UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

August 10, 2020

Mr. Don Moul
Vice President, Nuclear Division and Chief Nuclear Officer
Florida Power & Light Company
Mail Stop: NT3/JW
15430 Endeavor Drive
Jupiter, FL 33478

SUBJECT: TURKEY POINT UNITS 3 & 4 – INTEGRATED INSPECTION REPORT 05000250/2020002, 05000251/2020002, AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION (ISFSI) 07200062/2020001

Dear Mr. Moul:

On June 30, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Turkey Point Units 3 & 4. On July 22, 2020, the NRC inspectors discussed the results of this inspection with Mr. Brian Stamp, Site Director, and other members of your staff. The results of this inspection are documented in the enclosed report.

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

If you contest the violation or the significance or severity of the violation documented in this inspection report, 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 Units 3 & 4.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; and the NRC Resident Inspector at Turkey Point Units 3 & 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 Title 10 of the *Code of Federal Regulations* 2.390, “Public Inspections, Exemptions, Requests for Withholding.”

Sincerely,

/RA/

Randall A. Musser, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Docket Nos. 05000250, 05000251 and 07200062
License Nos. DPR-31 and DPR-41

Enclosure:
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SUBJECT: TURKEY POINT UNITS 3 & 4 – INTEGRATED INSPECTION REPORT 05000250/2020002, 05000251/2020002, AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION (ISFSI) 07200062/2020001 Dated August 10, 2020

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OFFICE	DRP	DRP	DRP	DRP	
NAME	J. Orr	J. Reyes	L. Pressley	R. Musser	
DATE	8/6/2020	8/6/2020	8/6/2020	8/7/2020	

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000250, 05000251 and 07200062
License Numbers:	DPR-31 and DPR-41
Report Numbers:	05000250/2020002 and 05000251/2020002 and 07200062/2020001
Enterprise Identifier:	I-2020-002-0050, and I-2020-001-0109
Licensee:	Florida Power & Light Company
Facility:	Turkey Point Units 3 & 4
Location:	Homestead, FL 33035
Inspection Dates:	April 01, 2020 to June 30, 2020
Inspectors:	M. Magyar, Reactor Inspector J. Orr, Senior Resident Inspector J. Reyes, Resident Inspector
Approved By:	Randall A. Musser, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Turkey Point Units 3 & 4, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

Error in Calibration Procedure Caused Reactor Protection System and Engineered Safety Feature Actuation System Setpoints to Exceed Technical Specification Allowable Values			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000250/2020002-01 Open/Closed	[H.1] - Resources	71153
A self-revealed, Green, Non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion VI, "Document Control," occurred when a technical error in a procedure resulted in an inaccurate reactor coolant system (RCS) average temperature (Tave) input to the Reactor Protection System (RPS) and several Engineered Safety Feature Actuation System (ESFAS) functions. The inaccurate Tave subsequently caused an error during a 100 percent power range nuclear instrument (PRNI) calibration, which caused the Channel II Overtemperature Delta (Δ) T (OTDT) and Overpower ΔT (OPDT) RPS setpoints to exceed the allowable values described in the Technical Specifications (TS).			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000250/2020-001-00	LER 2020-001-00 for Turkey Point, Unit 3, Technical Specification Action Not Taken for Unrecognized Inoperable Reactor Protection System (RPS) and Engineered Safety Feature Actuation System (ESFAS) Instrument Channel Functional Units	71153	Closed

PLANT STATUS

Unit 3 began the inspection period in refueling outage. Unit 3 was restarted on April 22, 2020, and achieved rated thermal power (RTP) on April 28, 2020. The unit remained at or near RTP power for the remainder of the inspection period.

Unit 4 operated at or near RTP for the entire inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time the resident inspectors performed periodic site visits each week and conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated readiness for seasonal extreme weather conditions on May 27, 2020, prior to the onset of hurricane season for the following systems:
- Unit 3 and 4 intake cooling water (ICW)
- Unit 4 emergency diesel generator (EDG) building
- Perimeter flood wall
- Auxiliary building roof
- Refueling water storage tank areas
- Start-up, main and auxiliary transformer areas

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) Unit 3 high head safety injection (HHSI) pumps cooling aligned to Unit 4 component cooling water (CCW), and Unit 3 CCW headers split to facilitate maintenance on the 3B CCW return header in accordance with ECO 3-030-02-B-CCW-HDR LEAK REPAIR, on April 04, 2020
(2) Unit 3 and Unit 4 safety-related condensate storage tanks (CST) and auxiliary feedwater (AFW) train 1, after system restoration following maintenance and testing of CST check valve 3-20-401, on April 22, 2020
(3) 3B, 4A and 4B boric acid transfer pumps and the A, B and C boric acid supply tank systems while the 3A boric acid transfer pump was out of service (OOS), on April 30, 2020
(4) 3A EDG and 3A, 4A and 4B HHSI pumps, while the 4B EDG was OOS, on May 07, 2020

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated system configurations during a complete walkdown of the Unit 3 and Unit 4 safety-related 125 Volt (V) direct current (DC) and 120 V alternating current (AC) systems, safety-related station batteries and 4 kilovolt (kV) switchgears on May 28, June 15 and 24, 2020.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) Unit 3 and Unit 4 safety-related 4160 V AC, A and B switchgear rooms, fire zones (FZs) 067, 068, 070, and 071, on April 22, 2020
(2) Unit 3 and Unit 4 steam generator (SG) feed pump and the condensate pump areas, FZs 066 and 069, on May 21, 2020
(3) Unit 3 and Unit 4 cable spreading room and the Unit 3 and Unit 4 reactor control rod equipment rooms, FZs 098, 104 and 101, on June 10, 2020
(4) Unit 3 and Unit 4 ICW structure and ICW pump area, FZ 119 and 120, on June 17, 2020

71111.07A - Heat Sink Performance

Annual Review (IP Section 03.01) (1 Sample)

The inspectors evaluated readiness and performance of:

(1) The Unit 3 spent fuel pool (SFP) heat exchangers on April 28, 2020, using procedure OSP-033.4, "Spent Fuel Heat Exchanger (3E208A and 3E208B) Performance Monitoring," and Action Request (AR) 2351626, "Inability to Meet the Functional Criteria for the 3A SFP heat exchanger, 3E208A"

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated pressurized water reactor non-destructive testing by reviewing the following examinations from March 9 – 20, 2020:

1. Ultrasonic Testing (UT)
   a. PTN3-123500, 10 inch (in.) Pipe-to-Elbow weld, ASME Class 1 (reviewed)
   b. 14 in.-FWA-2301-1518, 14 in. Elbow-to-Pipe weld, ASME Class 2 (reviewed)
   c. 14 in.-FWA-2301-1718, 14 in. Pipe-to-Elbow weld, ASME Class 2 (reviewed)
2. Penetrant Testing (PT)
   a. PTN3-052601, 12 in. Safe-end to Nozzle weld, ASME Class 1 (reviewed)
   b. EC-292147, 3 in. Pipe-to-Valve weld, ASME Class 2 (reviewed)
3. Magnetic Particle Testing (MT)
   a. PTN3-329401, 14 in. Elbow-to-Pipe weld, ASME Class 2 (reviewed)
   b. PTN3-329601, 14 in. Pipe-to-Elbow weld, ASME Class 2 (reviewed)

The Inspectors evaluated the licensee’s boric acid corrosion control program performance.

The Inspectors reviewed the exigent license amendment No. 291, concerning the deferral of SG inspections.

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

(1) The inspectors observed and evaluated licensed operator performance in the Control Room during:

- Unit 3 reactor coolant system (RCS) solid plant pressure control and RCS drain down, on April 1, 2020
- Control room turnovers during RCS level at reactor vessel head flange, on April 15, 2020
- Drawing a pressurizer bubble in accordance with 3-NOP-041.02, "Pressurizer Operation," on April 18, 2020
- Unit 3 reactor start up, on April 22, 2020

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

(1) The inspectors observed and evaluated a requalification training simulator scenario administered to an operating crew on June 22, 2020

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) AR 1977207 and 1953341 – Unit 3 and Unit 4 power operated containment purge valves, POV-2600, 2601, 2602, and 2603, in maintenance rule (a)1, on May 13, 2020
(2) AR 2351744, LT-3-494, 3C SG level transmitter protection set I, found out of acceptance criteria, on June 19, 2020

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed;

(1) 3CD diesel driven instrument air compressor, 4B CCW heat exchanger, E234 water chiller unit for electrical equipment room AHU-V78, and C AFW pump, OOS, on May 5, 2020
(2) 4B EDG, 4CD diesel driven instrument air compressor, E234 water chiller unit for electrical equipment room AHU-V78, and B standby SG feed pump OOS, on May 07, 2020
(3) 3A CCW heat exchanger, 4C charging pump, E234 water chiller unit for electrical equipment room AHU-V78, and MOV-4-880A, 4A containment spray pump discharge MOV OOS, on May 12, 2020
(4) 3A emergency containment cooler, E234 water chiller unit for electrical equipment room AHU-V78, and MOV-3-749A, residual heat removal (RHR) heat exchanger motor operated CCW outlet isolation valve OOS, on May 21, 2020
(5) 3B ICW header, E234 water chiller unit for electrical equipment room AHU-V78, MOV-3-535 pressurizer power operated relief valve block valve, 4C CCW heat exchanger, and the 4C CCW pump OOS, on June 10, 2020

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) AR 2350581, 3B CCW header through wall leak, on April 01, 2020
(2) AR 2350524, Valve 3-312B, charging to RCS loop C check valve, failed back leakage acceptance criterion, on April 14, 2020
(3) AR 2353399, 3A CCW header non-destructive examination indications, on April 28, 2020
(4) AR 2358413, 3B EDG radiator leak, on June 08, 2020
(5) AR 2355849, Unit 3 Tave/ΔT, Temperature Installation, on June 25, 2020

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (7 Samples)

The inspectors evaluated the following post maintenance test activities to verify system operability and functionality:

(1) 3-OSP-051.5, "Local Leak Rate Tests," (Section 7.35, Containment Purge Supply), after Work Order (WO) 40637067, POV-3-2600, Position Indication Channel Calibration, on April 21, 2020
(2) 4-OSP-075.6, "Auxiliary Feedwater Train 1 Backup Nitrogen Test," after WO 40637227, maintenance on valve 3-20-401, CST outlet check valve to AFW pumps, on April 22, 2020
(3) Post maintenance testing performed within WO 40637223-01, 3-20-456, Unit 3 AFW pump cooling recirculation valve to the Unit 3 CST – Disassembly & Inspection CVCM (IST), on May 07, 2020
(4) 3-SMI-071.04A, "Steam Generator 3C Level (Narrow Range) Protection Set I Loop L-494 Channel Calibration," after WO 40713899, EC 294648 LT-3-494 Replace Transmitter SG C, on May 08, 2020
(5) Functional testing and performance testing performed in WO 40625120, EC290289 3A ECC Control Circuit Modification, on May 08, 2020
(6) 4-OSP-075.2, "Auxiliary Feedwater Train 2 Operability Verification," after WO 40719690, 40674798 and 40674796 after maintenance on C AFW turbine trip and throttle valve, MOV-6459C, on May 11, 2020
(7) 4-OSP-023.1, "Diesel Generator Operability Test," (Section 7.2, 4B EDG Normal Start Test), after mini-critical maintenance management (CMM) per WO 40675789, on May 12, 2020

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated activities during the Unit 3 refueling outage, (PT3-31), which began on March 30, 2020, and concluded when the turbine generator was synchronized to the electrical grid on April 25, 2020.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (3 Samples)

(1) 3-OSP-072.6, "Main Steam Safety Valve Setpoint Surveillance Using Team Trevitest Mark VIII Equipment," on April 15, 2020
(2) 0-OSP-040.19, "Low Power Physics Testing," and 3-GOP-301, "Hot Standby to Power Operations," for Unit 3 reactor startup on April 24, 2020
(3) 3-OSP-203.2, "Train B, Engineered Safeguards Integrated Test," on May 27, 2020

Inservice Testing (IP Section 03.01) (1 Sample)

(1) 3-OSP-064.1, "SI Check Valve Full-Flow Test," on April 3, 2020

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

(1) 3-OSP-051.3, "Containment Personnel Air Lock Pressure Test," on April 14, 2020

FLEX Testing (IP Section 03.02) (1 Sample)

(1) 0-OSP-083.58, "Periodic Testing of DGE-9, 6 kW Portable DG (Fukushima – 120 VAC Vital Power System)" and 0-OSP-083.59, "Periodic Testing of DGE-10, 6 kW Portable DG (Fukushima – 120 VAC Vital Power System)," on June 24, 2020

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (2 Samples)

(1) Unit 3 April 2019 through March 2020
(2) Unit 4 April 2019 through March 2020

BI02: RCS Leak Rate Sample (IP Section 02.11) (2 Samples)

(1) Unit 3 April 2019 through March 2020
(2) Unit 4 April 2019 through March 2020

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program (CAP) for potential adverse trends in Diverse and Flexible Coping Strategies (FLEX) equipment availability and reliability that might be indicative of a more significant safety issue on June 18, 2020. The review concluded there was no adverse trend.

71153 - Followup of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

(1) LER 05000250/2020-001-00, "Technical Specification Action Not Taken for Unrecognized Inoperable Reactor Protection System (RPS) and Engineered Safety Feature Actuation System (ESFAS) Instrument Channel Functional Units," (Agency Documents Access and Management System (ADAMS) Accession No. ML20177A143). The inspectors determined that the cause of this event was a result of a licensee performance deficiency. The regulatory significance of this LER is documented under the Inspection Results Section of this report. This LER is closed.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855.1 - Operation of an Independent Spent Fuel Storage Installation at Operating Plants (1 Sample)

(1) The inspectors evaluated the licensee's activates related to long-term operation and monitoring of their independent spent fuel storage installation on May 28, 2020.

INSPECTION RESULTS

<table>
<tr><td colspan="4">Error in Calibration Procedure Caused Reactor Protection System and Engineered Safety Feature Actuation System Setpoints to Exceed Technical Specification Allowable Values</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Mitigating Systems</td><td>Green
NCV 05000250/2020002-01
Open/Closed</td><td>[H.1] - Resources</td><td>71153</td></tr>
<tr><td colspan="4">A self-revealed, Green, Non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion VI, "Document Control," occurred when a technical error in a procedure resulted in an inaccurate reactor coolant system (RCS) average temperature (Tave) input to the Reactor Protection System (RPS) and several Engineered Safety Feature Actuation System (ESFAS) functions. The inaccurate Tave subsequently caused an error during a 100 percent power range nuclear instrument (PRNI) calibration, which caused the Channel II Overtemperature Delta (Δ) T (OTDT) and Overpower ΔT (OPDT) RPS setpoints to exceed the allowable values described in the Technical Specifications (TS).</td></tr>
<tr><td colspan="4">Description: On May 7, 2020, at 0948 hours, during a Unit 3 nuclear instrument (NI) channel check, performed by procedure 0-OSP-059.15, "NI Channel Check," Florida Power & Light (FPL) discovered that the difference between Channel II indicated RCS ΔT and reference ΔT exceeded the procedure acceptance criterion in 0-OSP-059.15. This condition resulted in the OTDT and OPDT, Channel II RPS Functional Units being declared inoperable. Operators referred to TS 3.3.1, "Reactor Trip System Instrumentation," and the required Action Statement from Table 3.3-1, for Functional Units 5 (OTDT) and 6 (OPDT) which required Action 13, to place the bistables of the affected Functional Units in the tripped condition. Operators completed the TS required actions at 1125 hours. Subsequently, the affected RPS Functional Units were corrected and declared operable at 2107 hours.</td></tr>
</table>

The licensee's investigation determined that the error was introduced during calibration activities performed as part of procedure 3-PMI-059.36, "PRNI Protection Set II Channel N-42 Installation of New Current and Streaming Constants at Shutdown," which was performed on April 11, 2020, using WO 40637419.

The cause of the error was due to an inaccurate streaming constant introduced in calibration procedure, 3-PMI-059.36, "PRNI Protection Set II Channel N-42 Installation of New Current and Streaming Constants at Shutdown." Procedure 3-PMI-059.36 was a new procedure developed on November 15, 2019, to incorporate the recommendations of AR 2143996, to formalize the RCS streaming constant values for plant startup. The intended S3 streaming constant of (2.9424) was instead revised as (-2.9424) in steps 4.13.25 and 4.13.43. The procedure error was the erroneous addition of the negative sign. The error was not discovered during the procedure change process and the incorrect S3 streaming constant was introduced to the Unit 3 process protection Channel II on April 11, 2020.

On May 6, 2020, FPL performed the initial 100 percent power calibration using procedure 3-SMI-059.08B, "Power Range Nuclear Instrumentation Protection Set II Channel N-3-42 Calibration." FPL followed procedure 3-SMI-059.08B and replaced additional temperature setpoint tuning constants with manually calculated values that were influenced by the erroneous RCS streaming constant. Therefore, at the completion of the 100 percent power calibration on May 6, 2020 at 1500 hours, the Channel II RPS OTDT and OPDT setpoints unknowingly exceeded the allowable values listed in TS Table 2.2-1. The condition was corrected, and all functions returned to service on May 7, 2020, at 2107 hours when 3-SMI-059.08B was reperformed with the updated correct manually calculated values for the RCS temperature setpoint tuning constants.

The investigation also determined the inaccurate RCS streaming constant affected Channel II RCS temperature calculations, which rendered three ESFAS Functional Units related to Tave inoperable from the time Unit 3 entered Mode 3 at 0437 hours on April 21, 2020, until the first 100 percent power calibration performed by 3-SMI-059.08B was completed on May 6, 2020. TS 3.3.2, "ESFAS Instrumentation," stated that the required action for an inoperable instrumentation channel was to take action in accordance with Table 3.3-2.

During various periods and instrument configurations when the inoperable RPS and ESFAS channel II conditions were unrecognized, TS action statements directed in Tables 3.3-1 and 3.3-2 were not met to place inoperable instruments in the tripped condition within the prescribed time. Specifically, the following instruments were inoperable:

- Functional Unit 5 for RPS, OTDT, TS Table 3.3-1 Action 13, from May 6, 1500 hours (when N-3-42 was first calibrated at 100 percent rated thermal power (RTP)) until May 7, 1125 hours, (after the discovery of the inaccurate streaming constant and associated bistables were tripped to comply with TS Table 3.3-1 Action 13). The RCS streaming constant associated with N-3-42 was correctly calibrated at 2107 hours on May 7, 2020.
- Functional Unit 6 for RPS, OPDT, TS Table 3.3-1 Action 13, from May 6, 1500 hours (when N-3-42 was first calibrated at 100 percent RTP) until May 7, 1125 hours, (after the discovery of the inaccurate streaming constant and associated bistables were tripped to comply with TS Table 3.3-1 Action 13). The RCS streaming constant associated with N-3-42 was correctly calibrated at 2107 hours on May 7, 2020.

- Functional Unit 1.f for ESFAS, Hi Steam Flow/Low Tave input to Safety Injection, TS Table 3.3-2, Action 25; from April 21, 0437 hours (Mode 3 entry) until May 6, 1035 hours, when the associated bistables were tripped and the at power calibration of PRNI, N-3-42 commenced.
- Functional Unit 4.d for ESFAS, Hi Steam Flow/Low Tave input to Steam Line Isolation, TS Table 3.3-2, Action 25; from April 21, 0437 hours (Mode 3 entry) until May 6, 1035 hours, when the associated bistables were tripped and the at power calibration of N-3-42 commenced.
- Functional Unit 8.b for ESFAS, Low Tave Input to ESFAS actuation interlocks, TS Table 3.3-2, Action 19; from the following:
  - April 26, 0959 hours until April 26, 1335 hours when redundant PRNI N-3-41 was inoperable for calibration,
  - April 26, 1714 hours until April 26, 1920 hours when redundant PRNI N-3-43 was inoperable for calibration,
  - April 27, 1420 hours until April 27, 1538 hours when redundant PRNI N-3-41 was inoperable for calibration,
  - April 27, 1627 hours until April 27, 1705 hours when redundant PRNI N-3-43 was inoperable for calibration.

Corrective Actions: The incorrect S3 streaming constant in procedure 3-PMI-059.36 was corrected in Revision 1 on June 3, 2020. These issues were captured in the licensee's CAP as AR 2355849. Additionally, FPL implemented corrective actions to revise and improve the engineering technical review process during procedure development and changes.

Corrective Action References: AR 2355849

Performance Assessment:

Performance Deficiency: FPL's failure to ensure 3-PMI-059.36, "PRNI Protection Set II Channel N-42 Installation of New Current and Streaming Constants at Shutdown," Revision 0, was properly reviewed for adequacy, was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the erroneous streaming constant resulted in an inaccurate Tave value, which caused a setpoint calculation error during the subsequent 100 percent power calibration, and caused Channel II OTDT and OPDT RPS setpoints to exceed the allowable values described in TS. Additionally, the inaccurate Tave resulted in an input error to the Channel II ESFAS functions.

Significance: The inspectors assessed the significance of the finding using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The inspectors determined that during the RPS non-compliant TS action statement periods, the RPS logic required to initiate on an OTDT or OPDT condition was satisfied by Channels I and III. For the degraded RPS functions, the inspectors used Exhibit 2, "Mitigating Systems Screening," question 'C' for RPS and determined the finding to be of very low safety significance (Green), because the finding did not affect a single RPS trip signal to initiate a reactor scram AND the function of other redundant trips or diverse methods of reactor shutdown (e.g., other automatic RPS trips, alternate rod insertion, or manual reactor trip capacity).

Inspectors also reviewed the screening for the ESFAS non-compliant TS action statement periods. Using Exhibit 2, "Mitigating Systems Screening," question 'A.6,' the inspectors determined that the ESFAS functions would have been probabilistic risk assessment (PRA) functional and therefore would also be of very low safety significance (Green), because the finding did not represent a loss of the PRA function of one or more non-TS trains of equipment designated as risk-significant in accordance with the licensee's maintenance rule program for greater than 3 days.

Cross-Cutting Aspect: H.1 - Resources: Leaders ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. The inspectors reviewed this performance deficiency for cross-cutting aspects as required by IMC 0310, "Aspects Within the Cross-Cutting Areas," and concluded that FPL failed to ensure 3-PMI-059.36, "PRNI Protection Set II Channel N-42 Installation of New Current and Streaming Constants at Shutdown," Revision 0, was properly reviewed for adequacy. Specifically, the subsequent implementation resulted in an inaccurate Tave value, which caused a setpoint manual calculation error during the 100 percent power calibration, which resulted in the RPS setpoints of Channel II OTDT and OPDT exceeding the allowable values described in TS and also inaccurate Tave inputs into the Channel II ESFAS functions.

Enforcement:

Violation: 10 CFR 50 Appendix B, Criterion VI., Document Control, in part states, measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy. Contrary to the above, on November 15, 2019, FPL failed to ensure 3-PMI-059.36, "PRNI Protection Set II Channel N-42 Installation of New Current and Streaming Constants at Shutdown," Revision 0, was properly reviewed for adequacy, which resulted in the Unit 3 Channel II, OTDT and OPDT, RPS setpoints exceeding the allowable values described in the TS. Additionally, three ESFAS Functional Units related to Tave were rendered inoperable.

Enforcement Action: This violation is being treated as an non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On July 22, 2020, the inspectors presented the integrated inspection results to Mr. Brian Stamp, Site Director, and other members of the licensee staff.
- On April 10, 2020, the inspectors presented the ISI Exit Meeting inspection results to Mr. Brian Stamp, Site Director, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.08P	Corrective Action Documents	AR-02307677	4B Steam Generator Feed Ring Repair	3/27/19
		AR-02329303	EPRI Interim Guidance for PAA Concentration Measurement (Op-E)	7/26/19
	Engineering Evaluations	AIM 161210184-2Q-3	Condition Monitoring and Operational Assessment for the Turkey Point Unit 3 Steam Generators Based on Eddy Current Examination End of Cycle 28, March 2017	Rev. 0
	Miscellaneous	EPID L-2020-LLA-0067	Turkey Point Nuclear Generating Unit No. 3, Issuance of Exigent Amendment No. 291, Concerning The Deferral of Steam Generator Inspections	4/16/20