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PNP 2017-035

July 27, 2017

U. S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

SUBJECT: License Amendment Request – Administrative Controls for a Permanently Defueled Condition

Palisades Nuclear Plant
Docket 50-255
Renewed Facility Operating License No. DPR-20

- REFERENCES:
1. Entergy Nuclear Operations, Inc. letter number PNP 2017-001 to NRC, *Certification of Permanent Cessation of Power Operations*, dated January 4, 2017 (ADAMS Accession No. ML17004A062)
 2. Entergy Nuclear Operations, Inc. letter number PNP 2017-010 to NRC, *Program Approval – Certified Fuel Handler Training and Retraining Program*, dated March 28, 2017 (ADAMS Accession No. ML17087A016)

Dear Sir or Madam:

Pursuant to Title 10 of the Code of Federal Regulations, Part 50, Section 90 (10 CFR 50.90), *Application for amendment of license, construction permit, or early site permit*, Entergy Nuclear Operations, Inc. (ENO) hereby requests an amendment to the Renewed Facility Operating License (RFOL) for the Palisades Nuclear Plant (PNP).

In Reference 1, ENO certified to the U.S. Nuclear Regulatory Commission (NRC) that it plans to permanently cease operations of PNP on October 1, 2018. Once certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel are submitted to the NRC in accordance with 10 CFR 50.82, *Termination of license*, paragraphs (a)(1)(i) and (ii), and docketed, the 10 CFR 50, *Domestic Licensing of Production and Utilization Facilities*, license no longer will authorize operation of the reactor or emplacement of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2). Therefore, the reason for this proposed amendment is to modify or remove certain PNP RFOL Appendix A, *Technical Specification* (TS) section requirements to reflect a permanently defueled condition.

Specifically, this request proposes to add definitions to PNP TS Sections 1.0, *Use and Application*, and change the descriptions of staff responsibilities, organization titles, and staff qualification requirements in TS Section 5.0, *Administrative Controls*, to more accurately reflect PNP's permanently defueled condition. Additionally, to support implementation of this amendment, NRC approval of PNP's Certified Fuel Handler Training and Retraining Program, requested by February 15, 2018, is required (Reference 2).

The proposed changes have been evaluated in accordance with 10 CFR 50.91(a), *Notice for public comment*, subparagraph (1), using criteria in 10 CFR 50.92, *Issuance of amendment*, paragraph (c), and it has been determined that the changes involve no significant hazards consideration. The bases for this determination are included in Attachment 1.

ENO requests approval of the proposed license amendment by August 15, 2018, and a 60-day implementation period following the effective date of the amendment. ENO requests the approved amendment become effective following NRC approval of the Certified Fuel Handler Training and Retraining Program (Reference 2) and following submittal of the required 10 CFR 50.82(a)(1)(ii) certification that PNP has been permanently defueled.

Attachment 1 provides a detailed description and evaluation of the proposed change. Attachment 2 contains the proposed RFOL page changes (markup). Attachment 3 contains the proposed revised RFOL pages.

In accordance with 10 CFR 50.91(b), *State consultation*, ENO is notifying the State of Michigan of this proposed license amendment by transmitting a copy of this letter to the designated state official.

Summary of Commitments

This letter identifies no new regulatory commitments and no revision to existing regulatory commitments.

Should you have any questions concerning this letter, or require additional information, please contact Jim Miksa at 269-764-2945.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 27, 2017.

Sincerely,



CFA/jpm

- Attachments:
1. Evaluation of Proposed Operating License Change
 2. Proposed Palisades Nuclear Plant Renewed Facility Operating License Page Changes (markup)
 3. Renewed Facility Operating License Page Change Instructions and Revised Palisades Nuclear Plant Renewed Facility Operating License Pages

cc: Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC
State of Michigan

ATTACHMENT 1
License Amendment Request
Palisades Nuclear Plant
Docket No. 50-255

EVALUATION OF PROPOSED OPERATING LICENSE CHANGE

Subject: Proposed Changes to Technical Specifications Sections 1.0 and 5.0

- 1.0 SUMMARY DESCRIPTION

- 2.0 DETAILED DESCRIPTION
 - 2.1 Reason for the Proposed Change
 - 2.2 Description of the Proposed Change and Basis

- 3.0 REGULATORY EVALUATION
 - 3.1 Applicable Regulatory Requirements/Criteria
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 - 3.4 Conclusion

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- 5.0 REFERENCES

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1.0 SUMMARY DESCRIPTION

On January 4, 2017, Entergy Nuclear Operations, Inc. (ENO) certified to the U.S. Nuclear Regulatory Commission (NRC) that it would permanently cease power operations at Palisades Nuclear Plant (PNP) on October 1, 2018 (Reference 1).

This evaluation supports a request to amend the Renewed Facility Operating License (RFOL) DRP-20 for PNP. The proposed changes would modify and remove certain requirements contained within PNP RFOL, Appendix A, Technical Specifications (TS) Sections 1.0, *Use and Application*, and 5.0, *Administrative Controls*. The changes are needed because upon docketing the certifications for permanent cessation of operations and permanent removal of fuel from the reactor are made, the Title 10, Code of Federal Regulations (CFR), Part 50 (10 CFR 50), *Domestic Licensing of Production and Utilization Facilities*, license for PNP will no longer authorize operation of the reactor or emplacement of fuel in the reactor vessel in accordance with 10 CFR 50.82, *Termination of license*, paragraph (a)(2).

The changes proposed by this amendment, once approved by the NRC, would not be effective until the certification of permanent removal of fuel from the reactor vessel is submitted to the NRC (anticipated in October 2018), and docketed, and the NRC approves the PNP Certified Fuel Handler Training and Retraining Program submitted in Reference 2.

Standard technical specifications for a defueled Combustion Engineering plant do not exist. However, since PNP TS are aligned with NUREG-1432, *Standard Technical Specifications (STS) Combustion Engineering Plants*, for consistency, where possible, the proposed TS wording maintains this alignment with NUREG-1432.

2.0 DETAILED DESCRIPTION

2.1 Reason for the Proposed Change

In Reference 1, ENO certified to the NRC that it plans to permanently cease operations of PNP on October 1, 2018. Once certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel are submitted to the NRC in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and docketed, the 10 CFR 50 license no longer will authorize operation of the reactor or emplacement of fuel in the reactor vessel in accordance with 10 CFR 50.82(a)(2). This license amendment request (LAR) is submitted because certain PNP TS sections will require modification or removal to reflect this permanently defueled condition.

Additionally, by letter dated March 28, 2017 (Reference 2), ENO submitted a Certified Fuel Handler Training and Retraining Program for NRC approval. This proposed LAR, once approved, will require implementation of this program, because it replaces licensed reactor operators with certified fuel handlers (CFH) for the purpose of monitoring, handling, storage and cooling of spent nuclear fuel.

2.2 Description of the Proposed Change and Basis

PNP TS pages containing current wording with proposed wording markups (markup pages) are provided in Attachment 2. TS pages containing the proposed wording (clean pages) are provided in Attachment 3. The specific changes affecting TS Sections 1.0 and 5.0 are described below with a comparison between the current and proposed text, and a basis for each change.

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Proposed changes to TS Section 1.0, USE AND APPLICATION

TS Section 1.1, Definitions	
Current Text	Proposed Text
<p>A term and definition for CERTIFIED FUEL HANDLER is not listed in PNP's current TS.</p>	<p><u>Term</u></p> <p>CERTIFIED FUEL HANDLER</p> <p><u>Definition</u></p> <p>A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training and retraining program required by Specification 5.3.2.</p>
<p>Basis</p> <p>PNP proposes to add a new term and definition for CERTIFIED FUEL HANDLER to TS subsection 1.1, <i>Definitions</i>. The definition of a CERTIFIED FUEL HANDLER is listed in 10 CFR 50.2, <i>Definitions</i>, and is contained in PNP's Certified Fuel Handler Training and Retraining Program that was submitted to the NRC for approval on March 28, 2017 (Reference 2). This term is further used in proposed PNP TS section 5.0, Administrative Controls.</p> <p>The proposed term and definition is consistent with a recently approved license amendment (Reference 5).</p>	
TS Section 1.1, Definitions	
Current Text	Proposed Text
<p>A term and definition for NON-CERTIFIED OPERATOR is not listed in PNP's current TS.</p>	<p><u>Term</u></p> <p>NON-CERTIFIED OPERATOR</p> <p><u>Definition</u></p> <p>A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1.</p>
<p>Basis</p> <p>PNP proposes to add a new term and definition for NON-CERTIFIED OPERATOR to TS subsection 1.1, to ensure consistent application when used to describe operations shift crew composition and operator qualification requirements proposed in PNP TS section 5.0 changes.</p>	

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Basis (continued)

PNP’s proposed wording deviates from industry precedent, as docketed in a recently approved license amendment (Reference 5), by eliminating the qualifier, “but is not a CERTIFIED FUEL HANDLER,” from the definition of a NON-CERTIFIED OPERATOR. This deviation is requested to eliminate a potential conflict with proposed TS section 5.2.2a. that states, “The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.” The proposed TS section 5.2.2.a. wording is consistent with previously approved license amendments.

The proposed definition provides for a clear differentiation between a NON-CERTIFIED OPERATOR and a CERTIFIED FUEL HANDLER because the proposed TS subsections, which provide the qualification requirements for each of the positions, are different (TS 5.3.1 versus TS 5.3.2, respectively). Additionally, it is not necessary for this TS definition to include minimum shift crew staffing because it is already required by the proposed TS 5.2.2a. Therefore, the wording, “but is not a CERTIFIED FUEL HANDLER,” which further differentiates between a NON-CERTIFIED OPERATOR and a CERTIFIED FUEL HANDLER, is not necessary.

Proposed changes to TS Section 5.0, ADMINISTRATIVE CONTROLS

TS Section 5.1, Responsibility	
Current Text	Proposed Text
<p><u>Subsection 5.1.1</u></p> <p>The plant superintendent shall be responsible for overall plant operation and shall delegate in writing the succession for this responsibility during his absence.</p> <p>The plant superintendent or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety.</p>	<p><u>Subsection 5.1.1</u></p> <p>The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession for this responsibility during absences.</p> <p>The plant manager or designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect safe storage and maintenance of spent nuclear fuel.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.1.1 to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Plant superintendent” is replaced with “plant manager,” where the plant manager will be responsible for overall facility operation. This change in position title is administrative because, when the PNP reactor is in a permanently defueled condition, the plant manager will be the senior position at PNP and will be duly authorized by ENO with sufficient authority to carry out the specific responsibilities as 	

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Basis (continued)

described in the proposed TS 5.1.1.

- “Plant operation” is replaced with “facility operation” to clearly differentiate between a plant that is licensed for power production and a facility with a reactor that is permanently defueled.
- The term “his” is deleted. This change is proposed to remove gender specific references from PNP TS wording because the position is gender neutral.
- “Nuclear safety” is replaced with “safe storage and maintenance of spent nuclear fuel,” to more precisely describe that, for a facility in a permanently defueled reactor condition, nuclear safety will focus predominately on ensuring the safe control and management of spent nuclear fuel. Therefore, because the proposed term is a more precise statement of nuclear safety, the two terms are considered essentially analogous.

Based on the above, this change is considered administrative.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.1, Responsibility

Current Text	Proposed Text
<p><u>Subsection 5.1.2</u></p> <p>The Shift Supervisor (SS) shall be responsible for the control room command function. During any absence of the SS from the control room while the plant is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the plant is in MODE 5 or 6 and individual with an active SRO license or Reactor Operator (RO) license shall be designated to assume the control room command function.</p>	<p><u>Subsection 5.1.2</u></p> <p>The shift manager shall be responsible for the shift command function.</p>

Basis

PNP proposes to revise TS subsection 5.1.2 to reflect a permanently defueled reactor condition by changing the following:

- “Shift supervisor” is replaced with “shift manager” to more accurately reflect the senior shift crew position at PNP responsible for overall shift operations. This is considered

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Basis (continued)

an editorial change because NUREG-1432, Volume 1, Standard TSs (STs), which is applicable to operating plants, has this term bracketed which allows for site-specific position title deviations.

- The requirement for a control room (CR) command function and delegation of that function when the shift supervisor is absent from the CR is changed to a shift command function. It is being modified because once PNP is in a permanently defueled condition with fuel in the spent fuel pool (SFP), the majority of activities (e.g., fuel handling) will not rely on the CR, and hence, the number of relevant controls located in the CR are significantly reduced. Also, the gradual nature of abnormal or accident situations (e.g., fuel handling accident, spent fuel cask drop, and failure of tanks containing radioactive liquids) do not warrant that the command function remain in the CR. Communication capabilities are available outside the CR between the operators and facility personnel to safely manage the storage and handling of spent nuclear fuel without reliance on the CR for the command function. The CR will remain the physical center of the command function; however, since control of activities may be performed either remotely from the CR or locally in the plant, the location of the command center is functionally where the shift manager is located.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.2, Organization

Current Text	Proposed Text
<p><u>Subsection 5.2.1, Onsite and Offsite Organizations</u></p> <p>Onsite and offsite organizations shall be established for plant operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the Palisades plant.</p>	<p><u>Subsection 5.2.1, Onsite and Offsite Organizations</u></p> <p>Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage and handling of spent nuclear fuel.</p>

Basis

PNP proposes to revise TS subsection 5.2.1 to reflect a permanently defueled reactor condition by changing the following:

- “Plant operation” is replaced with “facility staff” to clearly differentiate between site staff at a licensed power production plant and site staff at a facility with a reactor that is permanently defueled.
- “Safety of the Palisades plant” is replaced with “safe storage and handling of spent

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Basis (continued)

nuclear fuel” because following the permanent cessation of operations and defueling, staff positions with responsibilities for activities affecting the safety of PNP will now focus predominately on ensuring the safe control and handling of spent nuclear fuel.

This change is administrative in nature because the organizational terms “plant operation” and “safety of the Palisades plant” are considered analogous to “facility staff” and “safe storage and handling of spent nuclear fuel”, respectively, once PNP is in a permanently defueled reactor condition.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.2, Organization

Current Text	Proposed Text
<p><u>Subsection 5.2.1a.</u></p> <p>Lines of authority, responsibility and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented, and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key positions, or in equivalent forms of documentation. These requirements and the plant specific equivalent of those titles referred to in these Technical Specifications shall be documented in the FSAR.</p>	<p><u>Subsection 5.2.1a.</u></p> <p>Lines of authority, responsibility and communication shall be established and defined for the highest management levels through intermediate levels to and including all facility organization positions. These relationships shall be documented, and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key positions, or in equivalent forms of documentation. These requirements and the plant specific equivalent of those titles referred to in these Technical Specifications shall be documented in the FSAR.</p>

Basis

PNP proposes to revise TS subsection 5.2.1a. to reflect a permanently defueled reactor condition by changing the following:

- “Operating organization” is replaced with “facility organization” to clearly differentiate between a site organization at a power production plant and a site organization at a facility with a reactor that is permanently defueled.

This change is administrative in nature because the organizational term “operating” is equivalent to “facility” once PNP is in a permanently defueled reactor condition.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.1b.</u></p> <p>The plant superintendent shall be responsible for overall plant safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.</p>	<p><u>Subsection 5.2.1b.</u></p> <p>The plant manager shall be responsible for overall facility safe operation and shall have control over those onsite activities necessary for safe storage and maintenance of spent nuclear fuel.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.2.1b. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Plant superintendent” is replaced with “plant manager.” This change in position title is administrative because when the PNP reactor is in a permanently defueled condition the plant manager will be the senior position at PNP and will be duly authorized by ENO with sufficient authority to carry out the specific responsibilities as described in the proposed TS 5.1.1. • “Plant safe operation” is replaced with “facility safe operation” to differentiate between a plant that is licensed for power production and a facility with a reactor that is permanently defueled. • “Safe operation and maintenance of the plant” is replaced with “safe storage and maintenance of spent nuclear fuel” to more precisely describe that, for a facility in a permanently defueled reactor condition, nuclear safety will focus predominately on ensuring the safe control and management of spent nuclear fuel. Therefore, because the proposed term is a more precise statement of nuclear safety, the two terms are considered essentially analogous. <p>Based on the above, this change is considered administrative.</p> <p>The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).</p>	

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.1c.</u></p> <p>A specified corporate executive shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the plant to ensure nuclear safety.</p>	<p><u>Subsection 5.2.1c.</u></p> <p>A specified corporate officer shall have corporate responsibility for the safe storage and handling of spent nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the facility to ensure safe management of spent nuclear fuel.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.2.1c. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Corporate executive” is replaced with “corporate officer” to more accurately reflect the senior corporate position responsible for the facility once a permanently defueled reactor condition is certified at PNP. • “Overall plant nuclear safety” is replaced with “the safe storage and handling of spent nuclear fuel” to more precisely describe that for a facility with a permanently defueled reactor, nuclear safety will focus predominately on ensuring the safe control and management of spent nuclear fuel. Therefore, because the proposed term is a more precise statement of nuclear safety, the two terms are considered essentially analogous. • “Support to the plant” is replaced with “support to the facility” to clearly differentiate between a plant that is licensed for power production and a facility with a reactor that is permanently defueled. • “Nuclear safety” is replaced with “safe management of spent nuclear fuel” to more precisely describe that, for a facility with a reactor that is permanently defueled, nuclear safety will focus predominately on ensuring the safe management of spent nuclear fuel. Therefore, because the proposed term is a more precise statement of nuclear safety, the two terms are considered essentially analogous. <p>Based on the above, this change is considered administrative.</p> <p>The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).</p>	

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.1d.</u></p> <p>The individuals who train the operating staff and those who carry out radiation safety and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.</p>	<p><u>Subsection 5.2.1d.</u></p> <p>The individuals who train the CERTIFIED FUEL HANDLERS, carry out radiation protection, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.2.1d. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Operating staff” is replaced with “CERTIFIED FUEL HANDLERS” to more precisely reflect the operations department critical positions once a permanently defueled reactor condition is certified by PNP. • “Radiation safety” is replaced with “radiation protection” change to better align with ENO corporate procedure position titles. Since this is a position title change only, and the position functions remain unchanged, this change is considered editorial. • “Independence from operating pressures” is replaced with “ability to perform their assigned functions” to better align with industry precedent. Since the intent of this statement has not changed, this is considered an equivalent statement, therefore this change is considered editorial. <p>Based on the above, this change is considered administrative.</p> <p>The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).</p>	
TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.2, Plant Staff</u></p> <p>(The current TS have no text under this heading.)</p>	<p><u>Subsection 5.2.2, Plant Staff</u></p> <p>The facility staff organization shall include the following:</p>
<p>Basis</p> <p>The proposed text addition to TS section 5.2.2, clarifies that the subsections that follow list facility staff organization requirements.</p>	

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Basis (continued)

This change is administrative in nature because the intent of the TS requirements is not affected.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.2, Organization

Current Text	Proposed Text
<p><u>Subsection 5.2.2a.</u></p> <p>A non-licensed operator shall be assigned when fuel is in the reactor and an additional non-licensed operator shall be assigned when the reactor is operating in MODES 1, 2, 3, or 4.</p>	<p><u>Subsection 5.2.2a.</u></p> <p>Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.</p>

Basis

PNP proposes to revise TS subsection 5.2.2a. to reflect a permanently defueled reactor condition by changing the following:

This requirement is changed in its entirety from non-licensed operator staffing requirements based on operating plant modes / conditions to operator minimum shift staffing requirements for a permanently defueled reactor. The position titles are also changed to align with proposed TS section 1.1, *Definitions*, changes.

This change is acceptable because it reflects the minimum operator shift staffing based on the reduced number of systems, compared to an operating reactor, that are required to provide and support spent fuel pool cooling and monitor spent fuel pool parameters, such as spent fuel pool level and temperature, while still maintaining the ability to ensure spent fuel handling operations are carried out in a safe manner. Moreover, the spectrum of credible accidents and operational events, and the quantity and complexity of activities required for safety will be greatly reduced from that at an operating plant. The shift manager will be qualified as a CERTIFIED FUEL HANDLER in accordance with proposed TS 5.2.2f. In this position, this individual will retain command and control responsibility for operational decisions and will be responsible for the functions required for event reporting and emergency response as required by proposed TS 5.1.2.

The proposed wording is consistent with previously proposed and approved industry submittals (References 3 through 7).

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.2b.</u></p> <p>(Deleted)</p>	<p><u>Subsection 5.2.2b.</u></p> <p>Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.2.2b. to reflect a permanently defueled reactor condition by adding a requirement that “Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.”</p> <p>This new requirement ensures that movement of spent nuclear fuel is only performed under the oversight of an individual who has been trained and qualified on the procedures, processes, requirements and standards for safe movement of spent nuclear fuel per proposed TS 5.3.2. Additionally, the term “oversight” of fuel handling operations refers to the authorization from the shift manager / CERTIFIED FUEL HANDLER to move fuel. This aligns with proposed TS 5.2.2f., which requires the shift manager to be a CERTIFIED FUEL HANDLER.</p> <p>The proposed wording is consistent with previously proposed and approved industry submittals (References 3 through 7).</p>	
TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.2c.</u></p> <p>Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i), and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the requirements.</p>	<p><u>Subsection 5.2.2c.</u></p> <p>Shift crew composition may be less than the minimum requirement of 5.2.2a. for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements and all the following are met:</p> <ol style="list-style-type: none"> 1) No fuel movements are in progress, and 2) No movement of loads over fuel are in progress, and 3) No unmanned shift positions during shift turnover shall be permitted due to an incoming shift crew member being late or absent.

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Basis

PNP proposes to revise TS subsection 5.2.2c. to reflect a permanently defueled reactor condition by changing the following:

- The minimum shift crew composition specified in 10 CFR 50.54(m)(2)(i), current TS 5.2.2a. and current TS 5.2.2g. will be replaced with the minimum shift crew requirements for a defueled reactor as specified in proposed TS 5.2.2a.
- Three limitations during periods when minimum shift crew composition is not met are added. (i.e., no fuel movements are in progress, and no movement of loads over fuel are in progress, and no unmanned shift positions during shift turnover shall be permitted due to an incoming shift crew member being late or absent.)

Following PNP certification that fuel has been removed from the reactor as required by 10 CFR 50.82(a)(1)(ii), PNP will no longer be authorized to operate or load fuel in the reactor vessel, and the requirements for licensed operators as stated in 10 CFR 50.54(m) are no longer applicable. Therefore, replacement of the licensed operator requirements of 10 CFR 50.54(m)(2)(i), and current TS 5.2.2g., with minimum shift composition for a defueled reactor facility that is provided in proposed TS 5.2.2a., is acceptable.

Restricting fuel movements and movements of loads over fuel during periods when less than the minimal shift crew composition is met ensures that proper oversight and response to unanticipated incidents is maintained during these activities. Finally, placing a restriction on maintaining crew composition during turnover prevents intentionally reducing crew composition below the minimum requirement. For example, the restriction would prevent an outgoing shift crew member from leaving the facility prior to an incoming shift crew member's arrival.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.2, Organization

Current Text	Proposed Text
<p><u>Subsection 5.2.2d.</u></p> <p>A radiation safety technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.</p>	<p><u>Subsection 5.2.2d.</u></p> <p>A radiation protection technician shall be on site during the movement of fuel and during the movement of loads over fuel. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.</p>

Basis

PNP proposes to revise TS subsection 5.2.2d. to reflect a permanently defueled reactor condition by changing the following:

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Basis (continued)

- “Radiation safety technician” is replaced with “radiation protection technician” to better align with ENO corporate procedure position titles. Since this is a position title change only, and the position functions remain unchanged, this change is considered editorial.
- “When fuel is in the reactor” is replaced with “during the movement of spent fuel and during the movement of loads over spent fuel” because, once PNP certifies, per 10 CFR 50.82(a)(ii), that fuel has been permanently removed from the reactor vessel, current TS wording will no longer require a radiation protection technician to be on site. However, a radiation protection technician is still required at a defueled facility when activities involving movement of spent nuclear fuel or movement of loads over spent nuclear fuel are being performed. Therefore, it is proposed that this requirement is retained but is restricted to times when spent nuclear fuel is being moved or during movement of loads over spent nuclear fuel.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.2, Organization

Current Text	Proposed Text
<p><u>Subsection 5.2.2e.</u></p> <p>Not Used</p>	<p><u>Subsection 5.2.2e.</u></p> <p>At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.</p>

Basis

PNP proposes to add a new requirement that “At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.” to TS subsection 5.2.2e.

Adding this requirement ensures that the primary functions of the control room at a permanently shutdown reactor, such as monitoring plant systems, response to abnormal conditions, communications with onsite personnel and offsite agencies, emergency response, and coordination of facility activities, will be maintained at all times when fuel is stored in the spent fuel pool.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.2f.</u></p> <p>The operations manager or an assistant operations manager shall hold an SRO license. The individual holding the SRO license shall be responsible for directing the activities of the licensed operators.</p>	<p><u>Subsection 5.2.2f.</u></p> <p>The shift manager shall be a CERTIFIED FUEL HANDLER.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.2.2f. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • The requirement for a single senior licensed operator position at the site is removed and is replaced with “The shift manager shall be a CERTIFIED FUEL HANDLER.” <p>Once ENO has certified that fuel has been permanently removed from the PNP reactor, licensed operators, including a senior license holder, are no longer required as specified in 10 CFR Part 55, <i>Operator’s Licenses</i>. Therefore, there is no longer a need for operations management staff to hold a SRO license. Replacing this with a requirement that a shift manager be a CERTIFIED FUEL HANDLER ensures that the senior individual directing activities on shift is appropriately trained and qualified in accordance with an NRC approved Certified Fuel Handler Training and Retraining Program.</p> <p>The PNP management structure will not require positions above the shift manager to be a CERTIFIED FUEL HANDLER or attend equivalent training. ENO has determined that once the plant is permanently shutdown and defueled, the time available to mitigate credible events is expected to be greater than that for current design basis events. As such, management oversight of the facility can be performed by individuals meeting the applicable requirements of American National Standards Institute (ANSI) / American Nuclear Society (ANS) 3.1-1978 (as required by TS 5.3.1) and need not be qualified as CERTIFIED FUEL HANDLERS.</p> <p>The proposed wording is consistent with previously proposed and approved industry submittals (References 3 through 7).</p>	

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TS Section 5.2, Organization	
Current Text	Proposed Text
<p><u>Subsection 5.2.2g.</u></p> <p>When in MODES 1, 2, 3, or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the plant. This individual shall meet the qualifications specified by ANSI/ANS 3.1–1993 as endorsed by RG 1.8, Rev. 3, 2000.</p>	<p><u>Subsection 5.2.2g.</u></p> <p>(Deleted)</p>
<p>Basis</p> <p>PNP proposes to delete TS subsection 5.2.2g., to reflect a permanently defueled reactor condition by removing the requirement for an individual to provide technical support (Shift Technical Advisor (STA)) which is plant operating mode dependent.</p> <p>TS 5.2.2g. establishes the requirements for the STA position. The basis for deleting this subsection is that the STA position is only required for a plant authorized for power operations. Once PNP certifies, per 10 CFR 50.82(a)(ii), that fuel has been permanently removed from the reactor vessel, PNP’s license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel.</p> <p>The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).</p>	

TS Section 5.3, Plant Staff Qualifications	
Current Text	Proposed Text
<p><u>Subsection 5.3.1</u></p> <p>Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Entergy Quality Assurance Program Manual (QAPM).</p>	<p><u>Subsection 5.3.1</u></p> <p>Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Quality Assurance Program Manual (QAPM).</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.3.1 to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Plant staff” is replaced with “facility staff” to clearly differentiate between site staff at 	

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Basis (continued)

a licensed power production plant and site staff at a facility with a permanently defueled reactor.

- “Entergy” is deleted as a descriptor of the Quality Assurance Program Manual (QAPM) to allow PNP to transition to a site-specific QAPM during the decommissioning process.

This proposed TS wording changes are considered administrative because the organizational term “plant staff” is analogous to “facility staff” and a NRC approved QAPM will still be required regardless if it is an Entergy corporate QAPM or a PNP site-specific QAPM.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.3, Plant Staff Qualifications

Current Text	Proposed Text
<p><u>Subsection 5.3.2</u></p> <p>(Deleted)</p>	<p><u>Subsection 5.3.2</u></p> <p>A NRC approved training and retraining program for CERTIFIED FUEL HANDLERs shall be maintained.</p>

Basis

PNP proposes to add a new requirement to TS subsection 5.3 for maintaining an approved training and retraining program for CERTIFIED FUEL HANDLERs.

The Certified Fuel Handler Training and Retraining Program will ensure that CERTIFIED FUEL HANDLER qualifications are commensurate with the tasks to be performed and the conditions requiring CERTIFIED FUEL HANDLER response actions. Regulation 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," requires training programs to be derived using a systems approach to training (SAT) as defined in 10 CFR 55.4. Although the requirements of 10 CFR 50.120 apply to holders of an operating license issued under 10 CFR Part 50, and the PNP license will no longer authorize operation following docketing of the certifications required by 10 CFR 50.82(a)(1), the Certified Fuel Handler Training and Retraining Program nonetheless aligns with those requirements. The Certified Fuel Handler Training and Retraining Program provides confidence that appropriate SAT based training of personnel who will perform the duties of a CERTIFIED FUEL HANDLER is conducted to ensure the safe storage and handling of spent nuclear fuel.

To support implementation of this proposed change, PNP’s Certified Fuel Handler Training and Retraining Program was submitted to the NRC on March 28, 2017 for approval (Reference 2).

The proposed wording is consistent with previously proposed and approved license

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Basis (continued)	
amendments (References 3 through 7).	
TS Section 5.3, Plant Staff Qualifications	
Current Text	Proposed Text
<u>Subsection 5.3.5</u> For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).	<u>Subsection 5.3.5</u> (Deleted)
Basis	
<p>PNP proposes to delete the requirements that licensed operators perform the functions described in 10 CFR 50.54(m).</p> <p>Once PNP certifies under 10 CFR 50.82(a)(1) that fuel has been permanently removed from the reactor, PNP will no longer be required to have operators licensed pursuant to 10 CFR Part 55, <i>Operator's Licenses</i>, at PNP, and therefore, 10 CFR 50.54(m) functions would no longer apply.</p> <p>Deletion of this requirement is consistent with previously proposed and approved license amendments (References 3 through 7).</p>	

TS Section 5.4, Procedures	
Current Text	Proposed Text
<u>Subsection 5.4.1a.</u> The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.	<u>Subsection 5.4.1a.</u> The procedures applicable to the safe storage of spent nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.
Basis	
<p>PNP proposes to revise TS subsection 5.4.1a. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • The qualifier, “procedures applicable to the safe storage of spent nuclear fuel” is added to limit the procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978 to those applicable to the safe storage of spent nuclear fuel. 	

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Basis (continued)

Once PNP certifies per 10 CFR 50.82(a)(1) that fuel has been permanently removed from the reactor, operating and refueling the reactor will both be prohibited by the 10 CFR Part 50 license, and therefore procedures associated with these activities will no longer need to be maintained. Procedures governing fuel handling operations will provide the guidance necessary to ensure safe handling and storage of spent fuel in the spent fuel pool and to transfer spent fuel from the spent fuel pool to dry fuel storage casks. Procedures governing responses to fuel handling accidents, spent fuel pool events and external events provide the necessary guidance to mitigate the consequences of such events.

The proposed wording is consistent with previously proposed and approved license amendments (References 3 through 7).

TS Section 5.4, Procedures

Current Text	Proposed Text
<p><u>Subsection 5.4.1b.</u></p> <p>The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;</p>	<p><u>Subsection 5.4.1b.</u></p> <p>(Deleted)</p>

Basis

PNP proposes to delete the requirements that emergency operating procedures are required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33.

Current TS 5.4.1b. requires emergency operating procedures that implement the requirements of NUREG-0737, *Clarification of TMI Action Plan Requirements*, and NUREG-0737, Supplement 1, *Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capability*, as stated in Generic Letter (GL) 82-33, Supplement 1 to NUREG-0737 – *Requirements for Emergency Response Capability*. GL 82-33 was only addressed to licensees of operating reactors, applicants for operating licenses, and holders of construction permits, none of which would apply once PNP certifies that fuel has been permanently removed from the reactor.

The deletion of this wording is consistent with previously proposed and approved license amendments (References 3 through 7).

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TS Section 5.5, Programs and Manuals	
Current Text	Proposed Text
<p><u>Subsection 5.5.1c.2.</u></p> <p>Shall become effective after approval by the plant superintendent.</p>	<p><u>Subsection 5.5.1c.2.</u></p> <p>Shall become effective after approval by the plant manager.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.5.1c.2. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Plant superintendent” is replaced with “plant manager.” This change in position title is administrative because when the PNP reactor is in a permanently defueled condition the plant manager will be the senior position at PNP. <p>The use of the position title plant manager is consistent with STS and with previously proposed and approved license amendments for plants transitioning to a decommissioning facility (References 3 through 7).</p>	
TS Section 5.5, Programs and Manuals	
Current Text	Proposed Text
<p><u>Subsection 5.5.15b.2.</u></p> <p>Shall become effective after approval by the plant superintendent.</p>	<p><u>Subsection 5.5.15b.2.</u></p> <p>Shall become effective after approval by the plant manager.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.5.15b.2. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Plant superintendent” is replaced with “plant manager.” This change in position title is administrative because when the PNP reactor is in a permanently defueled condition the plant manager will be the senior position at PNP. <p>The use of the position title plant manager is consistent with STS and with previously proposed and approved license amendments for plants transitioning to a decommissioning facility (References 3 through 7).</p>	

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TS Section 5.7, High Radiation Area	
Current Text	Proposed Text
<p><u>Subsection 5.7.2a.1.</u></p> <p>All such door and gate keys shall be maintained under the administrative control of the shift supervisor, radiation protection manager, or his or her designee.</p>	<p><u>Subsection 5.7.2a.1.</u></p> <p>All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designee.</p>
<p>Basis</p> <p>PNP proposes to revise TS subsection 5.7.2a.1. to reflect a permanently defueled reactor condition by changing the following:</p> <ul style="list-style-type: none"> • “Shift supervisor” is replaced with “shift manager” because the position title shift supervisor for an operating reactor is equivalent to the position title shift manager for a permanently defueled reactor. Therefore this title change is considered administrative. <p>The proposed wording is consistent with previously proposed and approved license amendments. (References 3 through 7).</p>	

3.0 REGULATORY EVALUATION

3.1 Applicable Regulatory Requirements/Criteria

10 CFR 50.82(a)(1) requires that when a licensee has determined to permanently cease operations, the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of 10 CFR 50.4(b)(8), *Certification of permanent cessation of operations*, and once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of 10 CFR 50.4(b)(9), *Certification of permanent fuel removal*. On January 4, 2017, ENO certified to the NRC that PNP would permanently cease operations on October 1, 2018 (Reference 1). ENO recognizes that issuance of these proposed changes is contingent upon the submittal of the certifications required by 10 CFR 50.82(a)(1).

10 CFR 50.82(a)(2) states: “Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.”

10 CFR 50.36, *Technical specifications*, establishes the requirements for TS. Regulation 10 CFR 50.36(c)(5), *Administrative controls*, identifies that an administrative controls section shall be included in the TS and shall include provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. This license amendment request is proposing changes

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to the Administrative Controls section, with conforming changes proposed to additional sections, consistent with the pending decommissioning status of the plant. This request applies the principles identified in 10 CFR 50.36(c)(6), *Decommissioning*, to a facility which has submitted certifications required by 50.82(a)(1) and proposes changes to the Administrative Controls section appropriate for the PNP permanently defueled condition. As 10 CFR 50.36(c)(6) states, this type of change should be considered on a case-by-case basis.

10 CFR 50.54(m) establishes the requirements for having reactor operators and senior reactor operators (SROs) licensed in accordance with 10 CFR 55 based on plant conditions. Given the permanent cessation of operation for PNP, the requirements of this section will no longer apply once the certifications required by 10 CFR 50.82(a)(1) have been docketed, and it will be permissible to remove those positions from the TS.

10 CFR 50.120, *Training and qualification of nuclear power plant personnel*, requires the use of a systems approach to training (SAT) for personnel positions, including certified fuel handlers.

3.2 Precedent

The proposed changes are consistent with the following ENO and industry proposed TS amendments and approved TS amendments to administrative controls requirements for a permanently defueled reactor:

- James A. Fitzpatrick Nuclear Power Plant (JAF), letter number (JAFP-15-0143), *Revision to Technical Specification Administrative Controls for Permanently Defueled Condition*, submitted to the NRC for approval on January 15, 2016, as supplemented by responses to NRC requests for additional information, JAF letter number JAFP-16-0077, dated June 3, 2016, and JAF letter number JAFP-16-0142, dated September 19, 2016 (References 3, 6, 7).
- Vermont Yankee Nuclear Power Station (VY) Amendment 260, *Changes to the Administrative Controls Section of the Technical Specifications*, dated December 22, 2014 (Reference 4).
- Oyster Creek Nuclear Generating Station (OCNGS) Amendment 290, *Changes to the Administrative Controls Section of the Technical Specifications*, dated March 7, 2017 (Reference 5).

3.3 No Significant Hazards Consideration Determination Analysis

Pursuant to Title 10 of the Code of Federal Regulations, Part 50, Section 92 (10 CFR 50.92), *Issuance of amendment*, Entergy Nuclear Operations, Inc. (ENO) has reviewed the proposed changes and concludes that the changes do not involve a significant hazards consideration since the proposed changes satisfy the criteria in 10 CFR 50.92(c). These criteria require that operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

The proposed changes would revise and remove certain requirements contained within Sections 1.0 (Definitions) and 5.0 (Administrative Controls) of the Palisades Nuclear Plant

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(PNP) Renewed Facility Operating License (RFOL) DPR-20, Appendix A, *Technical Specifications* (TS). The TS requirements being changed would not be applicable until the PNP Certified Fuel Handler Training and Retraining Program has been approved by the United States Nuclear Regulatory Commission (NRC) and ENO has certified that that all fuel has been permanently removed from the PNP reactor. Once the certifications for permanent cessation of operations and permanent removal of fuel from the reactor have been docketed, the 10 CFR 50 license for PNP will no longer authorize operation of the reactor or emplacement of fuel in the reactor vessel in accordance with 10 CFR 50.82, *Termination of license*, paragraph (a)(2). The discussion below addresses each of the no significant hazards criteria and demonstrates that the proposed amendment does not constitute a significant hazard.

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendment would not take effect until the PNP Certified Fuel Handler Training and Retraining Program has been approved by the NRC, and PNP has permanently ceased operation and entered a permanently defueled condition. The proposed changes would revise the PNP TS by modifying the definitions, in TS Section 1.0, and administrative controls, in TS Section 5.0, to correspond to the permanently defueled condition. Additionally, certain portions of the administrative control sections are deleted because they are no longer applicable to a permanently defueled facility.

The proposed deletion and modification of provisions of the administrative controls do not directly affect the design of structures, systems, and components (SSCs) necessary for safe storage of spent nuclear fuel or the methods used for handling and storage of such fuel in the spent fuel pool (SFP). The proposed changes to the administrative controls are administrative in nature and do not affect any accidents applicable to the safe management of spent nuclear fuel or the permanently shutdown and defueled condition of the reactor. Thus, the consequences of an accident previously evaluated are not increased.

In a permanently defueled condition, the only credible accidents are the fuel handling accident (FHA), the failure of tanks containing radioactive liquids, and a spent fuel cask drop accident. The probability of occurrence of previously evaluated accidents is not increased, because extended operation in a permanently defueled condition will be the only operation allowed. This mode of operation is bounded by the existing analyses. Additionally, the occurrence of postulated accidents associated with reactor operation are no longer credible in a permanently defueled reactor. This significantly reduces the scope of applicable accidents.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

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The proposed amendment has no impact on facility systems, structures, and components (SSCs) affecting the safe storage of spent nuclear fuel, or on the methods of operation of such SSCs, or on the handling and storage of spent nuclear fuel itself. The proposed amendment does not result in different or more adverse failure modes or accidents than previously evaluated because the reactor will be permanently shutdown and defueled, and PNP will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

The proposed amendment does not affect systems credited in the PNP accident analysis for a FHA, or for mitigating accident releases from the failure of tanks containing radioactive liquids or from a spent fuel cask drop. The proposed changes will continue to require proper control and monitoring of safety significant parameters and activities.

The proposed amendment does not result in any new mechanisms that could damage the remaining relevant safety barriers that support maintaining the plant in a permanently shutdown and defueled condition (e.g., fuel cladding and SFP cooling). Since extended operation in a defueled condition will be the only operation allowed, and this condition is bounded by existing analyses, such a condition does not create the possibility of a new or different kind of accident.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment involves deleting and/or modifying certain TS requirements once the PNP has been permanently shutdown and defueled. As specified in 10 CFR 50.82(a)(2), the 10 CFR 50 license for PNP will no longer authorize operation of the reactor or emplacement or retention of fuel into the reactor vessel following submittal of the certifications required by 10 CFR 50.82(a)(1). Therefore, the occurrence of postulated accidents associated with reactor operation are no longer credible.

The only remaining credible accidents are the fuel handling accident (FHA), the failure of tanks containing radioactive liquids, and a spent fuel cask drop accident. The proposed amendment does not adversely affect the inputs or assumptions of any of the design basis analyses that impact these analyzed conditions.

The proposed changes are limited to those portions of the TS that are not related to the SSCs that are important to the safe storage of spent nuclear fuel. The requirements that are proposed to be revised or deleted from the PNP TS are not credited in the existing accident analysis for the remaining applicable postulated accidents, and as such, do not contribute to the margin of safety associated with the accident analysis. Postulated design basis accidents involving the reactor are no longer possible because the reactor will be permanently shutdown and defueled, and PNP will no longer be authorized to operate the reactor or retain or place fuel in the reactor vessel.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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Based on the above, ENO concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

3.4 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) 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.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment request meets the eligibility criteria for categorical exclusion from environmental review set forth in 10 CFR 51, *Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions*, General Provisions Section 22, *Preliminary Procedures; Classification of Licensing and Regulatory Actions; Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review*, paragraph (c)(9) (10 CFR 51.22(c)(9)), as follows:

- (i) The amendment involves no significant hazards consideration.

As described in Section 3.3 of this evaluation, the proposed change involves no significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed amendment does not involve any physical alterations to the facility configuration that could lead to a change in the type or amount of effluent released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above, ENO concludes that the proposed change meets the eligibility criteria for categorical exclusion as 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 this amendment.

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5.0 REFERENCES

1. Entergy Nuclear Operations, Inc. letter number PNP 2017-001 to NRC, *Certification of Permanent Cessation of Power Operations*, dated January 4, 2017 (ADAMS Accession No. ML17004A062)
2. Entergy Nuclear Operations, Inc. letter number PNP 2017-010 to NRC, *Program Approval – Certified Fuel Handler Training and Retraining Program*, dated March 28, 2017 (ADAMS Accession No. ML17087A016)
3. Entergy Nuclear Operations, Inc., letter number JAFP-15-0143 to NRC, *License Amendment Request – Revision to technical Specification Administrative Controls for Permanently Defueled Condition*, dated January 15, 2016 (ADAMS Accession No. ML16015A456)
4. NRC letter to Entergy Nuclear Operations, Inc., *Vermont Yankee Nuclear Power Station – Issuance of Amendment to Renewed Facility Operating License Re: Changes to the Administrative Controls Section of the Technical Specifications (TAC No. MF2991)*, dated December 22, 2014 (ADAMS Accession No. ML14217A072)
5. NRC letter to Exelon Generation Company, LLC., *Oyster Creek Nuclear Generating Station – Issuance of Amendment Regarding Changes to the Administrative Controls Section of the Technical Specifications (CAC No. MF8108)*, dated March 7, 2017 (ADAMS Accession No. ML16235A413)
6. Entergy Nuclear Operations, Inc. letter number JAFP-16-0077 to NRC, *Response to Request for Additional Information (RAI) Regarding Revision to Technical Specification (TS) Administrative Controls for Staffing and Training Upon Permanent Cessation of Operation (CAC No. MF7280) – Supplement 1*, dated June 3, 2016 (ADAMS Accession No. ML16155A326)
7. Entergy Nuclear Operations, Inc. letter number JAFP-16-0142 to NRC, *Revision to Technical Specification (TS) Administrative Controls for Staffing and Training Upon Permanent Cessation of Operation (CAC No. MF7280) – Supplement 2*, dated September 19, 2016 (ADAMS Accession No. ML16263A237)

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ATTACHMENT 2

**Proposed Palisades Nuclear Plant
Renewed Facility Operating License Page Changes (markup)**

(showing proposed changes; additions are highlighted and deletions are strikethrough)

13 pages follow

- (1) Pursuant to Section 104b of the Act, as amended, and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," (a) ENP to possess and use, and (b) ENO to possess, use and operate, the facility as a utilization facility at the designated location in Van Buren County, Michigan, in accordance with the procedures and limitation set forth in this license;
 - (2) ENO, pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
 - (3) ENO, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use byproduct, source, and special nuclear material as sealed sources for reactor startup, reactor instrumentation, radiation monitoring equipment calibration, and fission detectors in amounts as required;
 - (4) ENO, 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 for sample analysis or instrument calibration, or associated with radioactive apparatus or components; and
 - (5) ENO, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operations of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations in 10 CFR Chapter I and is subject to all applicable provisions of the Act; 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) ENO is authorized to operate the facility at steady-state reactor core power levels not in excess of 2565.4 Megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.
 - (2) The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~263XXX~~, and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. ENO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (3) Fire Protection

ENO 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 license amendment request dated December 12, 2012, as supplemented by letters dated February 21, 2013, September 30, 2013, October 24, 2013, December 2, 2013, April 2, 2014, May 7, 2014, June 17, 2014, August

1.0 USE AND APPLICATION

1.1 Definitions

-----NOTE-----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

<u>Term</u>	<u>Definition</u>
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AVERAGE DISINTEGRATION ENERGY - \bar{E}	\bar{E} shall be the average (weighted in proportion to the concentration of each radionuclide in the primary coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes, making up at least 95% of the total noniodine activity in the coolant.
AXIAL OFFSET (AO)	AO shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core (determined using the incore monitoring system).
AXIAL SHAPE INDEX (ASI)	ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core (determined using the excore monitoring system).
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training and retraining program required by Specification 5.3.2.

1.1 Definitions

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except Primary Coolant Pump seal water leakoff), that is captured and conducted to collection systems or a sump or collecting tank;
2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known not to interfere with the operation of leakage detection systems and not to be pressure boundary LEAKAGE; and
3. Primary Coolant System (PCS) LEAKAGE through a Steam Generator to the Secondary System (primary to secondary LEAKAGE).

b. Unidentified LEAKAGE

All LEAKAGE (except Primary Coolant Pump seal leakoff) that is not identified LEAKAGE;

c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an PCS component body, pipe wall, or vessel wall.

MODE

A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average primary coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

NON-CERTIFIED OPERATOR

A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1.

1.1 Definitions

OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	<p>PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:</p> <ol style="list-style-type: none"> Described in Chapter 13, Initial Tests and Operation, of the FSAR; Authorized under the provisions of 10 CFR 50.59; or Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT (T_q)	T_q shall be the maximum positive ratio of the power generated in any quadrant minus the average quadrant power, to the average quadrant power.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the primary coolant of 2565.4 MWt.
REFUELING BORON CONCENTRATION	REFUELING BORON CONCENTRATION shall be a Primary Coolant System boron concentration of ≥ 1720 ppm and sufficient to assure the reactor is subcritical by $\geq 5\%$ $\Delta\rho$ with all control rods withdrawn.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

1.1 Definitions

SHUTDOWN MARGIN (SDM)
(continued)

a. All full length control rods (shutdown and regulating) are fully inserted except for the single rod of highest reactivity worth, which is assumed to be fully withdrawn. However, with all full length control rods verified fully inserted by two independent means, it is not necessary to account for a stuck rod in the SDM calculation. With any full length control rods not capable of being fully inserted, the reactivity worth of these rods must be accounted for in the determination of SDM; and

b. There is no change in part length rod position.

STAGGERED TEST BASIS

A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.

THERMAL POWER

THERMAL POWER shall be the total reactor core heat transfer rate to the primary coolant.

TOTAL RADIAL PEAKING FACTOR (F_R^T)

F_R^T shall be the maximum ratio of the individual fuel pin power to the core average pin power integrated over the total core height, including tilt.

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant ~~superintendent~~ **manager** shall be responsible for overall ~~plant~~ **facility** operation and shall delegate in writing the succession for this responsibility during ~~his~~ absences.

The plant ~~superintendent~~ **manager** or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect **safe storage and maintenance of spent** nuclear ~~safety~~ **fuel**.

5.1.2 The ~~S~~ **Shift Supervisor (SS)** ~~manager~~ shall be responsible for the ~~control room~~ **shift** command function. ~~During any absence of the SS from the control room while the plant is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the SS from the control room while the plant is in MODE 5 or 6 an individual with an active SRO license or Reactor Operator (RO) license shall be designated to assume the control room command function.~~

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for ~~plant~~ **facility staff operation** and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety **storage and handling** of the ~~Palisades plant~~ **spent nuclear fuel**.

- a. Lines of authority, responsibility and communication shall be established and defined for the highest management levels through intermediate levels to and including all ~~operating~~ **facility** organization positions. These relationships shall be documented, and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key positions, or in equivalent forms of documentation. These requirements and the plant specific equivalent of those titles referred to in these Technical Specifications shall be documented in the FSAR.
- b. The plant ~~superintendent~~ **manager** shall be responsible for overall ~~plant~~ **facility** safe operation and shall have control over those onsite activities necessary for safe ~~operation~~ **storage** and maintenance of the ~~plant~~ **spent nuclear fuel**.
- c. A specified corporate ~~executive~~ **officer** shall have corporate responsibility for ~~the overall plant nuclear safety~~ **storage and handling of spent nuclear fuel** and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the ~~plant~~ **facility** to ensure **safe management of spent nuclear safety fuel**.
- d. The individuals who train the ~~operating staff~~ **CERTIFIED FUEL HANDLERS**, and those who carry out radiation ~~safety~~ **protection**, and ~~or perform~~ quality assurance functions may report to the appropriate onsite manager; however, they ~~se individuals~~ shall have sufficient organizational freedom to ensure their ~~independence from operating pressures~~ **ability to perform their assigned functions**.

5.2.2 Plant Facility Staff

The facility staff organization shall include the following:

- a. ~~A non-licensed operator~~ **Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED**

5.2 Organization

5.2.2 Plant Staff (continued)

~~FUEL HANDLER assigned when fuel is in the reactor and an additional non-licensed operator shall be assigned when the reactor is operating in MODES 1, 2, 3, or 4.~~

- b. ~~(Deleted) Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.~~
- c. Shift crew composition may be less than the minimum requirement of ~~10 CFR 50.54(m)(2)(i), and 5.2.2.a, and 5.2.2.g~~ for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the ~~minimum~~ requirements ~~and all the following are met:~~
 - 1) ~~No fuel movements are in progress, and~~
 - 2) ~~No movement of loads over fuel are in progress, and~~
 - 3) ~~No unmanned shift positions during shift turnover shall be permitted due to an incoming shift crew member being late or absent.~~
- d. A radiation ~~safety~~ protection technician shall be on site ~~when~~ during the movement of fuel ~~is in the reactor and~~ during the movement of loads over fuel. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- e. ~~Not Used~~ At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.
- f. The operations ~~shift~~ manager or an assistant operations manager shall hold an SRO license ~~be a~~ CERTIFIED FUEL HANDLER. ~~The individual holding the SRO license shall be responsible for directing the activities of the licensed operators.~~
- g. When in MODES 1, 2, 3, or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the plant. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000. ~~(Deleted)~~

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

- 5.3.1 Each member of the ~~plant~~ **facility** staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the ~~Energy~~ Quality Assurance Program Manual (QAPM).
- 5.3.2 ~~(Deleted)~~ **A NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained.**
- 5.3.3 (Deleted)
- 5.3.4 (Deleted)
- 5.3.5 ~~For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).~~ **(Deleted)**
-

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

- 5.4.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:
- a. The ~~applicable~~ procedures **applicable to the safe storage of spent nuclear fuel** recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.
 - b. ~~The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33; (Deleted)~~
 - c. Not used;
 - d. All programs specified in Specification 5.5.
-

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

The following programs shall be established, implemented, and maintained:

5.5.1 Offsite Dose Calculation Manual (ODCM)

- a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The ODCM shall also contain (1) the radioactive effluent controls and radiological environmental monitoring activities and (2) descriptions of the information that should be included in the Radiological Environmental Operating Report, and Radioactive Effluent Release Report required by Specification 5.6.2 and Specification 5.6.3.
- c. Changes to ODCM:
 1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the changes, and
 - b. A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
 2. Shall become effective after approval by the plant ~~superintendent~~manager.
 3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

5.5 Programs and Manuals

5.5.15 Process Control Program

- a. The Process Control Program shall contain the current formula, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR 20, 10 CFR 71, Federal and State regulations, and other requirements governing the disposal of the radioactive waste.
- b. Changes to the Process Control Program:
 1. Shall be documented and records of reviews performed shall be retained as required by the Quality Program. This documentation shall contain:
 - a) Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s) and
 - b) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
 2. Shall become effective after approval by the plant ~~superintendent~~ manager.

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

- a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:
 1. All such door and gate keys shall be maintained under the administrative control of the shift ~~supervisor~~ **manager**, radiation protection manager, or his or her designee.
 2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP, or equivalent, while performing radiation surveys in such areas, provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
 1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
 2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, and with the means to communicate with and control every individual in the area, or

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ATTACHMENT 3

Renewed Facility Operating License Page Change Instructions

and

**Revised Palisades Nuclear Plant
Renewed Facility Operating License Pages**

14 pages follow

Page Change Instructions

**ATTACHMENT TO LICENSE AMENDMENT NO. 2XX
RENEWED FACILITY OPERATING LICENSE NO. DPR-20
DOCKET NO. 50-255**

Remove the following pages of the Renewed Facility Operating License, and replace with the attached revised page. The revised page is identified by amendment number and contains a line in the margin indicating the area of change.

Renewed Facility Operating License Pages:

REMOVE

Page 3

INSERT

Page 3

Appendix A, Technical Specification Pages:

REMOVE

Page 1.1-1

Pages 1.1-4 through 1.1-6

Pages 5.0-1 through 5.0-6

Page 5.0-21

Page 5.0-31

INSERT

Page 1.1-1

Pages 1.1-4 through 1.1-6

Pages 5.0-1 through 5.0-6

Page 5.0-21

Page 5.0-31

- (1) Pursuant to Section 104b of the Act, as amended, and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," (a) ENP to possess and use, and (b) ENO to possess, use and operate, the facility as a utilization facility at the designated location in Van Buren County, Michigan, in accordance with the procedures and limitation set forth in this license;
 - (2) ENO, pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Updated Final Safety Analysis Report, as supplemented and amended;
 - (3) ENO, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use byproduct, source, and special nuclear material as sealed sources for reactor startup, reactor instrumentation, radiation monitoring equipment calibration, and fission detectors in amounts as required;
 - (4) ENO, 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 for sample analysis or instrument calibration, or associated with radioactive apparatus or components; and
 - (5) ENO, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operations of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations in 10 CFR Chapter I and is subject to all applicable provisions of the Act; 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) ENO is authorized to operate the facility at steady-state reactor core power levels not in excess of 2565.4 Megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.
 - (2) The Technical Specifications contained in Appendix A, as revised through Amendment No. XXX, and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. ENO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (3) Fire Protection

ENO 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 license amendment request dated December 12, 2012, as supplemented by letters dated February 21, 2013, September 30, 2013, October 24, 2013, December 2, 2013, April 2, 2014, May 7, 2014, June 17, 2014, August

1.0 USE AND APPLICATION

1.1 Definitions

-----NOTE-----

The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

<u>Term</u>	<u>Definition</u>
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AVERAGE DISINTEGRATION ENERGY - \bar{E}	\bar{E} shall be the average (weighted in proportion to the concentration of each radionuclide in the primary coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes, making up at least 95% of the total noniodine activity in the coolant.
AXIAL OFFSET (AO)	AO shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core (determined using the incore monitoring system).
AXIAL SHAPE INDEX (ASI)	ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core (determined using the excore monitoring system).
CERTIFIED FUEL HANDLER	A CERTIFIED FUEL HANDLER is an individual who complies with provisions of the CERTIFIED FUEL HANDLER training and retraining program required by Specification 5.3.2.

1.1 Definitions

LEAKAGE

LEAKAGE shall be:

- a. Identified LEAKAGE
 - 1. LEAKAGE, such as that from pump seals or valve packing (except Primary Coolant Pump seal water leakoff), that is captured and conducted to collection systems or a sump or collecting tank;
 - 2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known not to interfere with the operation of leakage detection systems and not to be pressure boundary LEAKAGE; and
 - 3. Primary Coolant System (PCS) LEAKAGE through a Steam Generator to the Secondary System (primary to secondary LEAKAGE).
- b. Unidentified LEAKAGE

All LEAKAGE (except Primary Coolant Pump seal leakoff) that is not identified LEAKAGE;
- c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an PCS component body, pipe wall, or vessel wall.

MODE

A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average primary coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

NON-CERTIFIED OPERATOR

A NON-CERTIFIED OPERATOR is a non-licensed operator who complies with the qualification requirements of Specification 5.3.1.

1.1 Definitions

OPERABLE - OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	<p>PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are:</p> <ol style="list-style-type: none"> a. Described in Chapter 13, Initial Tests and Operation, of the FSAR; b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
QUADRANT POWER TILT (T_q)	T_q shall be the maximum positive ratio of the power generated in any quadrant minus the average quadrant power, to the average quadrant power.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the primary coolant of 2565.4 MWt.
REFUELING BORON CONCENTRATION	REFUELING BORON CONCENTRATION shall be a Primary Coolant System boron concentration of ≥ 1720 ppm and sufficient to assure the reactor is subcritical by $\geq 5\%$ $\Delta\rho$ with all control rods withdrawn.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

1.1 Definitions

SHUTDOWN MARGIN (SDM) (continued)	<p>a. All full length control rods (shutdown and regulating) are fully inserted except for the single rod of highest reactivity worth, which is assumed to be fully withdrawn. However, with all full length control rods verified fully inserted by two independent means, it is not necessary to account for a stuck rod in the SDM calculation. With any full length control rods not capable of being fully inserted, the reactivity worth of these rods must be accounted for in the determination of SDM; and</p> <p>b. There is no change in part length rod position.</p>
STAGGERED TEST BASIS	<p>A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during n Surveillance Frequency intervals, where n is the total number of systems, subsystems, channels, or other designated components in the associated function.</p>
THERMAL POWER	<p>THERMAL POWER shall be the total reactor core heat transfer rate to the primary coolant.</p>
TOTAL RADIAL PEAKING FACTOR (F_R^T)	<p>F_R^T shall be the maximum ratio of the individual fuel pin power to the core average pin power integrated over the total core height, including tilt.</p>

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall facility operation and shall delegate in writing the succession for this responsibility during absences. |

The plant manager or designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect safe storage and maintenance of spent nuclear fuel. |

5.1.2 The shift manager shall be responsible for the shift command function. |

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for facility staff and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safe storage and handling of spent nuclear fuel.

- a. Lines of authority, responsibility and communication shall be established and defined for the highest management levels through intermediate levels to and including all facility organization positions. These relationships shall be documented, and updated, as appropriate, in the form of organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key positions, or in equivalent forms of documentation. These requirements and the plant specific equivalent of those titles referred to in these Technical Specifications shall be documented in the FSAR.
- b. The plant manager shall be responsible for overall facility safe operation and shall have control over those onsite activities necessary for safe storage and maintenance of spent nuclear fuel.
- c. A specified corporate officer shall have corporate responsibility for the safe storage and handling of spent nuclear fuel and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the facility to ensure safe management of spent nuclear fuel.
- d. The individuals who train the CERTIFIED FUEL HANDLERS, carry out radiation protection, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their ability to perform their assigned functions.

5.2.2 Facility Staff

The facility staff organization shall include the following:

- a. Each duty shift shall be composed of at least one shift manager and one NON-CERTIFIED OPERATOR. The NON-CERTIFIED OPERATOR position may be filled by a CERTIFIED FUEL HANDLER.
- b. Oversight of fuel handling operations shall be provided by a CERTIFIED FUEL HANDLER.

5.2 Organization

5.2.2 Plant Staff (continued)

- c. Shift crew composition may be less than the minimum requirement of 5.2.2a. for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements and all the following are met:
 - 1) No fuel movements are in progress, and
 - 2) No movement of loads over fuel are in progress, and
 - 3) No unmanned shift positions during shift turnover shall be permitted due to an incoming shift crew member being late or absent.
 - d. A radiation protection technician shall be on site during the movement of fuel and during the movement of loads over fuel. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
 - e. At least one person qualified to stand watch in the control room (NON-CERTIFIED OPERATOR or CERTIFIED FUEL HANDLER) shall be present in the control room when nuclear fuel is stored in the spent fuel pool.
 - f. The shift manager shall be a CERTIFIED FUEL HANDLER.
 - g. (Deleted)
-

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

- 5.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Quality Assurance Program Manual (QAPM). |
 - 5.3.2 A NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained. |
 - 5.3.3 (Deleted)
 - 5.3.4 (Deleted)
 - 5.3.5 (Deleted) |
-

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

5.4.1 Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The procedures applicable to the safe storage of spent nuclear fuel recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. |
 - b. (Deleted) |
 - c. Not used;
 - d. All programs specified in Specification 5.5.
-

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs and Manuals

The following programs shall be established, implemented, and maintained:

5.5.1 Offsite Dose Calculation Manual (ODCM)

- a. The ODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The ODCM shall also contain (1) the radioactive effluent controls and radiological environmental monitoring activities and (2) descriptions of the information that should be included in the Radiological Environmental Operating Report, and Radioactive Effluent Release Report required by Specification 5.6.2 and Specification 5.6.3.
- c. Changes to ODCM:
 1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the changes, and
 - b. A determination that the change will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR 190, 10 CFR 50.36a, and 10 CFR 50, Appendix I, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.
 2. Shall become effective after approval by the plant manager. |
 3. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

5.5 Programs and Manuals

5.5.15 Process Control Program

- a. The Process Control Program shall contain the current formula, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR 20, 10 CFR 71, Federal and State regulations, and other requirements governing the disposal of the radioactive waste.
- b. Changes to the Process Control Program:
 1. Shall be documented and records of reviews performed shall be retained as required by the Quality Program. This documentation shall contain:
 - a) Sufficient information to support the change together with the appropriate analyses or evaluation justifying the change(s) and
 - b) A determination that the change will maintain the overall conformance of the solidified waste product to existing requirements of Federal, State, or other applicable regulations.
 2. Shall become effective after approval by the plant manager. |

5.7 High Radiation Area

5.7.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour at 30 Centimeters from the Radiation Source or from any Surface Penetrated by the Radiation, but less than 500 rads/hour at 1 Meter from the Radiation Source or from any Surface Penetrated by the Radiation

- a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked or continuously guarded door or gate that prevents unauthorized entry, and, in addition:
 1. All such door and gate keys shall be maintained under the administrative control of the shift manager, radiation protection manager, or his or her designee.
 2. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit.
- b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.
- c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP, or equivalent, while performing radiation surveys in such areas, provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas.
- d. Each individual or group entering such an area shall possess:
 1. A radiation monitoring device that continuously integrates the radiation rates in the area and alarms when the device's dose alarm setpoint is reached, with an appropriate alarm setpoint, or
 2. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, and with the means to communicate with and control every individual in the area, or