



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

July 15, 2022

Mr. David P. Rhoades
Senior Vice President
Constellation Energy Generation, LLC
President and Chief Nuclear Officer
Constellation Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – ISSUANCE OF
AMENDMENT NO. 351 RE: REMOVAL OF SELECTED RESPONSE TIME
TESTING FOR REACTOR PROTECTION SYSTEM AND PRIMARY
CONTAINMENT ISOLATION INSTRUMENTATION (EPID L-2021-LLA-0192)**

Dear Mr. Rhoades:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 351 to Renewed Facility Operating License No. DPR-59 for the James A. FitzPatrick Nuclear Power Plant. The amendment consists of changes to the technical specifications in response to your application dated October 18, 2021, as supplemented by letter dated January 14, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML21291A110 and ML22014A015, respectively).

The amendment revises the technical specifications to eliminate selected response time testing requirements associated with reactor protection system instrumentation and primary containment isolation instrumentation.

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

Sincerely,

/RA/

Justin C. Poole, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosures:

1. Amendment No. 351 to DPR-59
2. Safety Evaluation

cc: Listserv



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

CONSTELLATION FITZPATRICK, LLC

AND

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 351
Renewed Facility Operating License No. DPR-59

1. The U.S. Nuclear Regulatory Commission has found that:
 - A. The application for amendment by Exelon Generation Company, LLC, dated October 18, 2021, as supplemented by letter dated January 14, 2022, 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 2.C.(2) of Renewed Facility Operating License No. DPR-59 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 351, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: July 15, 2022

ATTACHMENT TO LICENSE AMENDMENT NO. 351
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
RENEWED FACILITY OPERATING LICENSE NO. DPR-59
DOCKET NO. 50-333

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page
Page 3

Insert Page
Page 3

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

Remove Pages
3.3.1.1-7
3.3.6.1-5
3.3.6.1-6

Insert Pages
3.3.1.1-7
3.3.6.1-5
3.3.6.1-6

- (3) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (4) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration; or associated with radioactive apparatus, components or tools.
 - (5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all 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 or incorporated below:
- (1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady state reactor core power levels not in excess of 2536 megawatts (thermal).
 - (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 351, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

Table 3.3.1.1-1 (page 2 of 3)
Reactor Protection System Instrumentation

| FUNCTION | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS | REQUIRED CHANNELS PER TRIP SYSTEM | CONDITIONS REFERENCED FROM REQUIRED ACTION D.1 | SURVEILLANCE REQUIREMENTS | ALLOWED VALUE |
|---|--|--|--|--|------------------|
| 2. Average Power Range Monitors (continued) | | | | | |
| c. Neutron Flux – High (Fixed) | 1 | 2 | F | SR 3.3.1.1.1 SR 3.3.1.1.2 SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.13 SR 3.3.1.1.15 | ≤ 120% RTP |
| d. Inop | 1,2 | 2 | G | SR 3.3.1.1.4 SR 3.3.1.1.7 SR 3.3.1.1.8 SR 3.3.1.1.13 | NA |
| 3. Reactor Pressure - High | 1,2 | 2 | G | SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.8 SR 3.3.1.1.10 SR 3.3.1.1.12 SR 3.3.1.1.13 | ≤ 1080 psig |
| 4. Reactor Vessel Water Level – Low (Level 3) | 1,2 | 2 | G | SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.8 SR 3.3.1.1.10 SR 3.3.1.1.12 SR 3.3.1.1.13 | ≥ 177 inches |
| 5. Main Steam Isolation Valve - Closure | 1 | 8 | F | SR 3.3.1.1.4 SR 3.3.1.1.8 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15 | ≤ 15% closed |
| 6. Drywell Pressure - High | 1,2 | 2 | G | SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.8 SR 3.3.1.1.10 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15 | ≤ 2.7 psig |

(continued)

SURVEILLANCE REQUIREMENTS (continued)

| SURVEILLANCE | | FREQUENCY |
|--------------|---------------------------------------|--|
| SR 3.3.6.1.4 | Calibrate the trip units. | In accordance with the Surveillance Frequency Control Program* |
| SR 3.3.6.1.5 | Perform CHANNEL CALIBRATION. | In accordance with the Surveillance Frequency Control Program* |
| SR 3.3.6.1.6 | Calibrate the radiation detectors. | In accordance with the Surveillance Frequency Control Program |
| SR 3.3.6.1.7 | Perform LOGIC SYSTEM FUNCTIONAL TEST. | In accordance with the Surveillance Frequency Control Program |

* This Surveillance for ISP-150B is not required to be performed for functions 4.a, 4.b, 4.d, 4.e and 4.f of table 3.3.6.1-1 until following the return of the "A" RHR pump to OPERABLE. This past due Surveillance will be completed as stated in Section 3.5 of letter JAFP-21-0053, dated June 14, 2021.

Primary Containment Isolation Instrumentation
3.3.6.1

Table 3.3.6.1-1 (page 1 of 6)
Primary Containment Isolation Instrumentation

| FUNCTION | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS | REQUIRED CHANNELS PER TRIP SYSTEM | CONDITIONS REFERENCED FROM REQUIRED ACTION C.1 | SURVEILLANCE REQUIREMENTS | ALLOWED VALUE |
|---|--|--|--|--|---|
| 1. Main Steam Line Isolation | | | | | |
| a. Reactor Vessel Water Level – Low Low Low (Level 1) | 1,2,3 | 2 | D | SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 | ≥ 18 inches |
| b. Main Steam Line Pressure - Low | 1 | 2 | E | SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 | ≥ 825 psig |
| c. Main Steam Line Flow - High | 1,2,3 | 2 per MSL | D | SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 | ≤ 125.9 psid |
| d. Condenser Vacuum - Low | 1, 2 ^(a) , 3 ^(a) | 2 | D | SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 | ≥ 8 inches Hg vacuum |
| e. Main Steam Tunnel Area Temperature - High | 1,2,3 | 8 | D | SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.4 SR 3.3.6.1.5 SR 3.3.6.1.7 | ≤ 195 °F |
| f. Main Steam Line Radiation - High | 1,2,3 | 2 | F | SR 3.3.6.1.1 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7 | ≤ 3 times Normal Full Power Background |

(continued)

(a) With any turbine stop valve not closed.

(b) Not used.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 351

CONSTELLATION FITZPATRICK, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-333

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-59

1.0 INTRODUCTION

By letter dated October 18, 2021, as supplemented by letter dated January 14, 2022, (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML21291A110 and ML22014A015, respectively), Exelon Generation Company, LLC submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant Technical Specifications (TSs). On February 1, 2022 (ML22032A333), Exelon Generation Company, LLC was renamed Constellation Energy Generation, LLC (the licensee). The proposed changes would modify the FitzPatrick TS to eliminate selected response time testing requirements associated with reactor protection system instrumentation and primary containment isolation instrumentation.

The supplement, dated January 14, 2022, provided additional information that clarified the application and did not expand the scope of the application as originally noticed. Specifically, the supplement provided a more detailed description of the nomenclature to align with the Boiling Water Reactor Owner's Group (BWROG) Licensing Topical report, NEDO-33291-A Supplement 1 and corrected transposition errors.

2.0 REGULATORY EVALUATION

2.1 Proposed TS Changes

The licensee proposes the following changes to TS:

- TS Table 3.3.1.1-1 Function 3, "Reactor Pressure – High" specifies surveillance requirement (SR) 3.3.1.1.15, to "Verify the RPS [Reactor Protection System] RESPONSE TIME is within limits," as applicable to this function. Function 3 is being revised to delete the applicability of SR 3.3.1.1.15.

- TS Table 3.3.1.1-1 Function 4, “Reactor Vessel Water Level – Low, (Level 3)” specifies SR 3.3.1.1.15, to “Verify the RPS RESPONSE TIME is within limits,” as applicable to this function. Function 4 is being revised to delete the applicability of SR 3.3.1.1.15.
- TS Table 3.3.6.1-1 Function 1.a, “Reactor Vessel Water Level – Low Low Low (Level 1)” specifies SR 3.3.6.1.8, to “Verify the ISOLATION INSTRUMENTATION RESPONSE TIME is within limits,” as applicable to this function. Function 1.a is being revised to delete the applicability of SR 3.3.6.1.8.
- TS Table 3.3.6.1-1 Function 1.b, “Main Steam Line Pressure – Low,” specifies SR 3.3.6.1.8, to “Verify the ISOLATION INSTRUMENTATION RESPONSE TIME is within limits,” as applicable to this function. Function 1.b is being revised to delete the applicability of SR 3.3.6.1.8.
- TS Table 3.3.6.1-1 Function 1.c, “Main Steam Line Flow – High,” specifies SR 3.3.6.1.8, to “Verify the ISOLATION INSTRUMENTATION RESPONSE TIME is within limits,” as applicable to this function. Function 1.c is being revised to delete the applicability of SR 3.3.6.1.8.
- Surveillance Requirement (SR) 3.3.6.1.8, to “Verify the ISOLATION INSTRUMENTATION RESPONSE TIME is within limits,” is deleted in its entirety as the above referenced functions are the only primary containment isolation instrumentation functions to which SR 3.3.6.1.8 apply.

2.2 Regulatory Requirements

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(c)(3) requires that TSs include items in the category of SRs, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation (LCOs) will be met.

2.3 Guidance documents

Regulatory Guide 1.118, *Periodic Testing of Electric Power and Protection Systems*, Revision 1, which endorses Institute for Electrical and Electronics Engineers Standard 338-1977, *Criteria for Period Testing of Nuclear Power Generating Station Safety Systems*, provides an acceptable method to the U.S. Nuclear Regulatory Commission (NRC) for satisfying the regulations with respect to periodic testing of electric power and protection systems. It states, in part:

Response time testing of all safety system equipment per se is not required if, in lieu of response time testing, the response time of the safety system equipment is verified by functional testing and/or calibration checks where it can be demonstrated that changes in response time beyond acceptable limits are always accompanied by performance characteristics which are detectable during routine periodic functional tests and/or calibration checks.

As documented in NRC Safety Evaluation (SE) (ML20080D819), the NRC staff determined that the BWROG Licensing Topical Report NEDO-32291, Supplement 1, provides an acceptable basis for elimination of response time testing (RTT) for selected groups of components in

instrument loops. Specifically, Supplement 1 represents the second phase of the BWROG RTT study and addresses instruments and components with shorter (between 300ms (milliseconds) and 5000ms) response time requirements.

3.0 TECHNICAL EVALUATION

3.1 Proposed TS Change

The NRC staff compared the licensee's proposed TS changes in Attachment 1 of the application, as described in Section 2.1 of this SE, against the criteria defined in NEDO-32291, Supplement 1 to confirm applicability of the analysis within.

The application states the proposed changes impact the following functions:

- Reactor Pressure – High
- Reactor Vessel Water Level Low – Level 3
- Main Steam Line Flow – High
- Main Steam Line Pressure – Low
- Reactor Vessel Water Level Low Low Low – Level 1

3.1.1 Reactor Pressure – High

The components configuration matches "Type H" as described in NEDO-32291-A, Supplement 1. The loop logic bounding response time (BRT) is the arithmetic sum of the individual component BRT. The Reactor Pressure – High loop contains the following equipment types with associated BRT.

| Reactor Pressure Loop | MTU | TU Output Relay | Logic Relay | Output Relay | Loop Logic BRT |
|------------------------------|-----------------|------------------------|--------------------|---------------------|-----------------------|
| Equipment Type | Rosemount 710DU | Agastat EGPB | [12/15]HFA15149 | GE CR105 | N/A |
| BRT | 24ms | 140ms | 40ms | 45ms | 249ms |

The FitzPatrick Updated Final Safety Analysis Report (UFSAR) Table 7.2-5 states the RPS Reactor Pressure – High loop has a required loop maximum allowable response time of 550ms. Based on the application, the allowable loop sensor BRT for the reactor pressure loop is calculated to be 301ms.

Per NEDO-32291-A Supplement 1, in order to conclude that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, the loop sensor BRT must be less than the calculated allowable loop sensor BRT. Current RTT for this loop is defined by SR 3.3.1.1.15. The application states the sensor for the reactor pressure loop is a Rosemount 1153 transmitter and has a BRT of 200ms.

The NRC staff reviewed the UFSAR and verified the loop maximum allowable response time for the RPS Reactor Pressure – High loop is 550ms. The NRC staff reviewed the applicability criteria of NEDO-32291-A, Supplement 1 and the calculated allowable loop sensor BRT of 301ms. The Rosemount 1153 transmitter in this loop has a range code of 9. The NRC staff

reviewed the manufacturer supplied manual and confirmed the listed response time for this Rosemount 1153 transmitter with a range code of 9 is 200ms. Since the reactor pressure loop sensor BRT of 200ms is less than the allowable loop sensor BRT of 301ms, the NRC staff confirms the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are therefore sufficient to ensure the loop response time requirements are met. Therefore, the NRC staff finds it acceptable to eliminate applicability of SR 3.3.1.1.15 for this loop.

3.1.2 Reactor Vessel Water Level Low – Level 3

The components configuration matches “Type H” as described in NEDO-32291-A, Supplement 1. The loop logic BRT is the arithmetic sum of the individual component BRT. The Reactor Vessel Water Level Low – Level 3 loop contains the following equipment types with associated BRT.

| Reactor Water Level Loop | MTU | TU Output Relay | Logic Relay | Output Relay | Loop Logic BRT |
|---------------------------------|-----------------|------------------------|--------------------|---------------------|-----------------------|
| Equipment Type | Rosemount 710DU | Agastat EGPB | 12HFA15149 | GE CR105 | N/A |
| BRT | 24ms | 140ms | 40ms | 45ms | 249ms |

The FitzPatrick UFSAR Table 7.2-5 states the Reactor Vessel Water Level Low – Level 3 loops have a required loop maximum allowable response time of 1050ms. Based on the application, the allowable loop sensor BRT for the reactor water level loop is calculated to be 801ms.

Per NEDO-32291-A, Supplement 1, in order to conclude that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, the loop sensor BRT must be less than the calculated allowable loop sensor BRT. Current RTT for this loop is defined by SR 3.3.1.1.15. The application states the sensor for the reactor water level loop is a Rosemount 1153 transmitter and has a BRT of 500ms.

The NRC staff reviewed the UFSAR and verified the loop maximum allowable response time for the Reactor Vessel Water Level Low – Level 3 loop is 1050ms. The NRC staff reviewed the applicability criteria of NEDO-32291-A, Supplement 1 and the calculated allowable loop sensor BRT of 801ms. The Rosemount 1153 transmitter in this loop has a range code of 4. The NRC staff reviewed the manufacturer supplied manual and confirmed the listed response time for this Rosemount 1153 transmitter with a range code of 4 is 500ms. Since the reactor water level loop sensor BRT of 500ms is less than the allowable loop sensor BRT of 801ms, the NRC staff confirms the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are therefore sufficient to ensure the loop response time requirements are met. Therefore, the NRC staff finds it acceptable to eliminate applicability of SR 3.3.1.1.15 for this loop.

3.1.3 Main Steam Line Flow – High

The components configuration matches “Type E” as described in NEDO-32291-A, Supplement 1. The loop logic BRT is the arithmetic sum of the individual component BRT. The Main Steam Line Flow – High loop contains the following equipment types with associated BRT.

| Main Steam Line Flow Loop | MTU | TU Output Relay | Logic Relay | Output Relay | Loop Logic BRT |
|----------------------------------|-----------------|------------------------|--------------------|---------------------|-----------------------|
| Equipment Type | Rosemount 710DU | Agastat EGPB | 12HFA15149 | 12HFA15149 | N/A |
| BRT | 24ms | 140ms | 40ms | 40ms | 244ms |

The FitzPatrick UFSAR Table 7.3-12 states the Main Steam Flow – High loops have a required loop maximum allowable response time of 2500ms. Based on the application, the allowable loop sensor BRT for the Main Steam Line Flow – High Loop is calculated to be 2256ms.

Per NEDO-32291-A, Supplement 1, in order to conclude that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, the loop sensor BRT must be less than the calculated allowable loop sensor BRT. Current RTT for this loop is defined by SR 3.3.6.1.8. The application states the sensor for the steam flow loops is a Rosemount 1153 transmitter and has a BRT of 700ms.

The NRC staff reviewed the UFSAR and verified the loop maximum allowable response time for the Main Steam Line Flow – High loop is 2500ms. The NRC staff reviewed the applicability criteria of NEDO-32291-A, Supplement 1 and the calculated allowable loop sensor BRT of 2256ms. Since the Main Steam Line Flow – High loop sensor BRT of 700ms is less than the allowable loop sensor BRT of 2256ms, the NRC staff confirms the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are therefore sufficient to ensure the loop response time requirements are met. Therefore, the NRC staff finds it acceptable to eliminate applicability of SR 3.3.6.1.8 for this loop.

3.1.4 Main Steam Line Pressure – Low

The components configuration matches “Type E” as described in NEDO-32291-A, Supplement 1. The loop logic BRT is the arithmetic sum of the individual component BRT. The Main Steam Line Pressure – Low loop contains the following equipment types with associated BRT.

| Main Steam Pressure Loop | MTU | TU Output Relay | Logic Relay | Output Relay | Loop Logic BRT |
|---------------------------------|-----------------|------------------------|--------------------|---------------------|-----------------------|
| Equipment Type | Rosemount 710DU | Agastat EGPB | 12HFA15149 | 12HFA15149 | N/A |
| BRT | 24ms | 140ms | 40ms | 40ms | 244ms |

The FitzPatrick UFSAR Table 7.3-12 states the MSIV Main Steam Line Pressure – Low loops have a required loop maximum allowable response time of 1000ms. Based on the application, the allowable loop sensor BRT for the Main Steam Line Pressure – Low loop is calculated to be 756ms.

Per NEDO-32291-A, Supplement 1, in order to conclude that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, the loop sensor BRT must be less than the calculated allowable loop sensor BRT. Current RTT for this loop is defined by

SR 3.3.6.1.8. The application states the sensor for the Main Steam Line Pressure – Low loop is a Rosemount 1153 transmitter and has a BRT of 200ms.

The NRC staff reviewed the UFSAR and verified the loop maximum allowable response time for the Main Steam Line Pressure - Low loop is 1000ms. The NRC staff reviewed the applicability criteria of NEDO-32291-A, Supplement 1 and the calculated allowable loop sensor BRT of 756ms. The Rosemount 1153 transmitter in this loop has a range code of 9. The NRC staff reviewed the manufacturer supplied manual and confirmed the listed response time for this Rosemount 1153 transmitter with a range code of 9 is 200ms. Since the MSIV Main Steam Pressure – Low loop sensor BRT of 200ms is less than the allowable loop sensor BRT of 756ms, the NRC staff confirms the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are therefore sufficient to ensure the loop response time requirements are met. Therefore, the NRC staff finds it acceptable to eliminate applicability of SR 3.3.6.1.8 for this loop.

3.1.5 Reactor Vessel Water Level Low Low Low – Level 1

The components configuration matches “Type E” as described in NEDO-32291-A, Supplement 1. The loop logic BRT is the arithmetic sum of the individual component BRT. The Reactor Vessel Water Level Low Low Low – Level 1 loop contains the following equipment types with associated BRT.

| Reactor Water Level Loop | MTU | TU Output Relay | Logic Relay | Output Relay | Loop Logic BRT |
|---------------------------------|-----------------|------------------------|--------------------|---------------------|-----------------------|
| Equipment Type | Rosemount 710DU | Agastat EGPB | 12HFA15149 | 12HFA15149 | N/A |
| BRT | 24ms | 140ms | 40ms | 40ms | 244ms |

The FitzPatrick UFSAR Table 7.3-12 states the Reactor Vessel Water Level Low Low Low – Level 1 loops have a required loop maximum allowable response time of 1000ms. Based on the application, the allowable loop sensor BRT for the Reactor Vessel Water Level Low Low Low – Level loop is calculated to be 756ms.

Per NEDO-32291-A, Supplement 1, in order to conclude that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, the loop sensor BRT must be less than the calculated allowable loop sensor BRT. Current RTT for this loop is defined by SR 3.3.6.1.8. The application states the sensor for the Reactor Vessel Water Level Low Low Low – Level loop is a Rosemount 1153 transmitter with a BRT of 200ms.

The NRC staff reviewed the UFSAR and verified the loop maximum allowable response time for the Reactor Vessel Water Level Low Low Low – Level 1 loop is 1000ms. The NRC staff reviewed the applicability criteria of NEDO-32291-A, Supplement 1 and the calculated allowable loop sensor BRT of 756ms. The Rosemount 1153 transmitter in this loop has a range code of 5. The NRC staff reviewed the manufacturer supplied manual and confirmed the listed response time for this Rosemount 1153 transmitter with a range code of 5 is 200ms. Since the Reactor Vessel Water Level Low Low Low – Level loop sensor BRT of 200ms is less than the allowable loop sensor BRT of 756ms, the NRC staff confirms the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are therefore sufficient to

ensure the loop response time requirements are met. Therefore, the NRC staff finds it acceptable to eliminate applicability of SR 3.3.6.1.8 for this loop.

3.1.6 Delete SR 3.3.6.1.8

The proposed change deletes SR 3.3.6.1.8 in its entirety. As discussed above in Sections 3.1.3, 3.1.4, and 3.1.5 of this SE, the NRC staff found that the requirements of NEDO-32291-A, Supplement 1 are met and that surveillance tests other than RTT are sufficient to ensure the loop response time requirements are met, thus eliminating applicability of SR 3.3.6.1.8. The NRC staff confirmed there are no remaining TS functions for which SR 3.3.6.1.8 applies. Therefore SR 3.3.6.1.8 is no longer required and can be deleted in its entirety.

3.2 Compliance with 10 CFR 50.36(c)(3) Technical Specifications

The NRC staff evaluated the changes in Section 3.1 of this SE as they apply to 10 CFR 50.36(c)(3), which requires TSs to include items in the category of SRs, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

The NRC staff reviewed the application and the UFSAR and determined the proposed changes only impact response time testing requirements and have demonstrated the applicability of the analysis from NEDO-32291-A, Supplement 1, that any credible failure of the instrument loop components would be bounded by the BRT or would be detected by other routine surveillances or calibration. Therefore, the NRC staff finds the proposed changes continue to meet the requirements of 10 CFR 50.36(c)(3).

3.3 Applicability of LTR NEDO-32291, Supplement 1

The NRC staff evaluated the changes as they relate to the guidance defined in NEDO-32291-A, Supplement 1, which provides an acceptable basis for elimination of RTT for selected groups of components in instrument loops. The NRC staff reviewed the application and the UFSAR against the applicability criteria for utilizing the analysis from NEDO-32291-A, Supplement 1. As discussed above in Sections 3.1.1 through 3.1.5, the NRC staff confirmed that the loop sensor BRT are less than the calculated allowable loop sensor BRT and therefore conclude the analysis documented in NEDO-32291-A, Supplement 1 applies.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment on May 25, 2022. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves 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 that the amendment involves no significant hazards consideration, and there has been no public

comment on such finding (December 28, 2021; 86 FR 73818). Accordingly, the amendment meets 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 amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor(s): C. Cheung

Date: July 15, 2022

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – ISSUANCE OF
AMENDMENT NO. 351 RE: REMOVAL OF SELECTED RESPONSE TIME
TESTING FOR REACTOR PROTECTION SYSTEM AND PRIMARY
CONTAINMENT ISOLATION INSTRUMENTATION (EPID L-2021-LLA-0192)
DATED JULY 15, 2022

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