UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 20, 2020

Mr. Don Moul
Executive Vice President
Nuclear Division and Chief
Nuclear Officer
Florida Power & Light Company
Mail Stop: EX/JB
700 Universe Blvd.
Juno Beach, FL 33408

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 - ISSUANCE OF AMENDMENTS NOS. 293 AND 286 REGARDING CONTAINMENT ATMOSPHERIC RADIOACTIVITY VENTILATION ISOLATION AND LEAKAGE DETECTION SYSTEM (EPID L-2019-LLA-0240) (L-2019-192)

Dear Mr. Moul:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 293 to Subsequent Renewed Facility Operating License No. DPR-31 and Amendment No. 286 to Subsequent Renewed Facility Operating License No. DPR-41 for the Turkey Point Nuclear Generating Unit Nos. 3 and 4, respectively. The amendments change the Technical Specifications (TS) in response to the application from Florida Power & Light Company dated November 4, 2019, as supplemented by letters dated April 16 and May 21, 2020 (Agencywide Documents Access and Management System Accession Nos. ML19315A003, ML20107H232, and ML20142A275, respectively).

The amendments revise certain TS containment atmospheric radioactivity and containment ventilation isolation, instrument setpoints, modifies the TS limiting condition for operation (LCO) with the TS ACTION and COMPLETION TIMES related to the inoperability of reactor coolant system radioactivity monitors, adjusts the frequency of reactor coolant system water inventory balances, changes the TS LCO related to isolation of the containment purge supply and exhaust isolation valves, and approves the relocation of the purge valve leakage rate criteria out of the TS to licensee administrative control within the constraints of Section 50.59 of Title 10 of the *Code of Federal Regulations*

.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

/RA/

Eva A. Brown, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosures:
1. Amendment No. 293 to DPR-31
2. Amendment No. 286 to DPR-41
3. Safety Evaluation

cc: Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 293
Subsequent Renewed License No. DPR-31

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power & Light Company (the licensee) dated November 4, 2019, as supplemented by letters dated April 16, 2020, and May 21, 2020, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Subsequent Renewed Facility Operating License No. DPR-31 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 293, are hereby incorporated into this subsequent renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Kimberly J. Green

Digitally signed by Kimberly J. Green
Date: 2020.10.20 12:13:51 -04'00'

Undine S. Shoop, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Subsequent Renewed Facility Operating License and Technical Specifications

Date of Issuance: October 20, 2020

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT NUCLEAR GENERATING UNIT NO. 4

AMENDMENT TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE

Amendment No. 286
Subsequent Renewed License No. DPR-41

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power & Light Company (the licensee) dated November 4, 2019, as supplemented by letters dated April 16, 2020, and May 21, 2020, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Subsequent Renewed Facility Operating License No. DPR-41 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 286 are hereby incorporated into this subsequent renewed operating license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Kimberly J. Green

Digitally signed by Kimberly J. Green
Date: 2020.10.20 12:14:28 -04'00'

Undine S. Shoop, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Subsequent Renewed Facility Operating License and Technical Specifications

Date of Issuance: October 20, 2020

ATTACHMENT TO LICENSE AMENDMENT NOS. 293 AND 286

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NOS. DPR-31 AND DPR-41

DOCKET NOS. 50-250 AND 50-251

Replace page 3 of Subsequent Renewed Facility Operating License No. DPR-31 with the attached page 3. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Replace page 3 of Subsequent Renewed Facility Operating License No. DPR-41 with the attached page 3. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove	Insert
3/4 3-16	3/4 3-16
3/4 3-25	3/4 3-25
3/4 3-31	3/4 3-31
3/4 3-34	3/4 3-34
3/4 3-40	3/4 3-40
3/4 3-41	3/4 3-41
3/4 4-13	3/4 4-13
3/4 6-11	3/4 6-11

applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:

A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 293, are hereby incorporated into this subsequent renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than July 19, 2012.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

D. Fire Protection

FPL shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment requests dated June 28, 2012 and October 17, 2018 (and supplements dated September 19, 2012; March 18, April 16, and May 15, 2013; January 7, April 4, June 6, July 18, September 12, November 5, and December 2, 2014; and February 18, 2015; October 24, and December 3, 2018; and January 31, 2019), and as approved in the safety evaluations dated May 28, 2015 and March 27, 2019. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval
A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the

A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 286, are hereby incorporated into this subsequent renewed operating license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than April 10, 2013.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

D. Fire Protection

FPL shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment requests dated June 28, 2012 and October 17, 2018 (and supplements dated September 19, 2012; March 18, April 16, and May 15, 2013; January 7, April 4, June 6, July 18, September 12, November 5, and December 2, 2014; and February 18, 2015; October 24, and December 3, 2018; and January 31, 2019), and as approved in the safety evaluations dated May 28, 2015 and March 27, 2019. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the

TABLE 3.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
3) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements. (Manual S.I. initiation will not initiate Phase A Isolation).				
b. Phase "B" Isolation					
1) Manual Initiation	2	2 (Both buttons must be pushed simultaneously to actuate)	2	1, 2, 3, 4	17
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
3) Containment Pressure--High-High	3	2	2	1, 2, 3	15
Coincident with: Containment Pressure--High	3	2	2	1, 2, 3	15
c. Containment Ventilation Isolation *					
1) Containment Isolation Manual Phase A or Manual Phase B	See Items 3.a.1 and 3.b.1 above for all Manual Containment Ventilation functions and requirements.				

* Not applicable to Containment purge supply and exhaust isolation valves.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	ALLOWABLE VALUE	TRIP SETPOINT
3. Containment Isolation (Continued)		
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
3) Containment Pressure--High-High	≤22.6 psig	≤20.0 psig
Coincident with: Containment Pressure--High	≤4.5 psig	≤4.0 psig
c. Containment Ventilation Isolation *		
1) Containment Isolation Manual Phase A or Manual Phase B	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
3) Safety Injection	See Item 1. above for all Safety Injection Allowable Values.	See Item 1. above for all Safety Injection Trip Setpoints.
4) Containment Radioactivity--High	Particulate ≤ 5.00×10^{-6} µCi/cc Gaseous See Note 2	Particulate ≤ 4.49×10^{-6} µCi/cc Gaseous See Note 2
4. Steam Line Isolation		
a. Manual Initiation	N.A.	N.A.

* Not applicable to Containment purge supply and exhaust isolation valves.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM
INSTRUMENTATION TRIP SETPOINTS

TABLE NOTATIONS

(1) Deleted

(2) Containment Gaseous Monitor Setpoint = $\frac{(\ 1.11\ \times 10^{-3}\ )}{(\quad F \quad)}$ µCi/cc,

Containment Gaseous Monitor Allowable Value = $\frac{(\ 1.22\ \times 10^{-3}\ )}{(\quad F \quad)}$ µCi/cc,

Where F = $\frac{\text{Actual Purge Flow}}{\text{Design Purge Flow (35,000 CFM)}}$

Setpoint may vary according to current plant conditions provided that the release rate does not exceed allowable limits provided in the Offsite Dose Calculation Manual.

(3) Auxiliary feedwater manual initiation is included in Specification 3.7.1.2.

(4) Time constants utilized in lead-lag controller for Steam Generator Pressure-Low and Steam Line Pressure-Low are $\tau_1 \geq 50$ seconds and $\tau_2 \leq 5$ seconds. CHANNEL CALIBRATION shall ensure that these time constants are adjusted to these values.

If no Allowable Value is specified, as indicated by [ ], the trip setpoint shall also be the allowable value.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST #	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation (Continued)						
3) Containment Pressure--High-High Coincident with: Containment Pressure--High	N.A.	SFCP	N.A.	SFCP	SFCP(1)	1, 2, 3
	N.A.	SFCP	N.A.	SFCP	SFCP(1)	1, 2, 3
c. Containment Ventilation Isolation *						
1) Containment Isolation Manual Phase A or Manual Phase B	N.A.	N.A.	N.A.	SFCP	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.	
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.					
4) Containment Radioactivity--High	SFCP	SFCP	SFCP	N.A.	N.A.	1, 2, 3, 4
4. Steam Line Isolation						
a. Manual Initiation	N.A.	N.A.	N.A.	SFCP	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	SFCP(1)	1, 2, 3(3)

* Not applicable to Containment purge supply and exhaust isolation valves.

TABLE 3.3-4

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

FUNCTIONAL UNIT	CHANNELS TO TRIP/ALARM	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment					
a. Containment Atmosphere Radioactivity-High (Particulate or Gaseous (See Note 1.))	1	1*	All*	Particulate $\leq 4.49 \times 10^{-6}$ µCi/cc Gaseous See Note 2.	26 for MODES 1, 2, 3, 4 or 27 for MODES 5 and 6

TABLE 3.3-4 (Continued)
TABLE NOTATIONS

* During movement of irradiated fuel within the containment, comply with Specification 3/4.9.13.

Note 1 Either the particulate or gaseous channel in the OPERABLE status will satisfy this LCO.

Note 2 Containment Gaseous Monitor Setpoint $= \frac{(\ 1.11\ \times 10^{-3}\ )}{(\quad F \quad)}\ \mu Ci/cc,$

Where $F = \frac{\text{Actual Purge Flow}}{\text{Design Purge Flow (35,000 CFM)}}$

Setpoint may vary according to current plant conditions provided that the release rate does not exceed allowable limits provided in the Offsite Dose Calculation Manual.

ACTION STATEMENTS

ACTION 26 - In MODES 1 thru 4: With both the Particulate and Gaseous Radioactivity Monitoring Systems inoperable, comply with the following:

1) Table 3.3-2, ACTION 16, and

2) Technical Specification 3.4.6.1, ACTION a.

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Systems shall be OPERABLE:

a. The Containment Atmosphere Gaseous or Particulate Radioactivity Monitoring System, and

b. A Containment Sump Level Monitoring System.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With both the Particulate and Gaseous Radioactivity Monitoring Systems inoperable, operation may continue for up to 30 days provided:

1) A Containment Sump Level Monitoring System is OPERABLE;

2) Appropriate grab samples are obtained and analyzed at least once per 24 hours; or

A Reactor Coolant System water inventory balance is performed at least once per 24* hours except when operating in shutdown cooling mode.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With no Containment Sump Level Monitoring System operable, restore at least one Containment Sump Level Monitoring System to OPERABLE status within 7 days, or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection System shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring System performance of CHANNEL CHECK, CHANNEL CALIBRATION and ANALOG CHANNEL OPERATIONAL TEST in accordance with the Surveillance Frequency Control Program, and

b. Containment Sump Level Monitoring System-performance of CHANNEL CALIBRATION in accordance with the Surveillance Frequency Control Program.

* Not required to be performed until 12 hours after establishment of steady state operation.

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge supply and exhaust isolation valve shall be administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by flange.

APPLICABILITY: MODES 1, 2, 3, AND 4.

ACTION:

a. With Specification 3.6.1.7 not met, within 4 hours, comply with Specification 3.6.1.7, or otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With a containment purge supply and/or exhaust isolation valve(s) having a measured leakage rate exceeding the limits of Specification 4.6.1.7.2, restore the inoperable valve(s) to OPERABLE status or isolate the penetrations such that the measured leakage rate does not exceed the limits of Specification 4.6.1.7.2 within 72 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 * Each containment purge supply and exhaust isolation valve shall be verified to be administratively sealed closed and deactivated in accordance with the Surveillance Frequency Control Program.

4.6.1.7.2 In accordance with the Surveillance Frequency Control Program, each containment purge supply and exhaust isolation valve shall be demonstrated OPERABLE by verifying that the measured leakage rate is within limit when pressurized to P_a. For each containment purge penetration isolated by a blind flange, the measured leakage rate shall be verified within limit in accordance with the Containment Leakage Rate Testing Program.

* Performance of SR 4.6.1.7.1 is not required when the associated purge supply and/or exhaust penetration is isolated by blind flange.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR AMENDMENT NO. 293 TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-31 AND AMENDMENT NO. 286 TO SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER & LIGHT COMPANY

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By application dated November 4, 2019, as supplemented by letters dated April 16 and May 21, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML19315A003, ML20107H232, and ML20142A275, respectively), Florida Power & Light Company (FPL, or the licensee) requested changes to the Technical Specifications (TS) for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point), which are contained in Appendix A of Subsequent Renewed Facility Operating License Nos. DPR-31 and DPR-41, respectively. The amendments revise certain TS containment atmospheric radioactivity, and containment ventilation isolation instrument setpoints; modifies the TS limiting condition for operation (LCO) with the TS ACTION and COMPLETION TIMES related to the inoperability of reactor coolant system (RCS) radioactivity monitors, adjusts the frequency of RCS water inventory balances, changes the TS LCO related to isolation of the containment purge supply and exhaust isolation valves, and approves the relocation of the purge valve leakage rate criteria out of the TS to licensee administrative control within the constraints of Section 50.59 to Title 10 of the *Code of Federal Regulations* (10 CFR).

The supplements dated April 16 and May 21, 2020, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC or the Commission) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on December 31, 2019 (84 FR 72387).

2.0 REGULATORY EVALUATION

2.1 Regulatory Requirements

Section 50.36 to 10 CFR contains the requirements for TSs. Paragraph 50.36(c)(1)(ii)(A) of 10 CFR states that limiting safety system settings (LSSS) for nuclear reactors are settings for

automatic protective devices related to those variables having significant safety functions. Where a LSSS is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. If, during operation, it is determined that the automatic safety system does not function as required, the licensee shall take appropriate action, which may include shutting down the reactor.

The regulation at 10 CFR 50.36(c)(2)(i) states that LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the LCO can be met.

Paragraph 50.36(c)(2)(ii) to of 10 CFR lists four criteria for determining when a nuclear reactor TS LCO must be established. The first criterion applies to installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary (RCPB).

Section 6.8.4.h of the TS contains the Turkey Point Containment Leakage Testing Program. This program establishes the leakage rate testing of the containment as required by 10 CFR 50.54(o) and Option B of Appendix J to 10 CFR Part 50, “Licensing of Production and Utilization Facilities,” as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, “Performance-Based Containment Leak-Test Program,” dated September 1995, with certain specific exceptions. Compliance with the leak rate testing criterion is intended to ensure that leakage through these containments or systems and components penetrating these containments does not exceed allowable leakage rates specified in the TS.

The Turkey Point construction permits (CPs) were issued in 1967 based, in part, on the review of principal design criteria (PDC) for water-cooled nuclear power plants. On February 20, 1971, the Atomic Energy Commission published an amendment to 10 CFR Part 50, which added Appendix A, “General Design Criteria (GDC) for Nuclear Power Plants.” The regulation became effective on May 21, 1971 and is not applicable to plants with CPs issued prior to May 21, 1971. Therefore, the Turkey Point plants are not required to comply with current Appendix A to 10 CFR Part 50. Section 3.1.2 of the Turkey Point Updated Final Safety Analysis Report (UFSAR) defines the PDC to which the plant was licensed.

The 1967 proposed GDC 13 states that means shall be provided for monitoring or otherwise measuring and maintaining control over the fission process throughout core life under all conditions that can reasonably be anticipated to cause variations in reactivity of the core.

The 1967 proposed GDC 15 states that protection systems shall be provided for sensing accident situations and initiating necessary engineered safety features.

The 1967 proposed GDC 16 states that means shall be provided to detect significant uncontrolled leakage from the reactor coolant pressure boundary.

The 1967 proposed GDC 17 states that means shall be provided for monitoring the containment atmosphere and the facility effluent discharge paths for radioactivity released from normal operations, anticipated transients and accident conditions.

The 1967 proposed GDC 49 states the reactor containment structure, including access openings and penetrations, shall be designed so that any leakage of radioactive materials from the containment structure will not result in undue risk to the public.

The 1967 proposed GDC 53 states that penetrations requiring closure for containment functions shall be protected by redundant valving and associated apparatus.

2.2 Regulatory Guidance

Chapter 7.2 of the Turkey Point UFSAR references WCAP-17070-P, Revision 1, "Westinghouse Setpoint Methodology for Protection Systems Turkey Point Units 3 and 4 (Power Uprate to 2644 MWt – Core Power)," January 2011. The WCAP endorses RG 1.105, Revision 3. The RG provides guidance for ensuring that setpoints for safety-related instrumentation are initially within and remain within the TS limits as required by 10 CFR 50.36(c)(1)(ii).

The NRC guidance for the format and content of pressurized water reactor TSs can be found in NUREG-1431, Revision 4.0, "Standard Technical Specifications [STS] Westinghouse Plants." The guidance specific to the RCS leakage detection instrumentation for pressurized water reactors is found in STS 3.4.15, "RCS Leakage Detection Instrumentation." The NRC staff notes that for several of the changes, the licensee cited consistency with NUREG-1431 as part of the justification. Given that the Turkey Point TSs are not based on NUREG-1431, the comparison was not material in determining the acceptability for the proposed change, but was instructive in the review of the proposed format and structure for the revised TSs.

Following the accident at Three Mile Island Nuclear Station (TMI), Unit 2, the NRC staff developed an action plan, NUREG-0660, to provide a comprehensive and integrated plan to improve the safety of power reactors. Specific items from NUREG-0660 were approved by the Commission for implementation at reactors, and these were incorporated in NUREG-0737, dated October 31, 1980. Subsequently, on December 17, 1982, the NRC staff issued Supplement 1 to NUREG-0737 which provided additional clarification on emergency response capabilities including the Detailed Control Room Design Review (DCRDR) and safety parameter display system (SPDS).

In Generic Letter (GL) 82-05 and GL 82-10, dated March 17, 1982, and May 5, 1982, respectively, the NRC requested the submittal of schedules related to completion of Three Mile Island (TMI) Action Items commitments, including DCRDR by Turkey Point. In a letter dated March 14, 1983, the Commission issued a confirmatory order (ADAMS Accession No. ML013340392) to Turkey Point, requiring completion of commitments contained in letters responding to GL 82-05 and GL 82-10. The NRC issued NUREG-0700, "Guidelines for Control Room Design Reviews," Revision 0 (ADAMS Accession No. ML15142A505), to provide guidance to licensees and a threshold for the NRC to determine the acceptability of the licensee's closeout of TMI Action Items associated with control room design. As discussed in the licensee's DCRDR report (ADAMS Accession No. ML17301A039), this NUREG was used by the licensee in the review of the Turkey Point Control Room. The intent of the human-system design interface review, as discussed in Section 4.2 of the NUREG, is to determine if the proposed changes affect operator performance where the consequences of the error could reduce the margin of safety below an acceptable level.

2.3 System Description

Radiation monitoring instruments are located in and around the units to detect and record radiation levels. Detected radiation levels in excess of desired setpoints initiate control room alarms. The containment air particulate radioactivity monitors, R-3-11 (Unit 3) and R-4-11 (Unit 4) (R-11), measure the containment air particulate beta radioactivity through continuous sampling of the containment atmosphere and transmit the detector outputs to the control room radiation monitoring system cabinets.

The containment radioactive gas monitors, R-3-12 and R-4-12 (R-12), measure the gaseous beta radioactivity in the containments to ensure that the radiation release rate during containment purging is maintained below specified limits. The alarm setpoints for the containment air particulate and radioactive gas monitors are specified in the TS and set in accordance with the Offsite Dose Calculation Manual (ODCM).

The containment purge supply and exhaust isolation valves function to maintain containment pressure between TS limits during normal plant operation and to reduce airborne radioactivity levels in containment (monitored by R-11 and R-12 detectors).

The RCS leakage detection system provides control room indication of RCS leakage by equipment that monitors the radioactivity concentration in the containment atmosphere, auxiliary building ventilation exhaust, steam generator blowdown exhaust, and component cooling water loop liquid. This equipment includes containment air particulate and radioactive gas monitors R-11 and R-12.

The alarm setpoints for the containment radioactivity monitors are specified in the TS and set in accordance with the ODCM and plant procedure 0-NCOP-067, “Process Radiation Monitors Setpoint Determination” (approved April 17, 2018). The basis for the R-11 and R-12 setpoints is to limit the public dose rate at the site boundary to within regulatory limits.

The R-11 and R-12 monitor alarm and trip setpoints are specified in counts per minute (cpm) in TS 3/4.3.2 (see Table 3.3-2, Functional Unit (FU) 3.4, “Containment Radioactivity – High”) and in TS 3/4.3.3 (see Table 3.3-4) as follows:

R-11	Allowable Value ≤ 6.8E5 cpm	Trip Setpoint ≤ 6.1E5 cpm
R-12	Allowable Value = $\frac{\text{3.5E4 cpm}}{\text{(F)}}$	Trip Setpoint = $\frac{\text{3.2E4 cpm}}{\text{(F)}}$

where (F) is an adjustment factor for actual purge flow, as compared to design purge flow. The setpoint may vary according to current plant conditions, provided the release rate does not exceed allowable limits provided in the ODCM.

2.4 Licensee’s Proposed Changes

- TS 3/4.3.2, Table 3.3-2, “Engineered Safety Features Actuation System Instrumentation [ESFAS],” specifies requirements for the FU 3.c “Containment Ventilation Isolation” instrument channels.

The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c instrument channel requirements.

- The proposed change deletes the instrument numbers, R-11 and R-12, in the Allowable Value and Trip Setpoint columns of Table 3.3-3 for the FU 3.c.4 instrument channels.

- TS 3/4.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation Trip Setpoints," specifies requirements for the FU 3.c "Containment Ventilation Isolation" instrument channels.

  The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c channel setpoint requirements.

- TS 3/4.3.2, Table 4.3-2, "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," specifies surveillance requirements (SRs) for the FU 3.c "Containment Ventilation Isolation" instrument channels.

  The proposed change adds a new footnote denoted by an asterisk (*) exempting the containment purge supply and exhaust isolation valves from the FU 3.c instrument channel SRs.

- The licensee proposed to revise allowable values and setpoints in TS Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation Trip Setpoints," and setpoints TS Table 3.3-4, "Radiation Monitoring Instrumentation for Plant Operations," by converting the allowable value from cpm to microcurie per cubic centimeter (µCi/cc) as shown in the following table:

TS Table	Affected Requirement	Current	Proposed
3.3-3	Functional Unit 3.c.4 "Containment Radioactivity—High"	Allowable Value ≤ 6.8×10^5cpm Setpoint ≤ 6.1×10^5cpm	Allowable Value ≤ 5.00×10^{-6} µCi/cc Setpoint ≤ 4.49×10^{-6} µCi/cc
3.3-3	Table Note 2	Setpoint ≤ 3.2×10^4cpm Allowable Value ≤ 3.5×10^4cpm	Setpoint ≤ 1.11×10^{-3} µCi/cc Allowable Value ≤ 1.22×10^{-3} µCi/cc
3.3-4	Functional Unit 1.a "Containment Atmosphere Radioactivity—High"	Setpoint ≤ 6.1×10^5cpm	Setpoint ≤ 4.49×10^{-6} µCi/cc
3.3-4	Table Note 2	Setpoint ≤ 3.2×10^4cpm	Setpoint ≤ 1.11×10^{-3} µCi/cc

- TS 3/4.4.6.1, "Reactor Coolant System Leakage – Leakage Detection Systems," specifies LCO, ACTIONS, MODES of Applicability, and SRs for the containment atmosphere gaseous or particulate radioactivity monitoring system.

The proposed change modifies an ACTION of TS 3/4.4.6.1 for the condition of the R-11 and R12 radioactivity monitors both inoperable by increasing the COMPLETION TIME from 7 to 30 days. The change provides an option to either analyze containment atmosphere grab samples or conduct RCS water inventory balances and decreases the frequency of RCS water inventory balances from every 8 hours to once per 24 hours by merging ACTION 'a.2' and 'a.3' for TS 3/4.4.6.1.

- TS 3/4.6.1.7, "Containment Systems – Containment Ventilation System," specifies the LCO, ACTIONS, MODES of Applicability, and SRs for the containment purge supply and exhaust isolation valves.

  The proposed change deletes and replaces the current LCO requirements 'a' and 'b' to require the containment purge supply and exhaust isolation valves be maintained administratively sealed closed and deactivated or isolated by blind flange, and relatedly modifies the ACTIONS and SRs in recognition that the purge valves will not be opened in MODES 1 through 4, or a unit shutdown must commence.

  The proposed change additionally extends to 72 hours the COMPLETION TIME to restore the purge valves to within the leakage limit of SR 4.6.1.7.2.

  The proposed change also adds a footnote denoted by an asterisk (*) exempting SRs 4.6.1.7.1 and 4.6.1.7.2 when the associated purge supply and/or exhaust penetration is isolated by a blind flange.

  The proposed change also relocates the purge supply and exhaust valve leakage rate criteria to licensee control and deletes SR 4.6.1.7.3, which requires verification of the mechanical stop positions.

3.0 TECHNICAL EVALUATION

The NRC staff's evaluation of the proposed changes included verification that the licensee followed the applicable regulatory guidance, performed an independent calculation to validate proposed allowable values for instrument setpoints, and validated that the appropriate assumptions were made.

3.1 Modify Containment Atmospheric Radioactivity Monitoring Requirements

3.1.1 Revise Instrument Measurement Units

The R-11 and R-12 setpoints limit the concentration of containment atmospheric radioactivity that can be released as a gaseous effluent. The NRC staff notes that the request to change the units of measurement does not include a change in the allowable magnitude of gaseous or particulate radioactivity release. The current setpoint values were previously approved by the NRC based on limiting site boundary dose rates to within regulatory limits. The licensee is requesting a change in the "units of measurement," which are currently specified in the TS in "cpm." The proposed units of measure are "uCi/cc."

The method of conversion from cpm to uCi/cc proposed by the licensee was provided by the instrument manufacturer, Sorrento Electronics. The detector efficiency for the R-11 particulate detector efficiency is based on Cobalt-60, and the detector efficiency for the R-12 gas detector is based on Xenon-133. These isotopes are acceptable for determining detector efficiencies

and conversion of units, because they are representative of the type of airborne particulate radioactivity and the type of airborne gaseous radioactivity expected to be present in the containment building.

The NRC staff reviewed the licensee's submittal and supplements. The licensee proposed to revise TS 3/4.3.2, Table 3.3-3 (Table 3.3-3), FU 3.c.4, allowable values and setpoints for containment radioactivity-high and for TS 3/4.3.2, Table 3.3-4 (Table 3.3-4), FU 1.a, setpoint for containment atmosphere radioactivity-high. The licensee stated that a detailed description of the methodology for determining the ESFAS instrument allowable range and trip setpoints, including R-11/R-12, is provided in Chapter 7.2 of the UFSAR and referenced documents as discussed in Section 2.0. The NRC staff reviewed these documents to determine if the proposed allowable values and setpoints listed in the reference TS Tables (3.3-3 and 3.3-4) are consistent with the methodology. Using these references and the conversions from the licensee's procedure, 0-NCOP-067, the NRC staff independently verified that the conversions for the allowable values and setpoints from cpm to uCi/cc are consistent with the values presented in the submittal.

Based on the methodology review and independent verification, the NRC staff concludes that the proposed TS changes to Table 3.3-3 (FU 3.c.4 and Note 2) allowable values and setpoints and Table 3.3-4 (FU 1.a and Note 2) setpoints continue to ensure that automatic protective action will correct an abnormal situation before a safety limit is exceeded. Additionally, the NRC staff concludes that the proposed change to the units of measurement in TS 3/4.3.2 is acceptable because the change is based on detector efficiencies provided by the instrument manufacturer and does not increase the magnitude of the allowable radioactive effluent release.

In the April 16, 2020, supplement, the licensee provided an explanation of the conversion. The NRC staff noticed some editorial issues with the identified units for a variable in 0-NCOP-067, but determined the error should have no impact on the ability of the instrument to function nor on the NRC staff's finding.

3.1.2 Remove Instrument Numbers

The licensee proposed to delete the instrumentation labels R-11 and R-12 from the TS and retain the description as the "Particulate" and Gaseous" channels. The NRC staff reviewed the changes against the intent of the TRIP SETPOINT column of TS 3/4.3.2 Table 3.3-3. The NRC staff determined that the removal of the instrument label should not affect the instrument functional requirements or required setpoint. Since the functional requirements are unaffected, the NRC staff finds that the proposed change is editorial in nature, and therefore, is acceptable.

3.1.3 Exempt Purge Valve Isolation Instrumentation Requirements

3.1.3.1 Changes to Reactor Coolant System Leakage Detection and Containment Ventilation Surveillance Requirements

The licensee proposed to add a footnote to three tables within TS 3/4.3.2, exempting the containment purge supply and exhaust isolation valves from the associated FU requirements. The licensee is also proposing various changes to TS 3/4.6.1.7 which include: modifying the LCO, extending an ACTION's COMPLETION TIME, adding a footnote to SRs, and relocating leakage rate criteria to licensee control.

3.1.3.2 Proposed Change to Add Footnote to TS 3/4.3.2 Tables

The licensee proposed adding the footnote:

*Not applicable to Containment purge supply and exhaust isolation valves.

to TS 3/4.3.2, Tables 3.3-2, 3.3-3, and 4.3-2, which exempts the containment ventilation isolation instrumentation from the requirements of TS 3/4.3.2, Tables 3.3-2, 3.3-3, and 4.3-2. As noted in the proposed changes to TS 3/4.6.1.7, the containment purge supply and exhaust isolation valves shall be maintained administratively sealed closed and deactivated or the associated penetration(s) shall be isolated by blind flange in MODES 1 through 4.

The licensee stated that maintaining the subject valves administratively sealed closed and deactivated or isolating by blind flange assures the penetration(s) will perform their containment ventilation isolation function without reliance on ESFAS instrumentation. Therefore, the licensee emphasized that the FU 3.c instrument channels are no longer required to be included in TS in accordance with Criterion 3 of 10 CFR 50.36(c)(2)(ii) since the containment ventilation isolation function is satisfied without the assistance of the FU 3.c instrumentation.

The proposed change is implemented by adding an asterisk (*) to the FU 3.c instrument channel columns of TS 3/4.3.2, Tables 3.3-2, 3.3-3, and 4.3-2, and the new footnotes. The licensee stated that exempting the purge supply and exhaust valves from the FU 3.c instrument requirements is appropriate since the change is consistent with the proposed change to maintain the containment purge supply and exhaust isolation valves administratively sealed closed and deactivated or isolate the associated penetration(s) by blind flange in MODES 1 through 4.

The NRC staff finds the added footnote to the three tables acceptable because it is consistent with the proposed changes to TS 3/4.6.1.7, and the changes support TS 3/4/.6.1.7 continuing to meet the criteria of 10 CFR 50.36(c)(2)(ii).

3.2 Modify Reactor Coolant System Leakage Detection Requirements

The licensee proposed to revise TS 3/4.4.6.1 ACTION ‘a’ COMPLETION TIME from 7 days to 30 days, provides the option to either obtain and analyze grab samples or conduct RCS water inventory balances, instead of requiring both required actions to be taken, and revises the RCS water inventory balance COMPLETION TIME frequency from once per 8 hours to once per 24 hours.

3.2.1 Increase TS ACTION COMPLETION TIME

The license proposed to increase the TS 3/4.4.6.1 ACTION a COMPLETION TIME from 7 days to 30 days based on the availability of an operable containment sump level monitoring system for the detection of unidentified leakage and the performance of additional leakage detection activities such as RCS water inventory balances and containment atmosphere monitoring via grab sample analyses. When R-11 and R-12 are both inoperable, ACTION ‘a’ of TS 3/4.4.6.1 currently allows 7 days of continued operation provided the containment sump level monitoring system is OPERABLE, containment atmosphere grab samples are obtained and analyzed every 24 hours and RCS water inventory balances are performed every 8 hours.

As discussed above, the inoperability of R-11 and R-12 should not diminish the effectiveness of the containment sump level monitoring system. The licensee stated that a 30-day COMPLETION TIME would provide a reasonable period to evaluate the cause of the dual

inoperability and conduct work planning and repair activities. During this time, monitoring the containment sump level along with conducting more frequent RCS water inventory balances or containment atmospheric monitoring via grab sample analyses should provide suitable and diverse methods of RCS leakage detection.

The NRC staff finds that extending the COMPLETION TIME from 7 days to 30 days will not adversely impact safety since the containment sump level monitoring system must be operable, and alternative monitoring is required by the performance of either RCS water inventory balances or containment atmosphere grab sample analyses.

The NRC staff concludes that 10 CFR 50.36(c)(2)(i) will continue to be met because the remedial actions proposed in TS 3/4.4.6.1 ACTION 'a' can be followed by the licensee until the LCO can be met or the licensee will be required to shut down the reactor. Therefore, the NRC staff concludes the proposed change to extend the COMPLETION TIME from 7 days to 30 days in TS 3/4.4.6.1 ACTION 'a' is acceptable.

The NRC staff notes that for this change, the licensee cited consistency with NUREG-1431 as part of the justification. Given that the TSs are not based on NUREG-1431, the comparison was not material in determining the acceptability for the proposed change but was instructive in the review of the proposed format and structure for the revised TSs.

3.2.2 Proposed Change to Perform Either Action Instead of Both Actions

The licensee proposed to either obtain and analyze grab samples of the containment atmosphere or conduct RCS water inventory balances, instead of performing both as currently required by ACTION 'a' of TS 3/4.4.6.1, based on the functional redundancy of the two activities. The proposed change adds an "or" to the end of TS 3/4.4.6.1 ACTION 'a.2' to combine the containment grab sample analysis requirement of ACTION 'a.2' with the RCS inventory balance requirement of ACTION 'a.3.' Thus, allowing the requirement in either ACTION 'a.2' or ACTION 'a.3' to be performed.

The RCS water inventory balance and the grab sample analyses are both methods of detecting RCS leakage. Either of these activities, in conjunction with monitoring the containment sump level, is expected to provide a warning concerning RCS leakage during the period of R-11 and R-12 inoperability.

The NRC staff finds that the proposed change to either perform the requirements in ACTION 'a.2' or ACTION 'a.3' instead of performing both requirements will not adversely impact safety since the containment sump level monitoring system is intended to be available with either the performance of RCS water inventory balances or grab sample analyses. The NRC staff notes that combining 'a.2' and 'a.3' and including the option to select either method, results in the deletion of the 'a.3' numbering in the ACTION statement, but not the associated requirement.

The NRC staff concludes that 10 CFR 50.36(c)(2)(i) will continue to be met because the remedial actions proposed in TS 3/4.4.6.1 ACTION 'a' must be followed by the licensee until the LCO can be met or the licensee will be required to shut down the reactor. Therefore, the NRC staff concludes the proposed change to either perform ACTION 'a.2' or Action 'a.3' by combining the requirements in 'a.2' instead of performing both requirements in TS 3/4.4.6.1 Action 'a' is acceptable.

The NRC staff notes the proposed change is consistent with NUREG-1431, Revision 4.0, Westinghouse STS LCO 3.4.15, Action 'B,' which requires either containment atmosphere grab sample analyses or RCS water inventory balances with the operable containment sump level monitoring system for the condition of the containment atmosphere radioactivity monitoring instrumentation requirement not met.

3.2.3 Proposed Change to the Reactor Coolant System Water Inventory Balance Completion Time Frequency

In the application, the licensee states that conducting RCS water inventory balances every 8 hours distracts station resources from more safety significant activities with no benefit to safety, given the diversity and effectiveness of the other RCS leakage detection methods required by TS 3/4.4.6.1 ACTION 'a'. Therefore, the license proposed to decrease the TS COMPLETION TIME frequency of RCS water inventory balances in TS 3/4.4.6.1 ACTION 'a.3' from every 8 hours to every 24 hours.

The criteria for the performance of RCS water inventory balance and verification of steam generator primary to secondary leakage is found in TS 3/4.4.6.2, "Reactor Coolant System Operational Leakage," SR 4.4.6.2.1. The specification requires the inventory balance and verification to be found within limits every 72 hours in accordance with the Surveillance Frequency Control Program (SFCP) and requires the monitoring of the containment atmosphere gaseous or particulate radioactivity monitor and containment sump level every 12 hours in accordance with the SFCP.

As discussed previously, the licensee indicates that conducting RCS water inventory balances every 8 hours per TS 3/4.4.6.1 ACTION 'a.3' is more frequent than the 12-hour containment atmosphere gaseous or particulate radioactivity monitoring. The RCS water inventory balances are meant to provide alternate periodic information in place of the normal containment atmosphere gaseous or particulate radioactivity monitoring when it is inoperable. The absence of containment atmosphere radioactivity monitoring due to the inoperability of R-11 and R-12 is not expected to increase the likelihood of RCS leakage nor diminish the effectiveness of the RCS water inventory balances or containment atmosphere grab sample analyses every 24 hours, combined with containment sump level monitoring every 12 hours.

The NRC staff finds that reducing the COMPLETION TIME for the frequency of RCS water inventory balances in TS 3/4.4.6.1 ACTION 'a.3' from every 8 hours to every 24 hours should not adversely impact safety since the containment sump level monitoring system is operable, and the alternative 24 hour interval for ACTION 'a.2' and ACTION 'a.3' provides periodic information that is adequate to detect leakage.

The NRC staff concludes that 10 CFR 50.36(c)(2)(i) will continue to be met because the remedial actions proposed in TS 3/4.4.6.1 ACTION 'a' are adequate to detect RCS leakage and can be followed by the licensee until the LCO can be met, or if the remedial actions cannot be met, the licensee will be required to shut down the reactor. Therefore, the NRC staff concludes the proposed change to reduce the TS COMPLETION TIME frequency to once per 24 hours in TS 3/4.4.6.1 ACTION 'a.3,' which is being combined into 'a.2' is acceptable.

As part of the submittal, the licensee provided draft TS Bases pages, which the licensee intends to incorporate into the licensee-controlled TS Bases document. These pages were not reviewed and are not a part of the NRC's evaluation of the TS changes evaluated above. The NRC staff also notes that the proposed change is consistent with NUREG-1431, Revision 4.0,

Westinghouse STS LCO 3.4.15, Action B, which allows the option of performing RCS water inventory balances every 24 hours for the condition of inoperable containment atmosphere gaseous and particulate radioactivity monitors.

3.3 Proposed Containment Ventilation System Requirements

3.3.1 Modification of Purge Valve LCO

The licensee proposed changing the LCO statement which allowed opening of the purge supply and exhaust isolation valves under defined conditions (LCO 'a' and 'b') to requiring the valves to be administratively sealed closed and deactivated or the associated penetrations isolated by a blind flange. Further, the licensee also proposed corresponding changes to ACTION 'a' to require the licensee to close the open valves or isolate the penetrations within 4 hours, comply with TS 3.6.1.7, or otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The licensee stated that the spring-return valves will be administratively sealed closed and deactivated by purging instrument air from the valve actuators and removing power to the actuator solenoid valves to prevent inadvertent actuation. Otherwise, the associated penetration will be isolated by blind flange featuring double O-ring gaskets. The proposed change to maintain the valves administratively sealed closed and deactivated would eliminate disturbances to the seating surfaces normally caused by valve actuations that follow satisfactory Type C testing. The licensee stated that the proposed change to isolate the associated penetration(s) by blind flange featuring double O-ring gaskets would provide the requisite redundant barriers for containment purge penetration leakage subject to Type B testing in accordance with the Containment Leakage Testing Program of TS 6.8.4.h. The licensee also stated the proposed change thereby enhances purge valve leakage performance in a manner consistent with safety analysis assumptions for containment leakage.

The NRC staff reviewed the proposed changes against the test acceptance criteria in the Containment Leakage Testing Program. Given that the valves are being maintained administratively sealed closed by purging instrument air from actuators and deactivated by removing power to the actuator solenoid valves, the NRC staff determined that the operational restrictions in LCO 'b' are no longer required in the TS. As a result, the NRC staff found that the proposed LCO statement changes should have minimal, if any, impact on the containment leakage safety analysis assumptions. The NRC staff finds that the design requirements related to redundancy for containment penetrations will continue to be met; therefore, the proposed changes to the LCO statements and TS ACTION 'a' are acceptable.

3.3.2 Extend Completion Time to 72 Hours

The licensee proposed changing the COMPLETION TIME for measuring the containment purge supply and/or exhaust isolation valve(s) leakage rate from within 24 hours to within 72 hours. The licensee stated that the time extension for the purge valve leakage in excess of the limits is based upon the historically substantial margin that exists between the Type B and C leakage limit of 0.60 L_a (166,355 standard cubic centimeters per minute (sccm)) and the combined Type B and C maximum pathway measured leakage determined in accordance with Containment Leakage Testing Program. The licensee provided historical testing data performed over the past seven outages ranging from 2009 through 2019. The margin between the L_a leakage limit and the combined Type B and C maximum pathway leakage rate over that period ranged from 74.1 to 85.9 percent for Unit 3 and 70.6 to 86.5 percent for Unit 4.

In Section 3.3.2 of the submittal, the licensee provided a description of the testing performed. The NRC staff reviewed the testing history and found that the testing consistently demonstrated margin between the maximum pathway leakage observed during testing and the leakage limit. Therefore, the NRC staff finds that the extension of the completion time should not affect the ability to properly test, whether leakage through the containment or systems and components penetrating the containment exceed allowable leakage rates specified in the TS.

The NRC staff notes that in Section 3.3.2 of the submittal, the licensee provided a reduction in NRC staff resources as justification for the proposed change. Decisions regarding the acceptability of a proposed change to a facility are based on the effect to the public health and safety and not the amount of resources needed to administrate the NRC's mission as defined in the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

3.3.3 Revise Purge Valve Surveillance Requirements

3.3.3.1 Addition of Footnote Denoting Surveillance Requirement Exemptions

The licensee proposed changing SR 4.6.1.7.1 from verification of the containment purge supply and exhaust isolation valves from sealed closed or open to allowing the valves to be verified administratively sealed closed and deactivated in accordance with the SFCP. Additionally, the licensee proposed changes to SR 4.6.1.7.2 and deleted SR 4.6.1.7.3. The NRC staff finds the deletion of SR 4.6.1.7.3 acceptable because of its direct correlation to the original LCO statement 'b', which is also deleted per this amendment request as discussed previously.

The licensee also proposed the addition of a footnote to the SR section. The footnote would add asterisks (*) to SRs 4.6.1.7.1 and 4.6.1.7.2 with corresponding text that reads:

> Performance of SR 4.6.1.7.1 and SR 4.6.1.7.2 are not required when the associated purge supply and/or exhaust penetration is isolated by blind flange.

During its review of the proposed changes to the SRs, the NRC staff noted a potential conflict associated with the proposed changes to the SRs in conjunction with the proposed changes to the LCO statement. This proposed change creates two separate and distinct conditions in the LCO statement, each of which must be verified by a SR in accordance with 10 CFR 50.36(c)(3). The addition of an asterisk to SRs 4.6.1.7.1 and 4.6.1.7.2, which no longer requires either SR to be performed in accordance with the corresponding proposed footnote when the associated purge supply and/or exhaust penetration is isolated by blind flange, combined with the proposed deletion of SR 4.6.1.7.3, created the appearance that no SR exists for the LCO related to the blind flange configuration.

In the April 16 and May 21, 2020, supplements, the licensee revised the submittal to apply the footnote solely to SR 4.6.1.7.1 and modify SR 4.6.1.7.2 by adding a new SR applicable to containment purge penetrations isolated by blind flange. This change would require verification that the measured leakage rate is within the limit found in the TS controlled Containment Leakage Rate Testing Program for each containment purge penetration isolated by blind flange. Therefore, this revision would assure satisfactory Type-B leak testing of the blind flange prior to restoring the containment purge penetration to operability or entering the applicable MODES, as appropriate. The licensee indicated that the intent is to ensure that once secured in place, the blind flange(s) cannot be inadvertently altered, thereby negating the need for periodic position

verification. This would align the change with the proposed change to LCO 3.6.1.7 allowing isolation of the containment purge penetration(s) by blind flange while maintaining the existing SR 4.6.1.7.2 requirement to verify purge valve measured leakage within limit whenever the purge valves are relied on for containment purge penetration isolation.

The NRC staff reviewed the information provided by the licensee and finds that the proposed revision should ensure that there is a SR for both LCO Conditions, and the Containment Leakage Rate Testing Program, as described in TS 6.8.4.h, should ensure the leakage rate criteria will be met in a blind flange configuration. The NRC staff finds the changes proposed are consistent with 10 CFR 50.36(c)(3), and are, therefore, acceptable.

The NRC staff notes that for this change, the licensee cited consistency with NUREG-1431 as part of the justification. Given that the Turkey Point TSs are not based on NUREG-1431, the comparison was not material in determining the acceptability for the proposed change, but was instructive in the review of the proposed format and structure for the revised TSs.

3.3.3.2 Relocation of Leakage Rate Criteria to Licensee Control

The licensee indicated that the proposed change modifies the SR by relocating the purge valve leakage rate criterion of 0.05 L_a to the Containment Leakage Rate Testing Program of TS 6.8.4.h. The licensee stated that the purge valve leakage rate criterion is appropriate for relocation to licensee control whereby future changes will be subject to the 10 CFR 50.59 process.

The NRC staff reviewed the proposed relocation of the purge valve leakage rate criterion. The NRC staff recognizes that most changes to the facility as described in the UFSAR are subject to the provisions in 10 CFR 50.59. However, given that the criterion will continue to be maintained within the Containment Leakage Rate Testing Program in TS 6.8.4.h, the NRC staff finds the relocation of the leakage rate criteria acceptable.

3.4 Human-System Interface Design

3.4.1 Description of Operator Action(s) Added/Changed/Deleted

Section 1.0 of the submittal summarizes the proposed changes, and Section 2.1 describes the system design and operation. The NRC staff reviewed the proposed changes to assess the applicable principles of display, including the information to be displayed, the readability of that information, and the usability of displayed values. In the May 21, 2020, supplement, the licensee provided a photo of the containment particulate (R-11) and gaseous (R-12) radioactivity monitor instrument panel. The photo confirmed the current R-11 and R-12 instrument readouts are expressed in µCi/cc. In the supplement, the licensee clarified that there will be no physical changes to the R-11 and R-12 instruments or the instrument readout panels as a result of the proposed changes.

The NRC staff questioned the effect that the revised setpoints will have on the alarms and the operator's response to the alarms. This included how the alarms, as well as the setpoints, are displayed and viewed by the operators in the control room. In the April 16, 2020, supplement, the licensee indicated that the proposed R-11 and R-12 allowable ranges (in µCi/cc) were determined from the current TS allowable ranges (in cpm) using the conversion factors provided by the supplier. The methodology for determining the allowable range and trip setpoints is available in the licensee's UFSAR, and the same conversion factors were used for the proposed

R-11 and R-12 allowable ranges. Converting the value to µCi/cc is not expected to adversely impact the alarms or displays associated with the R-11 and R-12 instruments and should not adversely impact control room operator response nor timing to the alarms or instrument readings. With respect to RCS leakage detection, the licensee stated that the current alarm/trip setpoints for R-11 and R-12 also remain unchanged with the exception of the measurement units. These changes are being made to be consistent with the proposed TS modifications.

The NRC staff has reviewed the proposed changes as they relate to operator actions and control room displays. As the NRC staff finds that the proposed changes to the alarms and trip setpoints for the R-11 and R-12 instrument panels or displays are not expected to have a negative impact on the operator's response nor the timing for an operator's response, the proposed changes are, therefore, acceptable.

3.4.2 Task Analysis

The licensee has stated that the alarm setpoints for the R-11 and R-12 radioactivity monitors are specified in the TS and set in accordance with the ODCM. The licensee described the methodology used for establishing the setpoints for these monitors and stated that restoring the measurement units to µCi/cc does not alter any ODCM methodologies. The licensee will retain the current equivalent values in µCi/cc and furthermore, the current R-11 and R-12 instrument readouts are expressed in µCi/cc.

The NRC staff has reviewed the licensee's statements on how the proposed changes will affect the alarms, information, controls, and task support needed to respond to the monitors. The licensee's proposed changes to the measurement units for the radioactivity monitors are considered administrative; therefore, it is not expected that the operator's response or timing will be affected. Furthermore, because the current instrument readouts are in µCi/cc, additional training is also not expected. Therefore, the NRC staff finds the licensee's statements as they relate to task analysis to be acceptable.

3.4.3 Human-System Design Interface Technical Conclusion

The NRC staff has reviewed the human performance aspects of FPL's proposal to modify TSs for containment atmosphere radioactivity monitoring, containment ventilation isolation, and RCS leakage detection system requirements. The licensee has demonstrated that there will be no changes to the existing panels as a result of these changes. Further, the licensee has provided sufficient information for the staff to determine that the proposed modifications should not produce any changes to the operator's actions, the alarms, or the instrument panels. Therefore, the NRC staff finds that the proposed changes should not affect operator performance where the consequences of the error could reduce the margin of safety below an acceptable level.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the NRC staff notified the State of Florida official (Ms. Cynthia Becker, M.P.H., Chief of the Bureau of Radiation Control, Florida Department of Health) on August 24, 2020, of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the use of facility components located within the restricted area as defined in 10 CFR Part 20, “Standards for Protection Against Radiation,” and change SR. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding, which was published in the *Federal Register* on December 31, 2019 (84 FR 72387), that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the aforementioned considerations, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: S. Garry
D. Scully
J. Ashcraft
K. Bucholtz
D. Ki

Date: October 20, 2020

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 - ISSUANCE OF AMENDMENTS NOS. 293 AND 286 REGARDING CONTAINMENT ATMOSPHERIC RADIOACTIVITY VENTILATION ISOLATION AND LEAKAGE DETECTION SYSTEM (EPID L-2019-LLA-0240) (L-2019-192) DATED OCTOBER 20, 2020

DISTRIBUTION:
PUBLIC
PM File Copy
RidsNrrDorlLpl2-2
RidsNrrLABAbeywickrama
RidsACRS_MailCTR
RidsRgn2MailCenter
RidsNrrPMTurkeyPoint
RidsNrrDssStsb Resource
RidsNrrDssScpb Resource
RidsNrrDexEicb Resource
RidsNrrDraArcb Resource
RidsNrrDroIolb Resource
SGarry, NRR
DScully, NRR
JAshcraft, NRR
KBucholtz, NRR
DKi, NRR
TSweat
KWest

ADAMS Accession No.: ML20237F385 *by memorandum **by e-mail

OFFICE	NRR/DORL/LPL2-2/PM*	NRR/DORL/LPL2-2/LA**	DSS/STSB/BC*
NAME	EBrown	BAbeywickrama	VCusumano
DATE	08/21/2020	08/26/2020	01/24/2020
OFFICE	NRR/DSS/SCPB/BC*	NRR/DEX/EICB/BC*	NRR/DRA/ARCB/BC**
NAME	BWittick	MWaters	KHseuh
DATE	06/08/2020	06/01/2020	06/15/2020
OFFICE	NRR/DRO/IOLB/BC*	OGC – NLO**	NRR/DORL/LPL2-2/BC*
NAME	CCowdrey	CCarson	UShoop (KGreen for)
DATE	08/12/2020	09/11/2020	10/20/2020

OFFICIAL RECORD COPY