral Bus, and Grounding Transformer Connection Assemblies, Rev. 7A
3-NOP-070, Vital Load Center and Switchgear Rooms Chilled Water Air Conditioning System, Rev. 3A
EN-AA-205-1102, Temporary Configuration Changes, Rev. 6
OP-AA-100-1000, Conduct of Operations, Rev. 18
OP-AA-108-1000, Operator Challenges Program Management, Rev. 2
AD-AA-103, "Nuclear Safety Culture Program," Rev. 8
PI-AA-207-1000, "Station Self-Evaluation and Trending Analysis," Rev. 6
WM-AA-201, Work Order Identification, Screening and Validation Process, Rev. 24
4-NOP-019, Intake Cooling Water System, Rev. 21A
3-NOP-019, Intake Cooling Water System, Rev. 25A
QI-4-NSC-1, Procurement Control, Rev. 14
3-NOP-070, Load Center and Switchgear Rooms Chilled Water A/C System, Rev. 3A
3-OSP-023, EDG Operability Test, 8/11/15

Action Request (ARs):

AR 1976240	AR 1994349	AR 1988566
AR 1967957	AR 1951254	AR 1990395
AR 1700970	AR 2087510	AR1984404
AR 2026941	AR 587621	AR 2004336
AR 1976240	AR 587641	AR 1913267
AR 2088888	AR 1878046	AR 1920471
AR 2075864	AR 1995631	AR1964085
AR 1990010	AR 1990757	AR 2111551
AR 1990011	AR 1973248	AR 597300
AR 1675544	AR 1977822	AR 2017678
AR 1966226	AR 1980956	AR 2019521
AR 1973993	AR 1981731	AR 2024373
AR 1975676	AR 1986059	AR 2027487
AR 1975812	AR 1987135	AR 2027611
AR 1976623	AR 1990932	AR 2030257
AR 1977271	AR 2007403	AR 2047137
AR 1977774	AR 2009853	AR 2004990

AR 2023116	AR 2148407	AR 2090344
AR 2053124	AR 2150153	AR 1675544
AR 2092121	AR 2080381	AR 2055100
AR 2092653	AR 02080373	AR 2055096
AR 2009853	AR 02085513	AR 2001314
AR 2100672	AR 02109323	AR 2000142
AR 2101072	AR 02105927	AR 1978122
AR 2101174	AR 02127962	AR 1979948
AR 2128096	AR 2149316	AR 2149382
AR 2133938	AR 2129902	AR 2152298
AR 2143176	AR 2133039	
AR 2146078	AR 2089635	
AR 2147195		

Work Orders (WO):

40311405	40014789	40418741
40118882	40037510	40471335
38025624	40189460	40183227
40311405	40257425	40287670
40147203	40322049	40285844
40411630	40326620	39018825
40048040	40379688	
40213501	40364024	
94099879	40392707	

Audits and Self-Assessments:

PTN-14-006, Turkey Point Nuclear Oversight Report, Operations (Audit), 6/3/14
 PTN-14-012, Turkey Point Nuclear Oversight Report, Emergency Planning (Audit), 7/15/14
 PTN-14-013, Turkey Point Nuclear Oversight Report, Modification Process (Audit), 9/15/14
 PTN-15-008, Turkey Point Nuclear Oversight Report, Emergency Planning (Audit), 8/10/15

Drawings

5610-M-65A-3, 24" Class 150 Dual Plate Check Valve Delta Seal, Rev. 1
 5610-M-65A-3, "Duo-Check" Check Valve General Assembly, Rev. 0
 5613-M-3019, Intake Cooling Water System, Rev. 40
 5613-M-3019, Intake Cooling Water System, Rev. 26
 5613-M-3019, Intake Cooling Water System, Rev. 38

Calculation

JPN-PTN-SENJ-92-003, Safety Assessment for LCSWGR, Rev. 0
 PTN-BFJM-91-047, Safety Assessment for Load Center and Switchgear Rooms HVAC Safety Classification, Rev. 2

Miscellaneous Documents:

System Health Report, Q2-2016/PTN/Unit 3-046- CVCS, August 10, 2016

0-ADM-117, Attachment 3, Emergency Response Facility or Equipment Functionality Assessment, 8/1/14
EC 246934, Design Change Package: Condensate Pump Replacement and Motor Rewind, Rev. 0
EC 286594, Temporary Modification, Hot Air Exhaust 3A and 3B EDGs, Rev. 0 and Rev. 2 Operational Focus Committee Meeting Minutes, 8/24/16
Prompt Operability Determination (POD) for AR 2148407, 3A EDG Early TS-3-1402A Temp Alarm and the Exhaust Hood Heat Deflector, 8/11/16
System Health Report, Q1-2016/PTN/Unit3 and Unit 4-023-Emergency Diesel Generators, July 21, 2016
NUREG-2165, "Safety Culture Common Language," dated March 2014
PTN Nuclear Safety Culture Monitoring Panel May 25, 2016 Meeting Minutes
PTN Nuclear Safety Culture Monitoring Panel June 30, 2016 Meeting Minutes