



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

July 7, 2025

Ms. Kelly J. Ferneau
Executive Vice President and Chief
Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 366 AND 347 REGARDING ADOPTION OF TSTF-501, REVISION 1, "RELOCATE STORED FUEL OIL AND LUBE OIL VOLUME VALUES TO LICENSEE CONTROL" (EPID L-2024-LLA-0167)

Dear Ms. Ferneau:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued the enclosed Amendment Nos. 366 and 347 to Renewed Facility Operating License Nos. DPR-58 and DPR-74, for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the technical specifications (TSs) in response to your application dated December 16, 2025.

The amendments revise TS 3.8.3, "Diesel Fuel Oil," and Surveillance Requirement (SR) 3.8.3.1 (verification of fuel oil storage tank volume), by removing the current stored diesel fuel oil and lube oil numerical volume requirements and replacing them with duration-based diesel operating time requirements, consistent with Technical Specifications Task Force (TSTF) traveler TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control." The amendments also revise TS 3.8.1, "AC [Alternating Current] Sources – Operating," SR 3.8.1.4 to replace the specific day tank numerical volume requirements with a duration-based diesel operating time requirement.

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

Sincerely,

/RA/

Scott P. Wall, Senior Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures:

1. Amendment No. 366 to DPR-58
2. Amendment No. 347 to DPR-74
3. Safety Evaluation

cc: Listserv



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 366
License No. DPR-58

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company dated December 16, 2024, 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-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. 366, are hereby incorporated in this 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Ilka Berrios, Acting Chief
Plant Licensing Branch III
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 7, 2025

ATTACHMENT TO LICENSE AMENDMENT NO. 366

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

DOCKET NO. 50-315

Renewed Facility Operating License No. DPR-58

Replace the following page of the Renewed Facility Operating License No. DPR-58 with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the area of change.

REMOVE

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Technical Specifications

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

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3.8.1-7

3.8.1-7

3.8.3-1

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3.8.3-2

and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) 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

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3304 megawatts thermal 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. 366, are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Less than Four Loop Operation

The licensee shall not operate the reactor at power levels above P-7 (as defined in Table 3.3.1-1 of Specification 3.3.1 of Appendix A to this renewed operating license) with less than four reactor coolant loops in operation until (a) safety analyses for less than four loop operation have been submitted, and (b) approval for less than four loop operation at power levels above P-7 has been granted by the Commission by amendment of this license.

(4) Fire Protection Program

Indiana Michigan Power Company 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's amendment request dated July 1, 2011, as supplemented by letters dated September 2, 2011, April 27, 2012, June 29, 2012, August 9, 2012, October 15, 2012, November 9, 2012, January 14, 2013, February 1, 2013,

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.3</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.8. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 3150 kW and ≤ 3500 kW.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.4</p> <p>Verify each day tank contains \geq a 15 minute supply of fuel oil.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.5</p> <p>Check for and remove accumulated water from each day tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.6</p> <p>Verify each required DG air start receiver pressure is ≥ 190 psig.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.7</p> <p>Verify each fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil

LCO 3.8.3 The stored diesel fuel oil subsystem shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel volume less than a 7 day supply and greater than a 6 day supply in storage tank.	A.1 Restore fuel oil volume to within limits.	48 hours
B. One or more DGs with stored fuel oil total particulates not within limit.	B.1 Restore fuel oil total particulates to within limits.	7 days
C. One or more DGs with new fuel oil properties not within limits.	C.1 Restore stored fuel oil properties to within limits.	30 days
D. Required Action and associated Completion Time not met. <u>OR</u> One or more DGs with diesel fuel oil subsystem not within limits for reasons other than Condition A, B, or C.	D.1 Declare associated DG inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains \geq a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.3	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program



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INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 347
License No. DPR-74

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Indiana Michigan Power Company dated December 16, 2024, 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-74 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. 347, are hereby incorporated into this 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 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Ilka Berrios, Acting Chief
Plant Licensing Branch III
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 7, 2025

ATTACHMENT TO LICENSE AMENDMENT NO. 347

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

DOCKET NO. 50-316

Renewed Facility Operating License No. DPR-74

Replace the following page of the Renewed Facility Operating License No. DPR-74 with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the area of change.

REMOVE

INSERT

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Technical Specifications

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

REMOVE

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3.8.1-7

3.8.1-7

3.8.3-1

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3.8.3-2

and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components; and
- (5) 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

The licensee is authorized to operate the facility at steady state reactor core power levels not to exceed 3468 megawatts thermal in accordance with the conditions specified herein and in Attachment 1 to the renewed operating license. The preoperational tests, startup tests and other items identified in Attachment 1 to this renewed operating license shall be completed. Attachment 1 is an integral part of this renewed operating license.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 347, are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Additional Conditions

(a) Deleted by Amendment No. 76

(b) Deleted by Amendment No. 2

(c) Leak Testing of Emergency Core Cooling System Valves

Indiana Michigan Power Company shall prior to completion of the first inservice testing interval leak test each of the two valves in series in the

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.3</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.8. <p>-----</p> <p>Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 3150 kW and ≤ 3500 kW.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.4</p> <p>Verify each day tank contains \geq a 15 minute supply of fuel oil.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.5</p> <p>Check for and remove accumulated water from each day tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.6</p> <p>Verify each required DG air start receiver pressure is ≥ 190 psig.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.8.1.7</p> <p>Verify each fuel oil transfer system operates to automatically transfer fuel oil from the storage tank to the day tank.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil

LCO 3.8.3 The stored diesel fuel oil subsystem shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel volume less than a 7 day supply and greater than a 6 day supply in storage tank.	A.1 Restore fuel oil volume to within limits.	48 hours
B. One or more DGs with stored fuel oil total particulates not within limit.	B.1 Restore fuel oil total particulates to within limits.	7 days
C. One or more DGs with new fuel oil properties not within limits.	C.1 Restore stored fuel oil properties to within limits.	30 days
D. Required Action and associated Completion Time not met. <u>OR</u> One or more DGs with diesel fuel oil subsystem not within limits for reasons other than Condition A, B, or C.	D.1 Declare associated DG inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains \geq a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.3	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 366 AND 347 TO

RENEWED FACILITY OPERATING LICENSE NOS. DPR-58 AND DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By application dated December 16, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24351A112), Indiana Michigan Power Company (I&M, the licensee), requested changes to the technical specifications (TS) for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 (CNP).

The proposed changes would revise TS 3.8.3, "Diesel Fuel Oil," and Surveillance Requirement (SR) 3.8.3.1 (verification of fuel oil storage tank volume), by removing the current stored diesel fuel oil and lube oil numerical volume requirements and replacing them with duration-based diesel generator (DG) operating time requirements, consistent with Technical Specifications Task Force (TSTF) traveler TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control" (ML090510686). The availability of this TS improvement was published in the *Federal Register* on May 26, 2010 (75 FR 29588), as part of the Consolidated Line Item Improvement Process (CLIIP). The licensee also proposed changes that would revise TS 3.8.1, "AC [Alternating Current] Sources – Operating," SR 3.8.1.4 (verification of each DG day tank fuel oil volume) to replace the specific day tank numerical volume requirements with a duration-based diesel operating time requirement. The licensee also proposed associated changes to the TS Bases.

Any change to the numerical volume requirements in the TSs requires prior approval by the U.S. Nuclear Regulatory Commission (NRC or the Commission). Licensees may need to modify diesel fuel oil numerical volumes to account for changes to the energy content (British Thermal Units (BTU)/gallon) of available fuel oils in the market. Fluctuations in energy content could be caused by a variety of factors including changes to regulatory requirements.

The proposed changes would remove the numerical volume requirements for stored diesel fuel oil from the TSs and would replace them with duration-based diesel operating time requirements. This amendment would permit the numerical volume requirements for stored diesel fuel oil to be modified under licensee control pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.59, "Changes, tests, and experiments," and, therefore, would not require prior NRC review under 10 CFR 50.90.

2.0 REGULATORY EVALUATION

2.1 System Description

The standby AC power sources are a part of the primary success path, and function or actuate to mitigate a design-basis accident or transient that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier. Diesel fuel oil requirements are retained in the TS as a limiting condition for operation (LCO) under 10 CFR 50.36(c)(2)(i) because they support the operation of the standby AC power sources.

The standby AC power system for each unit of CNP is powered by two DGs capable of an automatic start at any time and capable of continued operation at rated load, voltage, and frequency until manually stopped. Each DG is provided with access to a storage tank. There are two storage tanks for the site, shared between the two units. Each storage tank supplies two DGs, one DG in each unit. Each storage tank has a fuel oil capacity sufficient to operate a DG for a period of 7 days while the DG is supplying maximum post loss-of-coolant accident load demand. The maximum load demand is calculated based on the fuel consumption by one DG for operation at a continuous rating for 7 days. This onsite fuel oil capacity is sufficient to operate the DG for longer than the time to replenish the onsite supply from outside sources. Diesel fuel oil is transferred from a storage tank to the day tanks by either of two transfer pumps associated with each storage tank.

2.2 Proposed Changes to the TSs

The proposed changes, described in Section 2.0 of the license amendment request (LAR), would revise conditions and SRs in TS 3.8 by removing the current stored diesel fuel oil volume numerical requirement and replacing it with a duration-based DG operating time requirement. The proposed changes would mean that the volume necessary to meet the TS duration requirements may be modified under licensee control. The specific TS changes are described in the following sections.

Consistent with TSTF-501, the licensee proposed replacing the volumetric requirements with the duration-based DG operating times required by the current licensing basis for CNP.

2.2.1 Proposed Changes to TS 3.8.3 Actions Table Condition A

Condition A of TS LCO 3.8.3 would be revised in the Actions table. Currently, Condition A applies when the stored diesel fuel oil numerical volume requirements are not met. As discussed in the TS Bases, the numerical diesel fuel oil volume requirement is based on volumes of less than a 7-day supply, but greater than a 6-day supply. The proposed amendment would remove the numerical volumetric requirement from the TS and replace it with a duration-based requirement.

2.2.2 Proposed Changes to SR 3.8.3.1 and SR 3.8.1.4

Currently, SR 3.8.3.1 requires the licensee to verify that each fuel oil storage tank contains a volume greater than or equal to 46,000 gallons of fuel oil. The proposed amendment would remove the numerical volume requirement. SR 3.8.3.1 would be revised to require verification that each fuel oil storage tank contains greater than or equal to a 7-day supply.

Currently, SR 3.8.1.4 requires the licensee to verify that each day tank contains a volume greater than or equal to 101.4 gallons of fuel oil. The proposed amendment would remove the numerical volume requirement. SR 3.8.1.4 would be revised to require verification that each day tank contains greater than or equal to a 15-minute supply.

2.2.3 Proposed Changes to the TS Bases

Consistent with 10 CFR 50.36(a)(1), the licensee submitted corresponding changes to the TS Bases that provide the reasons for the proposed TS changes. On page 2 of Enclosure 2 of the LAR, the licensee stated:

Proposed revisions to the TS Bases are also included in this application. Adoption of the TS Bases associated with TSTF-501, Revision 1, is an integral part of implementing this TS amendment. The changes to the affected TS Bases pages will be incorporated in accordance with the TS Bases Control Program.

The regulation at 10 CFR 50.36(a)(1) states that “[a] summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications.” The licensee shall make changes to the CNP TS Bases in accordance with TS 5.5.12, “Technical Specifications (TS) Bases Control Program.”

2.3 Licensee-Identified Differences with TSTF-501, Revision 1

On pages 2 and 3 of Enclosure 2 of the LAR, the licensee proposed six variations from TSTF-501, Revision 1, as described below:

- Variation 1: Traveler TSTF-501 references lube oil volumes in the proposed TS changes. CNP TSs do not include requirements for lube oil volumes. Therefore, lube oil volume requirements were not included in the proposed CNP TS changes.
- Variation 2: Condition A of TS 3.8.3, and SR 3.8.3.1 uses the word “volume” instead of the word “level” as detailed in the Standard Technical Specifications (STSS) on which TSTF-501 was based.
- Variation 3: CNP SR 3.8.1.4, concerning fuel oil day tank inventory, currently specifies verification of greater than or equal to a minimum volume of fuel oil. The licensee proposed a revision to SR 3.8.1.4 to remove the day tank volume requirement and replace it with a duration-based requirement.
- Variation 4: The proposed revision to SR 3.8.1.4 discussed in Variation 3 are already reflected in the CNP TS Bases of SR 3.8.1.4. There will be no change to the Bases of SR 3.8.1.4.
- Variation 5: CNP calculations that determine minimum required fuel oil volumes do not include the fuel oil volume required to support periodic testing. Instead, the licensee administratively controls fuel oil in support of periodic testing.

- Variation 6: The current CNP Updated Final Safety Analysis Report (UFSAR) does not identify the NRC-approved calculation methodology as discussed in the April 3, 2014, NRC letter to the TSTF.

2.4 Applicable Regulatory Requirements and Guidance

2.4.1 Regulatory Requirements

The regulations in 10 CFR 50.90 state that whenever a holder of an operating license desires to amend the license, including TSs in the license, an application for amendment must be filed with the Commission fully describing the changes desired. The regulations at 10 CFR 50.92(a) state that determinations on whether to grant an applied for license amendment are guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate. Both the common standards for licenses in 10 CFR 50.40(a) (regarding, among other things, consideration of the operating procedures, the facility and equipment, the use of the facility, and other TSs, or the proposals) and those specifically for issuance of operating licenses in 10 CFR 50.57(a)(3), provide that there must be reasonable assurance that the activities at issue will not endanger the health and safety of the public, and that the applicant will comply with the Commission's regulations.

The regulation in 10 CFR 50.36, "Technical specifications," provides the regulatory requirements for the content of the TS. It requires, in part, that a summary statement of the bases for such specifications shall be included by applicants for a license authorizing operation of a production or utilization facility. Specifically, 10 CFR 50.36(c) requires that TS include items in five specific categories related to station operation. These categories are (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) SRs; (4) design features; and (5) administrative controls.

The regulation in 10 CFR 50.36(c)(2)(i), "Limiting conditions for operation," states, in part, that TS will include LCOs, which are "the lowest functional capability or performance levels of equipment required for safe operation of the facility." Section 50.36(c)(2)(i) further states that "[w]hen a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met."

The regulation in 10 CFR 50.36(c)(3), "Surveillance requirements," states that "[s]urveillance requirements 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."

2.4.2 Guidance

Regulatory Guide (RG) 1.137, Revision 1, "Fuel-Oil Systems for Standby Diesel Generators" (ML003740180), provides guidance that describes a method acceptable to the NRC staff for complying with the Commission's regulations regarding fuel oil systems for standby DGs and endorses American National Standards Institute (ANSI) N195-1976, "Fuel Oil Systems for Standby Diesel Generators," with certain limitations. RG 1.137, Section C.1.c sets forth two methods for the calculation of fuel oil storage requirements as described in ANSI N195-1976, Section 5.4 "Calculation of Fuel Oil Storage Requirements." These methods are: (1) calculations based on the assumption that the DG operates continuously for 7 days at its rated capacity, and (2) calculations based on the time-dependent loads of the DG. If the

time-dependent load method is used, the minimum required capacity should include the capacity to power engineered safety features.

The NRC-approved traveler TSTF-501, Revision 1, provides an acceptable method of modifying the stored fuel oil and lube oil requirements contained in the standard TS. Though the TSTF-501 traveler was developed based on changes to Revision 3 of NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," the NRC staff's review of this LAR includes consideration of whether the proposed changes are consistent with the latest revision. NUREG-1431, Revision 5, "Standard Technical Specifications for Westinghouse Plants" (ML21259A155), provides example TS LCOs and acceptable remedial actions that meet the requirements in 10 CFR 50.36(c)(2)(i) for a standard plant design.

3.0 TECHNICAL EVALUATION

The licensee assessed the model safety evaluation (SE) (ML100850069), which was published in the *Federal Register* on May 26, 2010 (75 FR 29588), as part of the CLIIP notice of availability as well as the identification and resolution of issues regarding plant-specific adoption of TSTF-501 in the April 3, 2014, letter from the NRC (ML14084A512). The licensee concluded, as stated in the Enclosure to the LAR, that the justifications presented in the model SE are applicable to CNP, and justify the proposed changes.

3.1 NRC Staff Evaluation of Proposed Changes to TS 3.8.3 Actions Table Condition A

Each DG is provided with a fuel oil capacity sufficient to operate that DG for a period of 7 days. This onsite fuel oil capacity is sufficient to operate the DG long enough to place CNP in a shutdown condition and to bring in replenishment fuel oil from offsite sources.

Currently, Condition A of TS 3.8.3 is entered when the fuel oil volume requirement is not met. The current TS Bases state that the numerical volume requirement in Condition A is based on a volume that is less than a 7-day supply, but at least a 6-day supply. The proposed change would modify Condition A by replacing the numerical volume requirements with duration-based diesel operating time requirements, such that Condition A is entered when the stored fuel oil inventory is less than a 7-day supply, but greater than a 6-day supply for one or more DGs. No other parts of Condition A are proposed to be modified.

The standby AC power sources (i.e., the DGs), are a part of the primary success path and function or actuate to mitigate a design-basis accident or transient that either assumes the failure of, or presents a challenge to the integrity of, a fission product barrier. Requirements for diesel fuel oil supplies are retained in the TS under 10 CFR 50.36(c)(2)(i) because they support the operation of the standby AC power sources.

As described in Section 3.2 below, the licensee stated in the LAR that the stored diesel fuel oil numerical volumes sufficient to meet the duration-based operating time requirements will be calculated using ANSI N195-1976, and the volumes are based on DG manufacturer's consumption values for the run-time of the DGs. The use of this methodology will ensure that the supplies of stored diesel fuel oil for each DG that dictate condition entry will continue to be calculated in accordance with NRC-approved methods.

Based on the above evaluation, the NRC staff finds that the changes to the TS 3.8.3 Actions table, Condition A, are acceptable because they remain consistent with the requirements in

10 CFR 50.36(c)(2)(i) by providing the conditions and remedial actions for when LCO 3.8.3 is not met.

3.2 NRC Staff Evaluation of Proposed Changes to SRs 3.8.3.1 and 3.8.1.4

Currently, SR 3.8.3.1 requires the licensee to verify that the stored diesel fuel oil numerical volume requirements are met. SR 3.8.1.4 requires the licensee to verify that each day tank contains the required volume of diesel fuel oil.

The licensee proposed to revise SR 3.8.3.1 to reflect the change from a numerical volume requirement to a duration-based requirement made in TS 3.8.3 Actions table, Condition A. Specifically, SR 3.8.3.1 would be revised to require availability of a 7-day supply of fuel oil for each DG, rather than a specified numerical volume. As a result, SR 3.8.3.1 would require the licensee to verify each DG fuel oil storage tank contains greater than or equal to a 7-day supply of fuel.

The licensee also proposed to revise SR 3.8.1.4, which contains the DG day tank volumetric requirement. The proposed change to SR 3.8.1.4 is similar to the proposed change for SR 3.8.3.1 in that the numerical volume requirements would be replaced with durational requirements. The revised SR 3.8.1.4 would require the licensee to verify that the stored diesel fuel oil volume in each day tank is greater than or equal to a 15-min supply of fuel oil. The licensee's proposed inclusion of changes to the day tank storage requirements in the LAR is identified as Variation 3 in Section 2.2.3 of this SE.

In Enclosure 2 of the LAR, the licensee describes how the volume of fuel oil necessary to support operation of the standby DGs is managed at the site, as follows:

The CNP calculation that determines the minimum required fuel oil volumes to support the operation of a DG for a 7 day TS requirement does not include an explicit allowance for fuel oil consumption due to periodic testing. Instead, the fuel level is administratively controlled in support of required periodic testing, such that the TS require volumes for the fuel oil storage tanks are maintained.

This is identified as Variation 5 in Section 2.2.3 of this SE.

The methodology in ANSI N195-1976 discusses how the stored diesel fuel oil requirement should be calculated based upon the DGs operating at the minimum required capacity for the plant condition that is most limiting for the calculation of such capacity. One method for calculating the stored diesel fuel oil supply in ANSI N195-1976 takes into account the time dependence of DG loads. That is, if DG loads increase or decrease during the event, the load changes should be included in the required fuel oil storage calculation. If the design includes provisions for an operator to supply power to equipment other than the minimum required for the plant condition, such additional loads should be included in the calculation of required fuel oil storage capacity. Revision 1 of RG 1.137 supplements the above by stating that for "the time-dependent load method, the minimum required capacity should include the capacity to power the engineered safety features." A minimum margin of 10 percent shall be added to the calculated storage requirement if the alternate conservative calculation discussed below is not used.

Another method for calculating the stored diesel fuel oil supply, which is more conservative than the time-dependent load method, is to calculate the storage capacity by assuming that the DG

operates continuously for 7 days at its rated capacity. Both calculation methods shall include an explicit allowance for fuel consumption required by periodic testing. This includes the fuel required for operation of the engine at the minimum loads specified by the engine manufacturer. Since both methods described in ANSI N195-1976 are approved for use by the NRC staff in RG 1.137, Revision 1, and the licensee calculates the volume of fuel oil in accordance with RG 1.137, Revision 1, the NRC staff has reasonable assurance that the volume of fuel oil calculated by the licensee will meet the new duration-based limits specified in SR 3.8.3.1 and SR 3.8.1.4.

One variable used in both stored diesel fuel oil calculation methods is the fuel oil consumption rate. The property of diesel fuel oil having the most significant effect on the fuel oil consumption rate is the energy content (heating value) of the fuel oil. Standards exist that correlate the energy content to the fuel oil's American Petroleum Institute (API) gravity or absolute specific gravity. At a minimum, licensees calculate the required fuel oil storage values for their plants assuming the most limiting API gravity or absolute specific gravity, and therefore, the most limiting fuel oil energy content. As long as the fuel oil placed in the storage tank is within the API gravity range or absolute specific gravity range specified by the licensee, the calculations of fuel oil consumption and required stored volume remain valid. Current SR 3.8.3.2 requires new fuel oil to be tested in accordance with, and maintained within the limits of current TS 5.5.11, "Diesel Fuel Oil Testing Program," to verify that the fuel oil's API gravity or absolute specific gravity is within the range assumed in the diesel fuel oil consumption calculations.

The NRC staff finds that the above methods will continue to provide assurance that the necessary quantity and quality of diesel fuel oil will continue to be maintained and calculated in accordance with NRC-approved methods. The method used to calculate the day tank oil volumes is one of the acceptable methods provided in RG 1.137. The NRC staff finds that Variation 3 is acceptable because revising the day tank supply to a duration-based amount continues to provide assurance that the necessary quality of systems and components is maintained; that facility operation will be within safety limits; and that LCO 3.8.1 will be met. The NRC staff finds that Variation 5 is acceptable because the calculation method used to determine the volume of oil required to be controlled is one of the acceptable methods provided in RG 1.137 and continues to provide assurance that the necessary quality of systems and components is maintained, that facility operation will be within the safety limits, and that LCO 3.8.3 will be met because only the calculated volume of oil, less testing volume, is necessary if the DG was used in an accident. Therefore, the NRC staff considers the duration-based changes to SRs 3.8.3.1 and 3.8.1.4 to be acceptable.

Accordingly, the NRC staff finds that the above methods used by the licensee still provide reasonable assurance that the necessary quality of systems and components are maintained, that facility operation will be within safety limits, and that the LCOs will be met, consistent with 10 CFR 50.36(c)(3). Therefore, the changes to SRs 3.8.3.1 and 3.8.1.4 are acceptable.

3.3 Implementation Requirement to Revise the UFSAR

To ensure an acceptable and consistent fuel oil calculation methodology is maintained, the licensee provided a commitment in Enclosure 7 of the LAR to revise the CNP UFSAR with the following information (or equivalent) and to submit the revised description with the next UFSAR update:

The specific Emergency Diesel Generator (EDG) fuel oil volumes contained in the diesel fuel oil storage tank(s) necessary to ensure that EDG run-duration

requirements are met are calculated using Section 5.4 of American National Standards Institute N195- 1976, 'Fuel Oil Systems for Standby Diesel-Generators,' and are based on applying the conservative assumption that the EDG is operated continuously at rated capacity. This fuel oil calculation methodology is one of the two approved methods specified in Regulatory Guide 1.137, Revision 1, 'Fuel Oil Systems for Standby Diesel Generators.' Regulatory Position C.1.c.

The NRC staff finds that licensee control of the fuel oil calculation methodology in the UFSAR is an acceptable method to address Variation 6 because it will continue to adequately ensure public health and safety, as any deviation from the calculation methodology described above requires the licensee to perform an evaluation pursuant to the provisions of 10 CFR 50.59 to determine whether the change requires prior NRC approval. The NRC staff did not rely upon this regulatory commitment in its approval of the proposed changes.

3.4 NRC Staff Evaluation of Licensee-Identified Differences with TSTF-501, Revision 1

The licensee-identified differences with TSTF-501, Revision 1, are described in Section 2.2.3 of this SE. Variations 3 and 5 are dispositioned in Section 3.2 of this SE. Variations 1 and 2 are discussed in this SE section.

Variation 1 noted that the TSTF-501 model application and SE reference lube oil levels in their evaluation and proposed TS changes. However, the licensee explained that CNP TSs applicable to the DGs do not contain lube oil level requirements in the context of this LAR (i.e., adopting TSTF-501), and were, therefore, intentionally excluded from discussion. The NRC staff considers this variation acceptable because the CNP TSs do not contain explicit DG lube oil level requirements and therefore, changes to lube oil level requirements in the context of adopting TSTF-501 are not applicable.

Variation 2 noted that the CNP TSs uses "volume" versus "level" when referring to diesel fuel oil requirements of Condition A of TS 3.8.3, and SR 3.8.3.1. The NRC staff finds that Condition A of TS 3.8.3, and SR 3.8.3.1 wording change is acceptable because it does not substantively alter TS requirements. The licensee stated that this variation is also associated with the TS Bases. TS Bases changes are not subject to NRC approval. For TS Bases changes, see discussion in Section 3.5 of this SE.

3.5 TS Bases Changes

The regulation at 10 CFR 50.36(a)(1) states that a summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the TSs. Consistent with 10 CFR 50.36(a)(1), the licensee submitted corresponding TS Bases changes that provide the reasons for the proposed TSs changes. The licensee makes changes to the CNP TS Bases in accordance with TS 5.5.12, "Technical Specifications (TS) Bases Control Program." This applies to both proposed bases consistent with TSTF-501 and those in Variations 2 and 4, as described in Section 2.2.3 of this SE.

3.6 Technical Conclusion

The proposed changes will continue to require that the appropriate volumes of stored diesel fuel oil be maintained. The proposed changes to TS 3.8.3 Actions table continue to provide assurance that the lowest functional capability or performance levels of equipment required for safe operation of the facility will continue to be met. Condition A of TS 3.8.3 Actions table continues to provide acceptable remedial actions to follow until LCO 3.8.3 can be met. The NRC staff concludes that replacement of the TS numerical value volume requirements with duration-based requirements does not change the current plant configuration or the current basis for fuel oil volume requirements. Therefore, the changes to TS 3.8.3 Actions table will continue to meet 10 CFR 50.36(c)(2) and are acceptable.

In addition, the proposed changes to SRs 3.8.3.1 and 3.8.1.4 continue to provide assurance that the necessary quality of systems and components is maintained, the facility will be within safety limits, and that the associated LCOs will be met. The revised SRs will continue to meet 10 CFR 50.36(c)(3), and are, therefore, acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Michigan official was notified of the proposed issuance of the amendment on June 5, 2025. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 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 that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (February 18, 2025; 90 FR 9742). 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 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: M. Hamm, NRR
D. Scully, NRR

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SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2 - ISSUANCE OF AMENDMENT NOS. 366 AND 347 REGARDING ADOPTION OF TSTF-501, REVISION 1, "RELOCATE STORED FUEL OIL AND LUBE OIL VOLUME VALUES TO LICENSEE CONTROL" (EPID L-2024-LLA-0167) DATED JULY 7, 2025

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