

David B. Hamilton  
Vice President

440-280-5382

October 23, 2017  
L-17-046

10 CFR 50.71(e)  
10 CFR 50.54(a)

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

SUBJECT:  
Perry Nuclear Power Plant  
Docket No. 50-440, License No. NPF-58  
Submission of the Updated Final Safety Analysis Report, Revision 20

In accordance with the requirements of 10 CFR 50.71(e), the FirstEnergy Nuclear Operating Company (FENOC) is hereby submitting to the Nuclear Regulatory Commission (NRC) the Perry Nuclear Power Plant (PNPP) Updated Final Safety Analysis Report (UFSAR), Revision 20, in CD-ROM format. This submittal reflects facility and procedure changes implemented between April 24, 2015 (the end of refueling outage 15), and April 3, 2017 (the end of refueling outage 16), along with several changes implemented after refueling outage 16.

In accordance with 10 CFR 50.4(b)(6), revision 20 of the PNPP UFSAR is submitted electronically on a total replacement basis. As required by NRC guidance for electronic submissions, Attachments 1 and 2 provide a listing of the document components that make up the two enclosed CD-ROMs. In addition to the UFSAR, the first enclosed CD-ROM includes the following:

- Technical Specification Bases, Revision 11, submitted to satisfy TS 5.5.11, "Technical Specifications (TS) Bases Control Program," which requires submittal of TS Bases changes implemented without prior NRC approval
- FENOC Quality Assurance Program Manual (QAPM), Revision 21, submitted in accordance with 10 CFR 50.54(a)

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The second enclosed CD-ROM includes the PNPP UFSAR, TS Bases, and QAPM with information identified in accordance with NRC Regulatory Issue Summary (RIS) 2015-17, "Review and Submission of Updates to Final Safety Analysis Reports, Emergency Preparedness Documents, and Fire Protection Documents," removed.

Attachment 3 includes a summary of information removed from the UFSAR in accordance with Appendix A to Nuclear Energy Institute (NEI) 98-03, "Guidelines for Updating Final Safety Analysis Reports," Revision 1.

There are no regulatory commitment changes to be submitted in accordance with NEI 99-04, "Guidelines for Managing NRC Commitment Changes," Revision 0, as endorsed by NRC RIS 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff."

This certifies, to the best of my judgment and belief, that Revision 20 of the PNPP UFSAR accurately presents changes made since the previous submittal that are necessary to reflect information and analysis submitted to the Commission or pursuant to Commission requirements.

This submittal contains no new regulatory commitments. If you have any questions regarding this report, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 315-6810.

Sincerely,



David B. Hamilton

**Attachments:**

1. List of Document Components on CD-ROM 1
2. List of Document Components on CD-ROM 2 (Information Identified Per RIS 2015-17 Removed)
3. Information Removed from the PNPP UFSAR

**Enclosures:**

- A. Perry Nuclear Power Plant UFSAR, Technical Specification Bases, and QAPM (on CD-ROM 1)
- B. Perry Nuclear Power Plant UFSAR With Information Identified Per RIS 2015-17 Removed, Technical Specification Bases, and QAPM (on CD-ROM 2)

cc: NRC Region III Administrator  
NRC Resident Inspector  
NRC Project Manager

Attachment 1  
L-17-046

List of Document Components on CD-ROM 1  
Page 1 of 2

<u>File Name</u>	<u>Size</u>
001 LIST EFF Rev 20.pdf	136 KB
002 Chapter 00.pdf	1,008 KB
003 Chapter 01.pdf	14,104 KB
004 Chapter 02.0 to 02.4.pdf	14,083 KB
005 Chapter 02.5 to 02E.pdf	38,213 KB
006 Chapter 03.pdf	15,613 KB
007 Chapter 04.pdf	13,498 KB
008 Chapter 05.pdf	13,809 KB
009 Chapter 06.pdf	14,189 KB
010 Chapter 07.pdf	13,879 KB
011 Chapter 08.pdf	13,616 KB
012 Chapter 09.pdf	15,387 KB
013 Chapter 10.pdf	13,474 KB
014 Chapter 11.pdf	13,760 KB
015 Chapter 12.pdf	13,735 KB
016 Chapter 13.pdf	13,393 KB
017 Chapter 14.pdf	13,762 KB
018 Chapter 15.pdf	22,138 KB
019 Chapter 16.pdf	57 KB
020 Chapter 17.pdf	67 KB
021 FIG LIST Rev 20.pdf	256 KB
022 Figures Section 01.pdf	4,740 KB
023 Figures Section 02 (2.1-1 to 2.5-46).pdf	25,946 KB
024 Figures Section 02 (2.5-47 to 2.5-49).pdf	20,214 KB
025 Figures Section 02 (2.5-50 to 2.5-215).pdf	26,172 KB
026 Figures Section 02D-1 to 02D-2.pdf	19,647 KB
027 Figures Section 02D-3 to 02E-1.pdf	32,280 KB

<u>File Name</u>	<u>Size</u>
028 Figures Section 03.pdf	38,067 KB
029 Figures Section 04.pdf	1,567 KB
030 Figures Section 05.pdf	4,874 KB
031 Figures Section 06.pdf	7,550 KB
032 Figures Section 07.pdf	10,300 KB
033 Figures Section 08.pdf	3,142 KB
034 Figures Section 09 (9.1-1 to 9.4-29).pdf	18,024 KB
035 Figures Section 09 (9.5-1 to 9.5-26).pdf	4,197 KB
036 Figures Section 09 (9A-1 to 9A-34).pdf	6,924 KB
037 Figures Section 10.pdf	15,769 KB
038 Figures Section 11.pdf	2,660 KB
039 Figures Section 12.pdf	15,083 KB
040 Figures Section 13.pdf	142 KB
041 Figures Section 14.pdf	241 KB
042 Figures Section 15.pdf	5,586 KB
043 PNPP TS Bases Rev 11.pdf	11,526 KB
044 FENOC QAPM Rev 21.pdf	3,024 KB

Attachment 2  
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List of Document Components on CD-ROM 2  
(Information Identified Per RIS 2015-17 Removed)  
Page 1 of 2

<u>File Name</u>	<u>Size</u>
001 List EFF Rev 20.pdf	136 KB
002 Chapter 00.pdf	1,008 KB
003 Chapter 01.pdf	14,104 KB
004 Chapter 02.0 to 02.4.pdf	14,083 KB
005 Chapter 02.5 to 02E.pdf	38,213 KB
006 Chapter 03.pdf	15,613 KB
007 Chapter 04.pdf	13,498 KB
008 Chapter 05.pdf	13,809 KB
009 Chapter 06.pdf	14,189 KB
010 Chapter 07.pdf	13,879 KB
011 Chapter 08.pdf	13,616 KB
012 Chapter 09.pdf	15,387 KB
013 Chapter 10.pdf	13,474 KB
014 Chapter 11.pdf	13,760 KB
015 Chapter 12.pdf	13,735 KB
016 Chapter 13.pdf	13,393 KB
017 Chapter 14.pdf	13,762 KB
018 Chapter 15.pdf	22,138 KB
019 Chapter 16.pdf	57 KB
020 Chapter 17.pdf	67 KB
021 FIG LIST Rev 20.pdf	256 KB
022 Figures Section 01.pdf	1,709 KB
023 Figures Section 02 (2.1-1 to 2.5-46).pdf	25,946 KB
024 Figures Section 02 (2.5-47 to 2.5-49).pdf	20,214 KB
025 Figures Section 02 (2.5-50 to 2.5-215).pdf	26,172 KB
026 Figures Section 02D-1 to 02D-2.pdf	19,647 KB
027 Figures Section 02D-3 to 02E-1.pdf	32,280 KB

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028 Figures Section 03.pdf	27,609 KB
029 Figures Section 04.pdf	1,567 KB
030 Figures Section 05.pdf	4,874 KB
031 Figures Section 06.pdf	7,358 KB
032 Figures Section 07.pdf	10,300 KB
033 Figures Section 08.pdf	2,738 KB
034 Figures Section 09 (9.1-1 to 9.4-29).pdf	17,429 KB
035 Figures Section 09 (9.5-1 to 9.5-26).pdf	4,197 KB
036 Figures Section 09 (9A-1 to 9A-34).pdf	558 KB
037 Figures Section 10.pdf	15,769 KB
038 Figures Section 11.pdf	2,660 KB
039 Figures Section 12.pdf	1,933 KB
040 Figures Section 13.pdf	142 KB
041 Figures Section 14.pdf	241 KB
042 Figures Section 15.pdf	5,586 KB
043 PNPP TS Bases Rev 11.pdf	11,526 KB
044 FENOC QAPM Rev 21.pdf	3,024 KB

Information Removed from the PNPP UFSAR

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In accordance with Nuclear Energy Institute (NEI) 98-03, Revision 1, "Guidelines for Updating Final Safety Analysis Reports," licensees periodically report a brief description of information removed from the Updated Final Safety Analysis Report (UFSAR) and the basis for its removal. The following provides a summary of the information removed from the PNPP UFSAR and the basis for removal.

1. Removed excessive detail in Section 3.1.2.4.4.1, Response to Criterion 33, associated with reactor coolant makeup. Descriptive information in the form of a run-on sentence was removed to avoid misinterpretation. The removed information has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions and has no impact on plant operations.
2. Removed excessive detail in Table 3.2-1, Equipment Classification Note 19, which discusses why recirculation pump seal cooling is non-safety and non-seismic. The note was simplified to remove excessive detail not needed to understand the equipment classification. The removed information has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions and has no impact on plant operations.
3. Removed excessive detail in Table 6.2-33, Potential Secondary Containment Bypass Leakage Paths, Note 6, associated with spectacle or blind flanges. The note was modified to remove the reference to the type of leak testing performed. The removed information has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions and has no impact on plant operations.
4. Removed excessive detail in its entirety with the deletion of Table 6.2-42, Primary Containment Integrated Leakage Rate Instrumentation. Regulatory Guide (RG) 1.70 does not require this level of detail. This removed information is descriptive in nature, has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions, and has no impact on plant operations.
5. Removed excessive detail in Table 6.2-44, Containment Equipment Survivability List. Descriptive information referencing manufacturer name and model number of instruments and components was removed. Manufacturer names and model numbers are not required by RG 1.70 and NEI 98-03. This removed information is descriptive in nature and has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions and has no impact on plant operations.

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Information Removed from the PNPP UFSAR  
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6. Removed excessive detail in Section 6.1.1.2, Composition, Compatibility and Stability of Containment and Core Spray Coolants. Descriptive information, which makes specific reference to "Oak Ridge National Laboratory," was removed. The location where nuclear grade coating materials are tested is excessive detail, and removal has no impact on the ability of plant structures, systems, and components described in the UFSAR to perform their design basis functions and has no impact on plant operations.