



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

May 6, 2013

Mr. Vito A. Kaminskis  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant  
Mail Stop A-PY-A290  
P.O. Box 97, 10 Center Road  
Perry, OH 44081-0097

SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT NO. 1 - ISSUANCE OF  
AMENDMENT REGARDING ADOPTION OF TSTF-275, "CLARIFY  
REQUIREMENT FOR EDG START SIGNAL ON RPV LEVEL - LOW, LOW,  
LOW DURING RPV CAVITY FLOOD-UP," AND TSTF-300, "ELIMINATE DG  
LOCA-START SRs WHILE IN S/D WHEN NO ECCS IS REQUIRED" (TAC NO.  
ME9521)

Dear Mr. Kaminskis:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 163 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1. This amendment revises the technical specifications (TSs) in response to your application dated September 5, 2012.

This amendment revises Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation," of the TSs to (1) clarify which emergency core cooling system (ECCS) instrumentation must be operable when shutdown and (2) ensure that ECCS instrumentation required to actuate the annulus exhaust gas treatment subsystems remain operable when required. This amendment also eliminates, through a revision to TS surveillance requirement 3.8.2.1, the requirement to verify diesel generator auto-start capability on an ECCS signal when the associated ECCS subsystems are not required to be operable.

V. Kaminskas

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

Sincerely,

A handwritten signature in black ink, appearing to read "Blake Purnell", written in a cursive style.

Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures:

1. Amendment No. 163 to NPF-58
2. Safety Evaluation

cc w/encls: Listserv



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

FIRSTENERGY NUCLEAR OPERATING COMPANY

FIRSTENERGY NUCLEAR GENERATION, LLC.

OHIO EDISON COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 163  
License No. NPF-58

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for license filed by FirstEnergy Nuclear Operating Company, et al. (the licensee, FENOC), dated September 5, 2012, 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 Facility Operating License No. NPF-58 is hereby amended to read as follows:

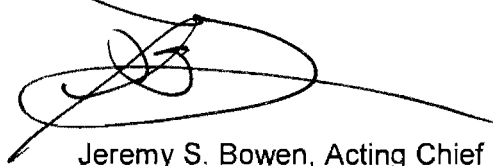
(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised

through Amendment No. 163 are hereby incorporated into the license. FENOC 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 its issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to be 'J. Bowen', is written over a horizontal line.

Jeremy S. Bowen, Acting Chief  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications and Facility Operating License

Date of Issuance: May 6, 2013

ATTACHMENT TO LICENSE AMENDMENT NO. 163

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following pages of the Facility Operating License Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove  
Page 4

Insert  
Page 4

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

Insert

3.3-39

3.3-39

3.3-40

3.3-40

3.3-41

3.3-41

3.3-42

3.3-42

3.8-20

3.8-20

renewal. Such sale and leaseback transactions are subject to the representations and conditions set forth in the above mentioned application of January 23, 1987, as supplemented on March 3, 1987, as well as the letter of the Director of the Office of Nuclear Reactor Regulation dated March 16, 1987, consenting to such transactions. Specifically, a lessor and anyone else who may acquire an interest under these transactions are prohibited from exercising directly or indirectly any control over the licenses of PNPP Unit 1. For purposes of this condition the limitations of 10 CFR 50.81, as now in effect and as may be subsequently amended, are fully applicable to the lessor and any successor in interest to that lessor as long as the license for PNPP Unit 1 remains in effect; these financial transactions shall have no effect on the license for the Perry Nuclear facility throughout the term of the license.

- (b) Further, the licensees are also required to notify the NRC in writing prior to any change in: (i) the terms or conditions of any lease agreements executed as part of these transactions; (ii) the PNPP Operating Agreement; (iii) the existing property insurance coverage for PNPP Unit 1; and (iv) any action by a lessor or others that may have an adverse effect on the safe operation of the facility.

- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now and hereafter in effect; and is subject to the additional conditions specified or incorporated below:

- (1) Maximum Power Level

FENOC is authorized to operate the facility at reactor core power levels not in excess of 3758 megawatts thermal (100% power) in accordance with the conditions specified herein.

- (2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 163, are hereby incorporated into the license. FENOC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- (3) Antitrust Conditions

- a. FirstEnergy Nuclear Generation, LLC and Ohio Edison Company

Table 3.3.5.1-1 (page 1 of 5)  
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2,3, 4(a)(f), 5(a)(f)	2(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 14.3 inches
b. Drywell Pressure - High	1,2,3	2(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.88 psig
c. LPCI Pump A Start - Time Delay Relay	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≤ 5.25 seconds
d. Reactor Vessel Pressure - Low (LPCS Injection Valve Permissive)	1,2,3	1	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 482.7 psig and ≤ 607.7 psig
	4(a),5(a)	1	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 482.7 psig and ≤ 607.7 psig
e. Reactor Vessel Pressure-Low (LPCI Injection Valve Permissive)	1,2,3	1	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490.0 psig and ≤ 537.1 psig
	4(a), 5(a)	1	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490.0 psig and ≤ 537.1 psig
f. LPCS Pump Discharge Flow - Low (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 1200 gpm

(continued)

- (a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, ECCS-Shutdown.
- (b) Also required to initiate the associated diesel generator and AEGT subsystem.
- (f) When associated AEGT subsystems are required to be OPERABLE per LCO 3.6.4.3, Annulus Exhaust Gas Treatment (AEGT) System.

Table 3.3.5.1-1 (page 2 of 5)  
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems (continued)					
g. LPCI Pump A Discharge Flow - Low (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 1450 gpm
h. Manual Initiation	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.6	NA
2. LPCI B and LPCI C Subsystems					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2,3, 4(a)(f), 5(a)(f)	2(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 14.3 inches
b. Drywell Pressure - High	1,2,3	2(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.88 psig
c. LPCI Pump B Start - Time Delay Relay	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≤ 5.25 seconds
d. Reactor Vessel Pressure - Low (LPCI Injection Valve Permissive)	1,2,3	1 per subsystem	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490.0 psig and ≤ 537.1 psig for LPCI B; and ≥ 490.0 psig and ≤ 537.1 psig for LPCI C
	4(a),5(a)	1 per subsystem	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 490.0 psig and ≤ 537.1 psig for LPCI B; and ≥ 490.0 psig and ≤ 537.1 psig for LPCI C

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, ECCS-Shutdown.

(b) Also required to initiate the associated diesel generator and AEGT subsystem.

(f) When associated AEGT subsystems are required to be OPERABLE per LCO 3.6.4.3, Annulus Exhaust Gas Treatment (AEGT) System.



Table 3.3.5.1-1 (page 3 of 5)  
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. LPCI B and LPCI C Subsystems (continued)					
e. LPCI Pump B and LPCI Pump C Discharge Flow - Low (Bypass)	1,2,3, 4(a),5(a)	1 per pump	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 1450 gpm
f. Manual Initiation	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.6	NA
3. High Pressure Core Spray (HPCS) System					
a. Reactor Vessel Water Level - Low Low, Level 2	1,2,3, 4(a),5(a)	4(e)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 127.6 inches
b. Drywell Pressure - High	1,2,3	4(e)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.88 psig
c. Reactor Vessel Water Level - High, Level 8	1,2,3, 4(a),5(a)	4	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 221.7 inches
d. Condensate Storage Tank Level - Low	1,2,3, 4(c),5(c)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 90,300 gallons
e. Suppression Pool Water Level - High	1,2,3	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.7 SR 3.3.5.1.6	≤ 18 ft 6 inches
(continued)					

- (a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, ECCS-Shutdown.
- (c) When HPCS is OPERABLE for compliance with LCO 3.5.2, "ECCS - Shutdown," and aligned to the condensate storage tank while tank water level is not within the limits of SR 3.5.2.2.
- (e) Also required to initiate the associated diesel generator.

Table 3.3.5.1-1 (page 4 of 5)  
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Core Spray (HPCS) System (continued)					
f. HPCS Pump Discharge Pressure - High (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 120 psig
g. HPCS System Flow Rate - Low (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 600 gpm
h. Manual Initiation	1,2,3, 4(a),5(a)	1	C	SR 3.3.5.1.6	NA
4. Automatic Depressurization System (ADS) Trip System A					
a. Reactor Vessel Water Level - Low Low Low, Level 1	1,2(d),3(d)	2	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 14.3 inches
b. ADS Initiation Timer	1,2(d),3(d)	1	G	SR 3.3.5.1.2 SR 3.3.5.1.4 SR 3.3.5.1.6	≥ 100.5 seconds and ≤ 109.5 seconds
c. Reactor Vessel Water Level - Low, Level 3 (Confirmatory)	1,2(d),3(d)	1	F	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 177.1 inches
d. LPCS Pump Discharge Pressure - High	1,2(d),3(d)	2	G	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 125 psig
e. LPCI Pump A Discharge Pressure - High	1,2(d),3(d)	2	G	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 115 psig
f. Manual Initiation	1,2(d),3(d)	2	G	SR 3.3.5.1.6	NA

(continued)

(a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2, ECCS-Shutdown.

(d) With reactor steam dome pressure > 150 psig.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<div>SR 3.8.2.1</div> <div>-----NOTES-----</div> <div><div>1. The following SRs are not required to be performed: SR 3.8.1.3, SR 3.8.1.8 through SR 3.8.1.16, SR 3.8.1.18, and SR 3.8.1.19.</div><div>2. SR 3.8.1.12 and SR 3.8.1.19 are not required to be met when the associated ECCS subsystem(s) are not required to be OPERABLE per LCO 3.5.2, "ECCS - Shutdown."</div></div> <div>-----</div> <div>For AC sources required to be OPERABLE, the following SRs are applicable:</div> <div><div><div>SR 3.8.1.1</div><div>SR 3.8.1.2</div><div>SR 3.8.1.3</div><div>SR 3.8.1.4</div><div>SR 3.8.1.5</div><div>SR 3.8.1.6</div></div><div><div>SR 3.8.1.7</div><div>SR 3.8.1.9</div><div>SR 3.8.1.10</div><div>SR 3.8.1.11</div><div>SR 3.8.1.12</div><div>SR 3.8.1.13</div></div><div><div>SR 3.8.1.14</div><div>SR 3.8.1.15</div><div>SR 3.8.1.16</div><div>SR 3.8.1.18</div><div>SR 3.8.1.19</div></div></div> <div>In accordance with applicable SRs</div>	



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. NPF-58  
FIRSTENERGY NUCLEAR OPERATING COMPANY  
FIRSTENERGY NUCLEAR GENERATION, LLC.  
OHIO EDISON COMPANY  
PERRY NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-440

1.0 INTRODUCTION

By application dated September 5, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12249A359), FirstEnergy Nuclear Operating Company, (the licensee), submitted a license amendment request to revise the technical specifications (TSs) for Perry Nuclear Power Plant (PNPP), Unit No. 1. The licensee is specifically requesting to adopt Technical Specifications Task Force (TSTF)-275, Revision 0, "Clarify Requirement for [Emergency Diesel Generator] EDG Start Signal on [Reactor Pressure Vessel] RPV Level – Low, Low, Low During RPV Cavity Flood-Up," and TSTF-300, Revision 0, "Eliminate [Diesel Generator] DG [Loss-of-Coolant-Accident] LOCA-Start [Surveillance Requirements] SRs While in [Shutdown] S/D When No [Emergency Core Cooling System] ECCS is Required." The proposed TSs changes would: (1) clarify which ECCS instrumentation must be operable when in shutdown (TSTF-275) and, (2) eliminate the need to require automatic start of the EDGs when the associated ECCS subsystem does not need to be operable (TSTF-300). In addition, the licensee is proposing to add a footnote to TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation," to ensure ECCS instrumentation required to actuate the annulus exhaust gas treatment (AEGT) subsystems remains operable when the associated AEGT subsystems are required.

2.0 REGULATORY EVALUATION

2.1 Background

The purpose of the ECCS instrumentation is to initiate appropriate responses from systems to ensure that the fuel is adequately cooled in the event of a design-basis accident or transient. The ECCS instrumentation actuates the AEGT subsystems and the DGs, in addition to the following ECCS subsystems: low-pressure core spray (LPCS) system, low-pressure coolant injection (LPCI) system, high-pressure core spray (HPCS) system, and automatic depressurization system.

The purpose of the AEGT system is to reduce via filtration and adsorption, the radioactive material released to the environment. The AEGT system automatically starts and operates in

response to actuation signals indicative of conditions, or an accident, that could require operation of the system.

The purpose of the DGs is to be the onsite standby power source for each 4.16 kilovolt bus for engineered safety features. In the event of a loss of preferred power, the electrical loads for the engineered safety features are automatically connected to the DGs in sufficient time to provide for safe reactor shutdown and to mitigate the consequences of a design-basis accident such as a LOCA.

## 2.2 Technical Specification Changes

Table 3.3.5.1-1 of the TS identifies instrumentation associated with the actuation of the ECCS and the applicable modes or other specified conditions for such instrumentation. The ECCS instrumentation addressed in TS Table 3.3.5.1-1 is for the LPCS, LPCI, HPCS, and automatic depressurization systems. The table indicates that several of these instruments have functions which are applicable in Modes 4 and 5 under the condition in footnote (a), which currently states: "When associated subsystem(s) are required to be operable." In its application, the licensee proposes to clarify footnote (a) so that it states: "When associated ECCS subsystem(s) are required to be operable per LCO limiting conditions for operations 3.5.2, ECCS-Shutdown."

For the LPCI and LPCS subsystems, the licensee proposes to clarify the applicability of TS Table 3.3.5.1-1 functions 1.a and 2.a, "reactor vessel water level – low low low, level 1," when in Modes 4 and 5 by adding a footnote (f). Footnote (f) will state: "When the associated AEGT subsystems are required to be OPERABLE per LCO 3.6.4.3, Annulus Exhaust Gas Treatment (AEGT) System."

Currently, SR 3.8.2.1 lists the surveillances that are applicable to the alternating current (ac) sources during shutdown. Listed among the applicable surveillances are SR 3.8.1.12, verification of DG auto-start capability on an ECCS-initiation signal, and SR 3.8.1.19, verification of load shedding and DG auto-start on a loss-of-offsite-power signal in conjunction with an ECCS-initiation signal. The licensee proposes to change SR 3.8.2.1 by adding a new Note 2 and renumbering the existing note as Note 1. Note 2 will eliminate the requirement to verify the DG's auto-start capability on an ECCS-initiation signal when the associated ECCS subsystems are not required to be operable. Note 2 will read as follows:

SR 3.8.1.12 and SR 3.8.1.19 are not required to be met when the associated ECCS subsystem(s) are not required to be OPERABLE per LCO 3.5.2, "ECCS-Shutdown."

## 2.3 Regulatory Review

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The U.S. Nuclear Regulatory Commission (NRC or Commission) regulatory requirements for the content of the TSs are contained in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36, "Technical Specifications." The TSs requirements in 10 CFR 50.36 include the following categories: (1) safety limits, limiting safety systems settings and control settings, (2) LCOs, (3) SRs, (4) design features, (5) administrative controls, (6) decommissioning, (7) initial notification, and (8) written reports.

Section 50.36(c)(3) of 10 CFR states that SRs "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 will be met."

The TSTF-275 and TSTF-300 are changes to NUREG-1434, "Standard Technical Specifications [STS], General Electric Plants, BWR/6," that were approved by the NRC staff as generic line-item improvements for voluntary adoption by licensees. PNPP has requested to adopt these line-item improvements into its current TSs.

### 3.0 TECHNICAL EVALUATION

#### 3.1 TSTF-275, Revision 0, "Clarify Requirement for EDG Start Signal on RPV level – Low, Low, Low During RPV Cavity Flood-Up"

Table 3.3.5.1-1 of the TS identifies instrumentation associated with the actuation of the ECCS. The ECCS instrumentation addressed in TS Table 3.3.5.1-1 is for the LPCS, LPCI, HPCS, and automatic depressurization systems. The licensee's September 5, 2012, submittal proposed to clarify when ECCS initiation instrumentation was required to be operable by revising a footnote in TS Table 3.3.5.1-1 via adoption of TSTF-275, Revision 0 (ADAMS Accession No. ML040611062).

The TSTF-275 was approved by the NRC on December 21, 1999 (ADAMS Accession No. ML993630256), and subsequently incorporated into Revision 2 of the STS, NUREG-1430 through -1434. TSTF-275 clarified TS Table 3.3.5.1-1, which tabulated requirements for ECCS initiation instrumentation, by changing footnote (a) from "When associated subsystem(s) are required to be operable" to "When associated ECCS subsystem(s) are required to be operable per LCO 3.5.2, ECCS-Shutdown." This more-precise phrasing was to prevent misinterpreting the DGs as associated subsystems that controlled the instrument availability requirements in Modes 4 and 5. The correct interpretation is that the ECCS instruments need only be operable if the associated ECCS is required by TS LCO 3.5.2.

The NRC staff finds that the licensee's September 5, 2012, application is consistent with TSTF-275. The proposed clarification assures the intent of the TSs is correctly stated. Accordingly, the NRC staff finds the proposed change to TS Table 3.3.5.1-1 to be acceptable.

#### 3.2 Addition of a Footnote to TS Table 3.3.5.1-1

The licensee is also proposing to add footnote (f) to TS Table 3.3.5.1-1, which is not included in TSTF-275, Revision 0. Portions of the ECCS instrumentation actuate the AEGT subsystems; therefore, the applicable ECCS instrumentation must remain operable when the AEGT subsystems are required to be operable per LCO 3.6.4.3, "Annulus Exhaust Gas Treatment (AEGT) System." LCO 3.6.4.3 requires the AEGT system to be operable in Modes 1, 2, and 3, during movement of recently irradiated fuel assemblies in the primary containment, and during operations with a potential for draining the reactor vessel.

The licensee stated in its application that:

The AEGT system is unique to the PNPP and was not considered in TSTF-275-A, Revision 0. The inclusion of a new footnote (f) on Table 3.3.5.1-1, pages 1 and 2 is necessary to ensure ECCS instrumentation that initiates AEGT

subsystems is required to be operable when the AEGT subsystems are required to be operable and ensures that the current TS requirements for the AEGT subsystem initiation instrument operability are not changed. This proposed change is consistent with the footnote proposed by TSTF-275-A in that it requires operability of ECCS instrumentation when the subsystems that the instrumentation initiates are required to be operable.

Footnote (f) will state: "When the associated AEGT subsystems are required to be OPERABLE per LCO 3.6.4.3, Annulus Exhaust Gas Treatment (AEGT) System."

The NRC staff finds the licensee's proposed addition of footnote (f) in TS Table 3.3.5.1-1 for the LPCI and LPCS subsystems, functions 1.a and 2.a, "reactor vessel water level – low low low, level 1," is consistent with the intent of TSTF-275. The proposed clarification assures that the intent of the TSs (i.e., to apply only when the system is needed) is correctly stated. Therefore, the addition of footnote (f) to TS Table 3.3.5.1-1 is acceptable.

### 3.3 TSTF-300, Revision 0, "Eliminate DG LOCA-Start SRs While in S/D [Shutdown] When No ECCS is Required"

The licensee stated in its application that according to LCO 3.5.2, two ECCS injection/spray subsystems are required to be operable in Mode 4 and in certain Mode 5 conditions. No ECCS injection/spray subsystems are required to be operable when the plant is in Mode 5 with the reactor vessel head and steam dryer storage pool/reactor well gate removed and water level greater than or equal to 22 feet 9 inches over the top of the reactor pressure vessel flange. In such conditions when the ECCS systems are not required to be operable, the ECCS-start functions of the DGs serve no safety-significant support function. As such, the SRs that verify the DGs capability to respond to an ECCS-start signal may be removed from DGs operability considerations during shutdown when the ECCS systems are not required to be operable.

TSTF-300 was approved by the NRC and incorporated into Revision 2 of the boiling-water reactor STS, NUREG-1433 and -1434. The change made by TSTF-300 is that exceptions are added to the DG SRs for LCO 3.8.2, "AC Sources - Shutdown." These exceptions will eliminate the requirement that the DGs be capable of responding to ECCS signals (i.e., SRs 3.8.1.12 and 3.8.1.19 are not required to be met) during shutdown while the associated ECCS subsystems are not required to be operable. Consistent with TSTF-300, the licensee proposes to change SR 3.8.2.1 by adding a new Note 2 and renumbering the existing note as Note 1. Note 2 will eliminate the requirement to verify the DG's auto-start capability on an ECCS signal when the associated ECCS subsystems are not required to be operable. Note 2 will read as follows:

SR 3.8.1.12 and SR 3.8.1.19 are not required to be met when the associated ECCS subsystem(s) are not required to be OPERABLE per LCO 3.5.2, "ECCS-Shutdown."

During shutdown modes, when the vessel is de-fueled, or when the reactor cavity is flooded, the ECCS is not required to be operable. Therefore, the ECCS-start functions of the DGs serve no safety-significant support function. As such, the SRs that assure the DG capability to respond to an ECCS-start signal may be removed from DG operability considerations at those times when the ECCS is not required to be operable. However, prior to entry into Modes 1, 2, 3, and 4, SR 3.8.1.12 and SR 3.8.1.19 are required to be met in accordance with SR 3.0.4.

The NRC staff also finds that when the ECCS is not required to be operable, the ECCS start functions of the DGs serve no safety-significant support function; hence, the proposed change is acceptable. Additionally, the proposed change is consistent with TSTF-300.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility located within the restricted area as defined in 10 CFR Part 20 and changes SRs. 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 issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (78 FR 1270; January 8, 2013). 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 needs to be prepared in connection with the issuance of the amendments.

#### 6.0 CONCLUSION

The NRC staff 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: Kristy Bucholtz, DSS/STSB

Date of issuance: May 6, 2013



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

Sincerely,

/ RA /

Blake Purnell, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures:

1. Amendment No. 163 to NPF-58
2. Safety Evaluation

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\*By memo dated \*\*By email dated

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