27780 Blue Star Highway, Covert, MI 49043

PNP 2025-045

10 CFR 50.4

July 1, 2025

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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

Subject: Palisades Nuclear Plant – Notification of Readiness for Transition to Power Operations Licensing Basis

On June 13, 2022, in accordance with the requirements of Title 10 of the Code of Federal Regulations (10 CFR) 50.82, *Termination of license,* paragraph (a)(1), Entergy Nuclear Operations, Inc. (Entergy) certified to the Nuclear Regulatory Commission (NRC) that it had permanently ceased operations and permanently removed fuel from the reactor vessel at the Palisades Nuclear Plant (PNP) (Reference 1). Upon docketing of the 10 CFR 50.82(a)(1) certifications, 10 CFR 50.82(a)(2) no longer authorizes operation of the reactor, or emplacement or retention of fuel into the reactor vessel. As required, Entergy implemented the necessary licensing changes to reflect a permanently defueled reactor and entered decommissioning status in compliance with the PNP Post Shutdown Decommissioning Activities Report (PSDAR) (Reference 2).

Shortly after PNP transitioned to a decommissioning facility, Holtec[1] assumed ownership of PNP (Reference 4) and given the support from the Governor of the State of Michigan and the Department of Energy, Holtec commenced a project to return PNP to a power operations plant. In a letter dated March 13, 2023 (Reference 5), followed by a meeting with the NRC on March 20, 2023 (Reference 6), Holtec presented a regulatory path to reinstate the power operations licensing basis (POLB) allowing resumption of power operations through a suite of licensing submittals permitted within the existing regulatory framework.

The regulatory path to reinstate the PNP POLB is consistent with the guidance provided in NRC Inspection Manual Chapter (IMC) 2562, *Light-Water Reactor Inspection Program for Restart of Reactor Facilities Following Permanent Cessation of Power Operations,* issued on April 24, 2025, detailing the inspection activities and requirements for plant operational readiness to provide reasonable assurance for safe operations following reactivation of an operating license. This IMC promulgates the NRC's previous position that the existing NRC regulatory framework, including the processes for exemptions and license amendments, may be used on a case-by-case basis to reauthorize the resumption of operations (Reference 7).

[1] Holtec Palisades, LLC ("Holtec Palisades") is the licensed owner of PNP. Holtec Decommissioning International, LLC ("HDI") is the licensed operator of PNP while the facility is in decommissioning. Pursuant to the license transfer application submitted in connection with the PNP restart (Reference 3), licensed authority will transfer from HDI to Palisades Energy, LLC ("Palisades Energy") upon NRC's approval of the transition from decommissioning back to power operations. Holtec Palisades will remain the licensed owner of PNP.

The purpose of this letter is to report the licensing and regulatory activities needed to support the resumption of power operations at PNP and its readiness to implement the POLB. The proposed implementation date for transitioning PNP to the POLB is August 25, 2025.

The Enclosure to this letter provides the details of the activities involved in the regulatory path to allow the reauthorization of power operations at PNP.

This letter contains no new and no revised regulatory commitments.

Should you have any questions or require additional information, please contact Michael Schultheis, Director, Regulatory and Site Strategies, at (269) 764-2566.

Respectfully,

Jean A. Fleming

Digitally signed by Jean A. Fleming
DN: cn=Jean A. Fleming, o=Holtec Decommissioning International, LLC, ou=Regulatory and Environmental Affairs, email=J.Fleming@Holtec.com
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Jean A. Fleming
Vice President, Licensing and Regulatory Assurance
Holtec International

References:

1. Entergy Nuclear Operations, Inc. (Entergy) letter to U.S. Nuclear Regulatory Commission (NRC), *Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel*, dated June 13, 2022 (ADAMS Accession No. ML22164A067)

2. Holtec Decommissioning International, LLC (HDI) to NRC, *Post Shutdown Decommissioning Activities Report including Site-Specific Decommissioning Cost Estimate for Palisades Nuclear Plant,* dated December 23, 2020 (ADAMS Accession No. ML20358A232)

3. HDI letter to NRC, *Application for Order Consenting to Transfer of Control of License and Approving Conforming License Amendments,* dated December 6, 2023 (ADAMS Accession No. ML23340A161)

4. NRC letter to HDI, *Palisades Nuclear Plant and Big Rock Point Plant – Issuance of Amendment Nos. 129 and 273 RE: Order Approving Transfer of Licenses and Conforming Administrative License Amendments (EPIDS L-2022-LLM-0002 and L-2020-LLM-0003),* dated June 28, 2022 (ADAMS Accession Nos. ML22173A173, ML22173A175, and ML22173A176)

5. HDI letter to NRC, *Regulatory Path to Reauthorize Power Operations at Palisades Nuclear Plant*, dated February 1, 2023 (updated March 13, 2023) (ADAMS Accession Nos. ML23032A398, ML230072A399, and ML23072A404)

6. NRC Meeting Summary, *Summary of March 20, 2023 Meeting with Holtec Decommissioning International, LLC Regarding Regulatory Path for Potentially Requesting Reauthorization of Power Operations at Palisades*

Nuclear Plant, dated April 20, 2023 (ADAMS Accession Nos. ML23107A121 and ML23139A192)

7. NRC SECY-20-0110, *Denial of Petition for Rulemaking on Criteria to Return Retired Nuclear Power Reactors to Operations (PRM-50-117; NRC-2019-0063),* dated December 7, 2020 (ADAMS Accession Nos. ML20205L305, ML20205L307, and ML20049A021)

Enclosure: Palisades Nuclear Plant – Operational Readiness Report

Enclosure Attachment: Changes to Updated Final Safety Analysis Report, Revision 35

cc: NRC Region III Regional Administrator
NRC Senior Resident Inspector – Palisades Nuclear Plant
NRC Project Manager – Palisades Nuclear Plant
Designated Michigan State Official

PNP 2025-045

Enclosure

Palisades Nuclear Plant

Operational Readiness Report

Operational Readiness Report

INTRODUCTION AND OVERVIEW

On June 13, 2022, in accordance with the requirements of Title 10 of the Code of Federal Regulations (10 CFR) 50.82, *Termination of license,* paragraph (a)(1), Entergy Nuclear Operations, Inc. (Entergy) certified to the Nuclear Regulatory Commission (NRC) that it had permanently ceased operations and permanently removed fuel from the reactor vessel at the Palisades Nuclear Plant (PNP) (Reference 1). Upon docketing of the 10 CFR 50.82(a)(1) certifications, 10 CFR 50.82(a)(2) no longer authorizes operation of the reactor, or emplacement or retention of fuel into the reactor vessel. As required, Entergy implemented the necessary licensing changes to reflect a permanently defueled reactor and entered decommissioning status in compliance with the PNP Post Shutdown Decommissioning Activities Report (PSDAR) (Reference 2).

Shortly after PNP transitioned to a decommissioning facility, Holtec[1] assumed ownership of PNP (Reference 4) and given the support from the Governor of the State of Michigan and the Department of Energy, Holtec commenced a project to return PNP to a power operations plant. In a letter dated March 13, 2023 (Reference 5), followed by a public meeting with the NRC on March 20, 2023 (Reference 6), Holtec presented a regulatory path to reinstate the power operations licensing basis (POLB) allowing resumption of power operations through a suite of licensing submittals permitted within the existing regulatory framework.

The regulatory path to reinstate the PNP POLB is consistent with the guidance provided in NRC Inspection Manual Chapter (IMC) 2562, *Light-Water Reactor Inspection Program for Restart of Reactor Facilities Following Permanent Cessation of Power Operations,* issued on April 24, 2025, detailing the inspection activities and requirements for plant operational readiness to provide reasonable assurance for safe operations following reactivation of an operating license. This IMC promulgates the NRC's previous position that the existing NRC regulatory framework, including the processes for exemptions and license amendments, may be used on a case-by-case basis to reauthorize the resumption of operations (Reference 7).

As described in Reference 5, the regulatory path to the reauthorization of power operations at PNP is tied collectively to a suite of licensing and regulatory requests (see Table 1 below) that require NRC approval and subsequent implementation by Holtec. This Enclosure assesses the six licensing and regulatory requests and Holtec's readiness to implement the associated licensing actions and activities required to support PNP's transition to the POLB.

OPERATIONAL OBJECTIVES AND READINESS

The suite of six licensing and regulatory requests identified in Table 1 requires NRC approval and implementation by Holtec to reauthorize power operations at PNP. The associated licensing actions and activities define the regulatory scope to transition PNP from decommissioning to an operational "No Mode" status under the PNP Renewed Facility Operating License (RFOL). Entry into "No Mode" status will allow Palisades Energy to receive, possess, and use source and special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for operation, as described in the reinstated POLB

[1] Holtec Palisades, LLC ("Holtec Palisades") is the licensed owner of PNP. Holtec Decommissioning International, LLC ("HDI") is the licensed operator of PNP while the facility is in decommissioning. Pursuant to the license transfer application submitted in connection with the PNP restart (Reference 3), licensed authority will transfer from HDI to Palisades Energy, LLC ("Palisades Energy") upon NRC's approval of the transition from decommissioning back to power operations. Holtec Palisades will remain the licensed owner of PNP.

Updated Final Safety Analysis Report (UFSAR), which is based on Revision 35 (version in effect prior to permanent shutdown).

As described in the *Environmental Assessment and Finding of No Significant Impact for the Palisades Nuclear Plant Reauthorization of Power Operations Project* (Reference 8), NRC approval of the Table 1-1 (page 1-3 of Reference 8) licensing and regulatory actions is required to support the reauthorization of power operations and refueling of the reactor under the existing Palisades' RFOL. Note that Table 1-1 of Reference 8 includes the six licensing and regulatory requests identified in Table 1 (below) of this Enclosure plus two additional license amendment requests (LARs) (References 9 and 10). Because NRC approval of the two additional LARs is not needed for PNP to transition from decommissioning to an operational "No Mode" status, the two LARs are not included in Table 1.

The licensing and regulatory requests and implementation readiness assessments are provided in this Enclosure, and each assessment is located by Section No. as indicated in Table 1.

Table 1 – Licensing and Regulatory Requests

Section No.	Document Description	ADAMS Accession No.
1.	Request for Exemption from Certain Termination of License Requirements of 10 CFR 50.82, dated September 28, 2023	ML23271A140
2.	Application for Order Consenting to Transfer of Control of License and Approving Conforming License Amendments, dated December 6, 2023	ML23340A161
3.	License Amendment Request to Revise Renewed Facility Operating License and Permanently Defueled Technical Specifications to Support Resumption of Power Operations, dated December 14, 2023	ML23348A148
4.	License Amendment Request to Revise Selected Permanently Defueled Technical Specifications Administrative Controls to Support Resumption of Power Operations, dated February 9, 2024	ML24040A089
5.	License Amendment Request to Revise the Palisades Nuclear Plant Emergency Plan to Support Resumption of Power Operations, dated May 1, 2024	ML24122C666
6.	License Amendment Request to Approve the Biasi Critical Heat Flux (CHF) Correlation for Use with the Main Steam Line Break (MSLB) Analysis, dated May 24, 2024	ML24145A145

1. 10 CFR 50.82 Exemption

In accordance with 10 CFR 50.82(a)(2), *[u]pon 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.* In accordance with the guidance in IMC 2562, the regulatory approach for a facility to transition from a decommissioning status to an operating status should begin with the submittal of a request for exemption from 10 CFR 50.82 to allow placing fuel in the reactor and authorizing operation of the reactor.

By letter dated September 28, 2023 (Reference 11), Holtec requested an exemption from the 10 CFR 50.82(a)(2) restriction that prohibits reactor power operations and retention of fuel into the reactor vessel, which is applicable to PNP due to docketing the 10 CFR 50.82(a)(1) certifications. The exemption would allow for a one-time rescission of the 10 CFR 50.82(a)(1) certifications. Once the docketed certifications are rescinded, 10 CFR 50.82(a)(2) will no longer apply and the PNP POLB in effect prior to the 10 CFR 50.82 certifications can be restored through the 10 CFR 50.90, *Application for amendment of license, construction permit, or early site permit,* LAR process for the PNP RFOL, Technical Specifications (TSs), and Emergency Plan. PNP's transition to the POLB is subject to NRC approval of the respective LARs and Holtec's readiness to implement the approved license amendments. The purpose and need for these licensing actions and activities to collectively support the reauthorization of power operations and refueling under the existing RFOL are assessed in the following sections of this Enclosure.

Subject to NRC approval of the requested exemption from 10 CFR 50.82(a)(2) needed to return PNP to power operations, Holtec will submit a letter formally notifying the NRC of the date the 10 CFR 50.82(a)(1) certifications of permanent cessation of power operations and permanent removal of fuel from the PNP reactor vessel are rescinded. This date will establish when PNP has transitioned to the POLB and is subject to the NRC's Reactor Oversight Process (ROP). [Status: In Progress – on track]

2. License Transfer

On December 6, 2023, Holtec Decommissioning International, LLC (HDI) and Holtec Palisades, LLC (Holtec Palisades) submitted an application requesting that the NRC consent to the transfer of operating authority under the PNP RFOL and general license for the PNP Independent Spent Fuel Storage Installation (ISFSI) from HDI to Palisades Energy, LLC (OPCO) and approve the conforming administrative amendments to reflect the requested transfer (Reference 3). OPCO is an indirect, wholly owned subsidiary of Holtec that was formed, staffed, and resourced by Holtec specifically for power operations of PNP. OPCO will be resourced with in-depth operational experience and the programmatic expertise to conduct power operations licensed activities at PNP. Subject to the foregoing, and receipt of the NRC approvals needed to return PNP to power operations, HDI will be ready to implement the license transfer to OPCO to coincide with PNP's transition to the POLB.

The conditions, actions, and readiness for implementation of the license transfer from HDI to OPCO coincident with the reauthorization of power operations and refueling under the PNP RFOL are as follows:

- NRC approval of the two LARs to reinstate (1) the PNP power operations technical specifications (POTS) and RFOL license conditions (Reference 12) and (2) the previous PNP Administrative Controls sections of the TSs (Reference 13). [Status: In Progress – on track]
- Reinstate the PNP POLB UFSAR, via the 10 CFR 50.59, *Changes, tests, and experiments,* process, based on UFSAR Revision 35 (Reference 14) (the version in effect prior to permanent shutdown) with appropriate conforming updates. [Status: In Progress – on track]
- OPCO will have a management team and site organization that is experienced and qualified to oversee and implement PNP’s operations in accordance with the POTS, Physical Security Plan (Reference 15), Emergency Plan (Reference 16), Quality

Assurance Program Manual (QAPM) (Reference 17), and Chapter 12 of the reinstated UFSAR. [Status: In Progress – on track]

- OPCO will maintain operational onsite property damage insurance coverage as required by 10 CFR 50.54, *Conditions of licenses,* paragraph (w)(1) and operational offsite nuclear liability insurance coverage as required by 10 CFR 140.11, *Amounts of financial protection for certain reactors,* paragraph (a)(4). [Status: In Progress – on track]
- Holtec Palisades and OPCO will be financially qualified to own and operate PNP pursuant to 10 CFR 50.33, *Contents of applications; general information,* paragraph (f)(2) and NUREG-1577, Revision 1, *Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance,* (Reference 18). [Status: In Progress – on track]
- Holtec Palisades and OPCO will revert to the decommissioning funding requirements applicable to operating plants pursuant to 10 CFR 50.75, *Reporting and recordkeeping for decommissioning planning,* and 10 CFR 72.30, *Financial assurance and recordkeeping for decommissioning.* [Status: In Progress – on track]
- NRC approval of the request to rescind exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) regarding the PNP operational nuclear decommissioning trust fund (DTF) (Reference 19). These regulations will be restored pursuant to 10 CFR 50.12, *Specific exemptions,* to comply with the DTF requirements for an operating plant. [Status: In Progress – on track]

3. License Amendment – Power Operations Technical Specifications

On December 14, 2023, HDI submitted a LAR to reinstate the POTS, Environmental Protection Plan (EPP), and RFOL license conditions (Reference 12) that were removed or revised by License Amendment No. 272 (Reference 20) due to docketing the 10 CFR 50.82(a)(1) decommissioning certifications (Reference 1) as conditioned by the 10 CFR 50.82(a)(2) restrictions prohibiting operation of the reactor or emplacement or retention in the reactor vessel. The Amendment 272 changes were incorporated into the PNP Permanently Defueled Technical Specifications (PDTS). NRC approval of the LAR and issuance of the license amendment (Amendment [###]) will revise the PNP TSs, EPP, and RFOL license conditions to reflect PNP License Amendment No. 271, which was in effect at the time HDI submitted the 10 CFR 50.82(a)(1) certifications of permanent cessation of power operations and permanent removal of fuel from the PNP reactor vessel. The changes will also restore the title of RFOL Appendix A to *Technical Specifications,* eliminating the title, *Permanently Defueled Technical Specifications.*

The regulatory scope to transition PNP from decommissioning to an operational "No Mode" status includes NRC approval and implementation of Amendment [###], which will place the POTS in effect. Once the PNP POTS are in effect, the TS provisions and requirements, including the TS Definitions, Limiting Conditions for Operations (LCOs), Required Actions, and Surveillance Requirements (SRs), will be applicable. PNP will initially be in a condition where no operational Modes defined in TS Table 1.1-1 apply; however, some "No Mode" TS LCOs and associated SRs will be applicable and required to be met. To commence reactor refueling, the TS LCOs and SRs for Mode 6 (Refueling) will be required to be met.

System Return to Service (SRTS) Plans have been developed and implemented as part of the regulatory path to reauthorize power operations at PNP. The SRTS Plans document the activities performed to verify that the configuration and condition of structures, systems, and

components (SSCs) are consistent with the design and licensing basis to support PNP's transition from decommissioning status back to licensed power operations. This includes identifying the SSCs necessary to achieve operational functions, potential degradation changes to the SSCs since shutdown, and the activities required to restore the SSCs to TS compliance and operability. The SRTS Plans supplement normal procedures (e.g., surveillance, tests) and processes (e.g., Corrective Action Program) in identifying potential restraints to TS compliance for entry into "No Mode" status and Mode 6. Operations representatives holding an active senior reactor operator (SRO) license at PNP perform final operational acceptance of the SRTS Plan implementation after all documentation is prepared, field work is completed, and walkdowns performed. This process provides the documentation to support the conclusion that the SSCs are ready to perform their specified safety function(s) and related support function(s) and can be considered returned to service.

Subject to NRC approval and issuance of the requested license amendment, Holtec will be ready to implement the changes to the POTS, EPP, and RFOL license conditions as part of the regulatory framework supporting PNP's transition to the POLB and the resumption of power operations at PNP. The licensing basis documents (LBDs) and programmatic requirements considered within the scope of the license amendment and the actions and readiness to support implementation are provided in Table 2.

Table 2 – Implementing Actions for Power Operations Technical Specifications

Affected LBDs and Programs	Required Implementing Actions	Status
RFOL, TSs, EPP, and TS Bases	Following NRC approval and issuance of POTS Amendment [###], issue revised RFOL, TSs, EPP, and TS Bases as part of the transition to the PNP POLB. The changes to the TS Bases are controlled by Administrative Controls TS 5.5.12, *Technical Specifications (TS) Bases Control Program.*	In Progress - on track
UFSAR	Revise Defueled Safety Analysis Report using 10 CFR 50.59 process to reflect POTS Amendment [###] and issue UFSAR as part of the transition to the PNP POLB. To support the resumption of power operations at PNP, the PNP pre-decommissioning UFSAR Revision 35, submitted to the NRC on April 14, 2021 (Reference 14), will be reinstated. To support the reinstatement of UFSAR Revision 35, the SSCs will be reclassified as required to be consistent with POTS Amendment [###] and the reinstated UFSAR SSC classifications. The attachment to this Enclosure provides the differences from the content of PNP UFSAR Revision 35 and the POLB UFSAR. The attachment includes changes to the facility that are ongoing, planned, and pending activities supporting the transition to the PNP POLB which may involve changes to the content of UFSAR Revision 35. The Holtec 10 CFR 50.59 process has been or will be applied to the activities that are completed, including the applicable 50.59 screenings and updates to the POLB UFSAR.	In Progress - on track

Affected LBDs and Programs	Required Implementing Actions	Status
Operating Requirements Manual (ORM)	Revise ORM and ORM Bases using 10 CFR 50.59 process to reflect POTS Amendment [###] and issue as part of the transition to the PNP POLB.	In Progress - on track
QAPM	Adopt QAPM (Transition Quality Assurance Plan (TQAP) Appendix C) as revised using the 10 CFR 50.54(a) process to reflect POTS Amendment [###] and issue as part of the transition to the PNP POLB.	Ready for implementation
Security Plan	Revise the PNP Physical Security Plan (PSP) using the 10 CFR 50.54(p) process to reflect POTS Amendment [###] and NRC approval of the request to rescind the exemption from 10 CFR 73.55(p)(1)(i) and (ii) (Reference 19) pursuant to 10 CFR 50.12. The exemption allows either a certified fuel handler (CFH) or a licensed senior operator to approve temporary suspension of security measures during certain emergency conditions or during severe weather. Rescission of the exemption will restore the regulations to only allow a licensed senior operator to have this authority since the terms *Certified Fuel Handler* and *CFH* will be removed from the PNP POTS. The changes to the PSP are not expected to require prior NRC approval for issuance as part of the transition to the PNP POLB. As required by 10 CFR 50.54(p)(2), a report containing a description of each change will be submitted to the NRC within two months after the changes are made. A draft and updated draft Revision 22 of the power operations PNP PSP have been submitted to the NRC (Reference 15). The draft submittals did not include the description of changes and do not fulfill the reporting requirement. A final report will be submitted within two months of implementation of PNP PSP Revision 22, as required by the regulation. Security is in the process of restoring the staffing levels to the previous power operation levels and will comply with power operations organizational requirements. The operating procedures, associated training, and validation of the security defensive strategies are in progress and will be completed for implementation prior to plant restart.	In Progress - on track
Surveillance Frequency Control Program (Administrative Controls TS 5.5.17)	Restore Surveillance Frequency Control Program as approved by the NRC in POTS Amendment [###] as part of the transition to the PNP POLB. The restored program controls and requirements will be incorporated in revisions to the ORM and ORM Bases.	In Progress - on track
Fire Protection Program (RFOL 2.C.(3))	Perform a 10 CFR 50.48 review and revise the Fire Protection Program to reflect POTS Amendment [###]. Issue revised program as part of the transition to the PNP POLB. In accordance with RFOL 2.C.(3)(c)2, PNP is required to achieve full compliance with 10 CFR-50.48(c), *National Fire Protection Association Standard NFPA 805,* by completion of all modifications described in Table S-2, *Plant Modifications Committed,* of Entergy Nuclear Operations, Inc. (ENO) letter PNP 2019-028, dated May	In Progress - on track

Affected LBDs and Programs	Required Implementing Actions	Status
	28, 2019 (Reference 21), before the end of the refueling outage following the fourth full operating cycle after NRC approval. The NRC approved adoption of NFPA 805 for PNP on February 27, 2015 in Amendment 254 (Reference 22) and the fourth full operating cycle after NRC approval is the current Cycle 28 outage. Therefore, except for the changes described in Amendment 269 (Reference 23), which cancelled 6 modifications and modified 10 modifications, the modifications described in Table S-2 of ENO letter PNP 2019-028 are required to be completed by the end of the current Cycle 28 outage. In accordance with RFOL 2.C.(3)(c)3, PNP is required to implement the items listed in Table S-3, *Implementation Items,* of ENO letter PNP 2014-097, dated November 4, 2014 (Reference 24), within six months after NRC approval, or six months after a refueling outage if in progress at the time of approval with the exception of Implementation Items 3 and 8 which will be completed once the related modifications are installed and validated in the PRA model. A revalidation of the Table S-3 Implementation Items is being conducted to verify their completion. On June 24, 2025, Holtec submitted a LAR (Reference 25) to obtain NRC approval of a change to the RFOL fire protection program transition license condition 2.C.(3)(c)2. This change proposes to extend the NFPA 805 full compliance date to before the end of the refueling outage following the fifth full operating cycle after NRC approval which will allow one additional operating cycle to implement the remaining modifications necessary to achieve full compliance.	
Administrative Controls TS 5.5.13 - *Safety Functions Determination Program (SFDP)*	Revise Operations administrative controls to restore the SFDP to reflect POTS Amendment [###]. Issue the restored SFDP requirements as part of the transition to the PNP POLB.	Ready for implementation
Reactor Vessel Surveillance Capsules (Appendix H) (RFOL 2.J)	Restore the surveillance capsule testing and reporting requirements pursuant to 10 CFR Part 50, Appendix H, *Reactor Vessel Material Surveillance Program Requirements,* to reflect POTS Amendment [###]. Issue the restored requirements as part of the transition to the PNP POLB.	In Progress - on track
Administrative Controls TSs: • 5.5.2 - *Primary Coolant Sources Outside Containment* • 5.5.5 - *Containment Structural Integrity*	Restore the administrative controls programs and reporting requirements to reflect POTS Amendment [###]. Issue the restored controls and requirements as part of the transition to the PNP POLB. On February 11, 2025, Holtec submitted a LAR (Reference 10) to support the resumption of power operations at PNP by allowing the use of Framatome Alloy 690 sleeves to repair defective steam generator (SG) tubes as an alternative to removing the tubes from service by plugging. NRC approval of this LAR, which includes changes to Administrative Controls TSs 5.5.8 and 5.6.8, is contingent upon prior approval of the POTS LAR (Reference 12)	In Progress - on track

Affected LBDs and Programs	Required Implementing Actions	Status
Surveillance Program • 5.5.6 - *Primary Coolant Pump Flywheel Surveillance Program* • 5.5.8 - *Steam Generator Program* • 5.5.10 - *Ventilation Filter Testing Program* • 5.5.11 - *Fuel Oil Testing Program* • 5.5.14 - *Containment Leak Rate Testing Program* • 5.5.16 - *Control Room Envelope Habitability Program* • 5.6.7 - *Containment Structure Integrity Surveillance Report* • 5.6.8 - *Steam Generator Tube Inspection Report*	and issuance of POTS Amendment [###]. The SG tube repairs are currently in progress, with the repairs to both SG-A and SG-B expected to be completed in the fourth quarter 2025.	
Administrative Controls TS 5.5.9 - *Secondary Water Chemistry Program*	Restore Chemistry administrative controls related to Secondary Water Chemistry Program to reflect POTS Amendment [###]. Issue the restored controls as part of the transition to the PNP POLB.	In Progress - on track
Administrative Controls TS 5.5.1 - *Offsite Dose Calculation Manual (ODCM)*	Revise ODCM to reflect POTS Amendment [###]. Issue the revised manual as part of the transition to the PNP POLB.	Ready for implementation
Diverse and Flexible Coping Strategies (FLEX) Program and ORM	Revise FLEX Program to reflect POTS Amendment [###]. Issue revised program and update ORM and ORM Bases to restore the FLEX Program requirements as part of the transition to the PNP POLB.	In Progress - on track

Affected LBDs and Programs	Required Implementing Actions	Status
Administrative Controls TSs: • 5.6.5 - *Core Operating Limits Report* • 5.6.6 - *Post Accident Monitoring Report*	Restore administrative controls TS 5.6.5 and TS 5.6.6 reporting requirements to reflect POTS Amendment [###]. Issue the restored TS 5.6.5 and TS 5.6.6 controls as part of the transition to the PNP POLB.	In Progress - on track
Commitments	A Commitment Change Summary Report will be submitted to the NRC pursuant to Nuclear Energy Institute (NEI) 99-04 (Reference 26). The report will provide NRC notification of the reinstatement of the regulatory commitments that were reported as being cancelled in Reference 27 based on implementation of Amendment 272 (Reference 20) which no longer authorized operation of the reactor or emplacement or retention of fuel into the PNP reactor vessel. The report will also provide any regulatory commitment changes requiring NRC notification that were made during the period from October 1, 2023 through September 30, 2025. Restoration of the previously cancelled NRC commitments and the reporting of new commitments support implementation of POTS Amendment [###] as part of the transition to the PNP POLB.	In Progress - on track
RFOL, TSs, EPP, TS Bases	Review changes to RFOL, TSs, EPP, and TS Bases submitted to the NRC in LAR letter HDI PNP 2023-030, dated December 14, 2023 (Reference 12), to determine if training is required. Conduct training as required to support implementation of POTS Amendment [###] as part of the transition to the PNP POLB.	In Progress - on track

4. License Amendment – Administrative Controls Technical Specifications

On February 9, 2024, HDI submitted a LAR (Reference 13) to revise the PNP PDTS to remove certain definitions and reinstate the descriptions of plant staff responsibilities, organization titles, staff qualification requirements, and procedures that are needed to support the resumption of power operations at PNP. These changes were incorporated into the PDTS by License Amendment No. 266 (Reference 28) due to docketing the 10 CFR 50.82(a)(1) decommissioning certifications (Reference 1) as conditioned by the 10 CFR 50.82(a)(2) restrictions prohibiting operation of the reactor or emplacement or retention in the reactor vessel. The administrative controls TSs are being restored as part of the regulatory framework to reinstate the POLB and resume power operations at PNP. NRC approval of the LAR and issuance of the license amendment (Amendment [###]) will revise the affected administrative controls TS sections to reflect the PNP Amendment 271 POTS administrative controls which were in effect at the time HDI submitted the 10 CFR 50.82(a)(1) certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel for PNP.

The regulatory scope to transition PNP from decommissioning to an operational "No Mode" status includes NRC approval and implementation of Amendment [###], which will place the revised administrative controls in effect.

Subject to NRC approval and issuance of the requested license amendment, Holtec will be ready to implement the changes to the administrative controls TSs to support PNP's transition to the POLB and the resumption of power operations at PNP. The changes considered within the scope of the license amendment and the actions and readiness to support implementation are provided in Table 3.

Table 3 – Implementing Actions for Administrative Controls Technical Specifications

Affected LBDs and Programs	Required Implementing Actions	Status
Administrative Controls TSs: • 5.1.2 - *Licensed Senior Reactor Operator (SRO) and Reactor Operator (RO) Responsibility* • 5.2.2 - *Plant Staff Organization* • 5.3.5 - *Licensed Senior Reactor Operator (SRO) and Reactor Operator (RO) Qualifications* • 5.4.1 - *Emergency Operating Procedures (EOPs)*	Revise administrative controls related to SRO/RO responsibilities and qualifications, staff organization, and EOPs to reflect administrative controls TS Amendment [###]. Issue the revised controls and requirements as part of the transition to the PNP POLB. The plant staff organization and training programs will be restored consistent with Chapter 12 of the reinstated UFSAR and power operations QAPM. The onsite per shift staffing requirements of 10 CFR 50.54(m)(2)(i) will be met with qualified SROs and ROs licensed under 10 CFR Part 55. It is planned that Operations will staff a five shift rotation (with training week) and all positions will be filled. There are currently 18 licensed SROs and 7 licensed ROs with an additional 5 SROs and 9 ROs in the first license class that are scheduled to be licensed by August 2025 to support plant restart. The second license class contains 12 SRO and 7 RO candidates that are scheduled to be licensed by July 2026. Based on the five-year staffing plan, a pipeline class of non-licensed operators is scheduled to be hired and start class in September 2025 and a pipeline class of licensed operators is scheduled to be hired and start class in the first quarter of 2026.	In Progress - on track
Administrative Controls TS 5.3.2 - *Certified Fuel Handlers Training Program*	Delete the Certified Fuel Handlers Training Program to reflect deletion of the training program requirement pursuant to administrative controls TS Amendment [###]. Delete the training program requirement as part of the transition to the PNP POLB.	In Progress - on track
Administrative Controls TS 5.2.1 - *Onsite and Offsite Organizations*	Revise administrative controls TS 5.2.1 organization requirements to reflect administrative controls TS Amendment [###]. Issue the revised TS 5.2.1 controls as part of the transition to the PNP POLB.	In Progress - on track
Administrative Controls TSs	Review changes to administrative controls TSs submitted to the NRC in LAR letter HDI 2024-001, dated February 9, 2024 (Reference 13), to determine if training is required. Conduct training as required to support implementation of administrative controls TS Amendment [###] as part of the transition to the PNP POLB.	In Progress - on track

5. License Amendment – Emergency Plan

On May 1, 2024, HDI submitted a LAR (Reference 29) that would revise the PNP Site Emergency Plan (SEP) and emergency classification scheme to restore the PNP power operations SEP (POSEP) and emergency classification scheme as part of the regulatory framework for the resumption of power operations at PNP. The proposed POSEP is primarily a reorganization and enhancement of the content of the PNP SEP (Reference 30) that was in effect just prior to the 10 CFR 50.82(a)(1) certifications of permanent cessation of power operations and permanent removal of fuel from the reactor vessel (Reference 1). The proposed Emergency Action Level (EAL) scheme consists of the last power operations emergency classification scheme approved by the NRC, plus subsequent revisions to the NRC-approved scheme using the 10 CFR 50.54(q) change process.

The proposed POSEP is a complete replacement of the current Permanently Defueled Emergency Plan (PDEP) that was approved by the NRC on December 27, 2023 (Reference 31) and implemented at PNP in January 2024. The proposed changes will establish an updated licensing basis that complies with 10 CFR 50.47, *Emergency plans,* and Appendix E to 10 CFR Part 50, *Emergency Planning and Preparedness for Production and Utilization Facilities,* for a power operations facility and are intended to align with Revision 2 of NUREG-0654/FEMA-REP-1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants* (Reference 32).

Subject to NRC approval and issuance of the license amendment for the POSEP, Holtec will be ready to implement the changes to support PNP's transition to the POLB and the resumption of power operations at PNP. The PNP POSEP primary activities and requirements and implementation readiness are provided below:

- An Emergency Response Organization (ERO) personnel staffing plan for on-shift and augmenting personnel for responding to their assigned emergency response facilities (ERFs) as depicted in Table B-1, *On-Shift and Augmenting ERO Staffing Plan,* of Enclosure, Attachment 3, of Reference 33. [Status: In Progress – on track]
- Local support organization agreements to assist with events requiring firefighting, medical response, and law enforcement. Refer to Appendix 4 of Enclosure, Attachment 3, of Reference 33 for a listing of agreements established between PNP and the external agencies and organizations. [Status: Ready for implementation]
- Activation of the NRC's emergency response data system (ERDS) and provisions for maintaining continuous communications with the NRC via the Emergency Notification System (ENS) line and Health Physics Network (HPN) line. [Status: In Progress – on track]
- Procedures established for notification of Federal, State, and local offsite response organizations (OROs) with the capability to notify responsible OROs within 15 minutes and the NRC within 60 minutes as described in Table D-1 and Section II.E of Enclosure, Attachment 3, of Reference 33. [Status: In Progress – on track]
- Activation of the alert and notification system (ANS) and capability for use by PNP and the OROs for notifying the public within the PNP plume exposure pathway emergency planning zone (EPZ) in the event of an airborne radiological release requiring notification. The 10-mile radius EPZ encompasses portions of Michigan's Van Buren, Berrien, and Allegan Counties. [Status: In Progress – on track]

- Adequate emergency facilities and equipment to support the emergency response, including methods, systems, and equipment for assessing radiation levels and monitoring a radiological release by obtaining and analyzing air samples. [Status: In Progress – on track]
- Radiological emergency response initial training and retraining (at least annually) is conducted to ensure ERO personnel are properly qualified for their specific position. The Systematic Approach to Training (SAT) process determines the necessary periodicity of the retraining (continuing training) on a task-specific basis. [Status: In Progress – on track]
- Performance of drills aimed at testing, developing, and maintaining skills in the Emergency Plan functions. Critiques will be held following each drill to evaluate performance and identify areas for improvement. [Status: In Progress – on track]
- Performance of exercises that test the integrated capability and a major portion of the elements of the Emergency Plan and organizations. The exercises will test the adequacy of the timing and content of the implementing procedures and methods, test the emergency equipment and communications networks, test the public ANS, and ensure emergency organization personnel are familiar with their duties. [Status: In Progress – on track]

Equipment Important to Emergency Response (EITER) is actively being assessed to support plant restart. EITER deficiencies are being captured and reviewed using the Corrective Action Program to ensure significant gaps are addressed.

ERO role training and qualification has commenced and is ongoing. The 2025 Emergency Planning drill schedule supporting PNP's transition to the POLB and the resumption of power operations is provided in Table 4.

Table 4 – 2025 Emergency Planning Drill Schedule

DATE	PARTICIPATING TEAM	CONTROLLING TEAM	DRILL TYPE
04/23/2025	Green	Red	Training Only - Coaching Allowed
05/15/2025	Blue	Green	Practice for NRC/FEMA Graded
06/03/2025	Red	Blue	INPO
07/08/2025	Blue	Green	EOF Tabletop with OROs
07/22/2025	Blue	Red	EOF Tabletop with OROs
07/29/2025	Blue	Red	NRC/FEMA Graded

6. License Amendment – Biasi Critical Heat Flux (CHF) Correlation

On May 24, 2024, HDI submitted a LAR (Reference 34) requesting NRC approval to use Framatome Inc. (Framatome) Topical Report EMF-2310, Revision 1, Supplement 2P-A, Revision 0, *SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors,* (Reference 35) for application of the Biasi Critical Heat Flux (CHF) correlation in the Post-Scram Main Steam Line Break (MSLB) Analysis at PNP. Application of the Biasi CHF correlation methodology for use with Palisades Combustion Engineering (CE) 15 x 15 High Thermal Performance (HTP) fuel is evaluated in Framatome Technical Report ANP-4083P, Revision 1, *Applicability of Biasi Critical Heat Flux Correlation to Palisades Fuel,* (Reference 34). The evaluation concluded that the methodology is acceptable for use in predicting Departure from Nucleate Boiling (DNB) for Post-Scram MSLB Analysis with Palisades CE 15 x 15 HTP fuel.

NRC approval of the LAR is needed as part of the plan to reanalyze the PNP MSLB to resolve a non-conforming condition identified in October 2018 where the Modified Barnett CHF correlation and associated limit used in the existing non-LOCA Transient/Steam Line Break analysis methodology (Reference 36) non-conservatively predict DNB for some PNP MSLB cases analyzed. The MSLB event was reanalyzed using approved CHF correlations with appropriate correlation limits and it was shown that DNB does not occur. Since DNB did not occur, there were no operability concerns. The plan to resolve the non-conforming condition relies on two additional CHF correlations not previously applied to the PNP MSLB analysis. The first of these correlations is the HTP CHF correlation (Reference 37) that is referenced for other PNP UFSAR, Revision 35, Chapter 14 events (Reference 14). The second of these correlations is the Biasi CHF correlation, which is an NRC approved correlation described in Reference 36. However, there is no Biasi correlation limit for PNP and neither the Biasi correlation nor a limit for use appear in PNP UFSAR, Revision 35.

In September 2019, the PNP MSLB analysis revision was completed using the Biasi, HTP, and Modified Barnett CHF correlations. However, the plant licensing basis was not updated to incorporate the revised PNP MSLB analysis due to the imminent plant shutdown announced on October 19, 2017 (Reference 38) that Entergy had decided to permanently cease power operations at PNP no later than May 31, 2022,.

Subject to NRC approval and issuance of the license amendment to use Framatome Topical Report EMF-2310, Revision 1, Supplement 2P-A, Revision 0, (Reference 35) for application of the Biasi CHF correlation in the MSLB analysis at PNP, Holtec will be ready to implement the changes to support PNP's transition to the POLB and the resumption of power operations at PNP. The actions and readiness to support implementation of the Biasi CHF correlation license amendment are provided below:

- Reinstate the PNP POLB UFSAR using the 10 CFR 50.59 process as described in Operational Objectives and Readiness Section 2 and Section 3, Table 2, of this Enclosure. [Status: In Progress – on track]
- Update the reinstated PNP POLB UFSAR using the 10 CFR 50.59 process to include conforming changes to reflect NRC approval of the Biasi CHF correlation for use with the PNP MSLB analysis. [Status: In Progress – on track]
- Revise the PNP Core Operating Limits Report (COLR) to reference Framatome Technical Report ANP-4083P/ANP-4083NP, Revision 1, *Applicability of Biasi Critical Heat Flux Correlation to Palisades Fuel.* [Status: In Progress – on track]

REFERENCES

1. Entergy Nuclear Operations, Inc. (Entergy) letter to U.S. Nuclear Regulatory Commission (NRC), *Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel*, dated June 13, 2022 (ADAMS Accession No. ML22164A067)

2. Holtec Decommissioning International, LLC (HDI) to NRC, *Post Shutdown Decommissioning Activities Report including Site-Specific Decommissioning Cost Estimate for Palisades Nuclear Plant,* dated December 23, 2020 (ADAMS Accession No. ML20358A232)

3. HDI letter to NRC, *Application for Order Consenting to Transfer of Control of License and Approving Conforming License Amendments,* dated December 6, 2023 (ADAMS Accession No. ML23340A161)

4. NRC letter to HDI, *Palisades Nuclear Plant and Big Rock Point Plant – Issuance of Amendment Nos. 129 and 273 RE: Order Approving Transfer of Licenses and Conforming Administrative License Amendments (EPIDS L-2022-LLM-0002 and L-2020-LLM-0003),* dated June 28, 2022 (ADAMS Accession Nos. ML22173A173, ML22173A175, and ML22173A176)

5. HDI letter to NRC, *Regulatory Path to Reauthorize Power Operations at Palisades Nuclear Plant*, dated February 1, 2023 (updated March 13, 2023) (ADAMS Accession Nos. ML23032A398, ML230072A399, and ML23072A404)

6. NRC Meeting Summary, *Summary of March 20, 2023 Meeting with Holtec Decommissioning International, LLC Regarding Regulatory Path for Potentially Requesting Reauthorization of Power Operations at Palisades Nuclear Plant,* dated April 20, 2023 (ADAMS Accession Nos. ML23107A121 and ML23139A192)

7. NRC SECY-20-0110, *Denial of Petition for Rulemaking on Criteria to Return Retired Nuclear Power Reactors to Operations (PRM-50-117; NRC-2019-0063),* dated December 7, 2020 (ADAMS Accession Nos. ML20205L305, ML20205L307, and ML20049A021)

8. NRC Environmental Assessment, *Environmental Assessment and Finding of No Significant Impact for the Palisades Nuclear Plant Reauthorization of Power Operations Project,* issued May 2025 (ADAMS Accession No. ML25111A031)

9. Holtec Palisades, LLC (Holtec) letter to NRC, *License Amendment Request to Include Leak Before Break Methodology for Primary Coolant System Hot and Cold Leg Piping in Palisades Licensing Basis,* dated February 5, 2025 (ADAMS Accession No. ML25035A216)

10. Holtec letter to NRC, *License Amendment Request to Revise Selected Permanently Defueled Technical Specifications to Support Repairing of Steam Generator Tubes by Sleeving,* dated February 11, 2025 (ADAMS Accession No. ML25043A348)

11. HDI letter to NRC, *Request for Exemption from Certain Termination of License Requirements of 10 CFR 50.82*, dated September 28, 2023 (ADAMS Accession No. ML23271A140)

12. HDI letter to NRC, *License Amendment Request to Revise Renewed Facility Operating License and Permanently Defueled Technical Specifications to Support Resumption of Power Operations,* dated December 14, 2023 (ADAMS Accession No. ML23348A148)

13. HDI letter to NRC, *License Amendment Request to Revise Selected Permanently Defueled Technical Specifications Administrative Controls to Support Resumption of Power Operations,* dated February 9, 2024 (ADAMS Accession No. ML24040A089)

14. Entergy letter to NRC, *Final Safety Analysis Update – Revision 35,* dated April 14, 2021 (ADAMS Accession No. ML21125A285)

15. Holtec letter to NRC, *Draft Power Operations Plant Physical Security Plan, Revision 22,* dated March 26, 2025 (updated May 5, 2025) (ADAMS Accession No. ML25085A291, ML25125A101, and ML25125A102)

16. HDI letter to NRC, *License Amendment Request to Revise the Palisades Nuclear Plant Site Emergency Plan to Support Resumption of Power Operations,* dated May 1, 2024 (ADAMS Accession No. ML24122C666)

17. Holtec letter to NRC, *Response to Requests for Additional Information Regarding Supplement to Application for Order Consenting to Transfer of Control of License and Approving Conforming License Amendments, Proposed Power Operations Quality Assurance Program Manual, Revision 0,* dated November 19, 2024 (ADAMS Accession No. ML24324A207)

18. NUREG-1577, Revision 1, *Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance,* issued December 13, 2001 (ADAMS Accession No. ML013330264)

19. Holtec letter to NRC, *Palisades Nuclear Plant – Request for NRC to Rescind Previously Approved Exemptions to Support Transition to a Power Operations Licensing Basis,* dated December 4, 2024 (ADAMS Accession No. ML24339A068)

20. NRC letter to Entergy, *Palisades Nuclear Plant – Issuance of Amendment No. 272 RE: Permanently Defueled Technical Specifications (EPID L-2021-LLA-0099),* dated May 13, 2022 (ADAMS Accession No. ML22039A198)

21. Entergy letter to NRC, *Response to Request for Additional Information – License Amendment Request to Revise Existing Facility Operating License Conditions Regarding NFPA 805 Modifications,* dated May 28, 2019 (ADAMS Accession Nos. ML19149A301, ML19149A302, ML19149A303)

22. NRC letter to Entergy, *Palisades Nuclear Plant – Issuance of Amendment Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance With 10 CFR 50.48(c) (TAC NO. MF0382),* dated February 27, 2015 (ADAMS Accession No. ML15007A191)

23. NRC letter to Entergy, *Palisades Nuclear Plant – Issuance of Amendment No. 269 Regarding Changes to NFPA 805 Modifications and Change to Full Compliance Implementation Date for the Fire Protection Program (EPIDS L-2018-LLA-0296 and L-2019-LLA-0049,* dated August 20, 2019 (ADAMS Accession No. ML19198A080)

24. Entergy letter to NRC, *Response to Request for Additional Information – License Amendment Request to Adopt NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactors,* dated November 4, 2014 (ADAMS Accession Nos. ML14308A228, ML14308A247)

25. Holtec letter to NRC, *License Amendment Request to Change the Full Compliance Implementation Date for the Fire Protection Program Transition License Condition for Required Modifications,* dated June 24, 2025 (ADAMS Accession No. ML25175A275)

26. NEI 99-04, Revision 0, *Guidelines for Managing NRC Commitment Changes,* dated July 1999 (ADAMS Accession No. ML12233A703)

27. HDI letter to NRC, *Palisades Nuclear Plant Report of Changes, Tests and Experiments, and Summary of Commitment Changes Report,* dated October 4, 2023 (ADAMS Accession No. ML23277A196)

28. NRC letter to Entergy, *Palisades Nuclear Plant – Issuance of Amendment Regarding Administrative Controls for Permanently Defueled Condition (CAC No. MG0021, EPID L-2017-LLA-0266),* dated June 4, 2018 (ADAMS Accession No. ML18114A410)

29. HDI letter to NRC, *License Amendment Request to Revise the Palisades Nuclear Plant Site Emergency Plan to Support Resumption of Power Operations,* dated May 1, 2024 (ADAMS Accession No. ML24122C666)

30. Entergy letter to NRC, *Palisades Nuclear Plant Site Emergency Plan, Revision 32,* dated November 5, 2019

31. NRC letter to HDI, *Palisades Nuclear Plant – Issuance of Amendment No. 274 Regarding the License Amendment Request for Changes to the Permanently Defueled Emergency Plan and Permanently Defueled Emergency Action Level Scheme (EPID: L-2022-LLA-0099),* dated December 27, 2023 (ADAMS Accession No. ML23236A004)

32. NUREG-0654/FEM-REP-1, Revision 2, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,* dated December 2019 (ADAMS Accession No. ML19347D139)

33. Holtec letter to NRC, *Response to Third Request for Additional Information – License Amendment Request to Revise the Palisades Nuclear Plant Site Emergency Plant to Support Resumption of Power Operations,* dated May 1, 2025 (ADAMS Accession No. ML25121A127)

34. HDI letter to NRC, *License Amendment Request to Approve the Biasi Critical Heat Flux (CHF) Correlation for Use with the Palisades Main Steam Line Break (MSLB) Analysis,* dated May 24, 2024 (ADAMS Accession No. ML24145A145)

35. Framatome Inc. (Framatome) letter to NRC, *Approved EMF-2310, Revision 1, Supplement 2P-A, Revision 0, SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors,* dated April 10, 2023 (ADAMS Accession No. ML23109A086)

36. Framatome letter to NRC, *Publication of EMF-2310(P)(A), Revision 1, SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors,* dated June 17, 2004 (ADAMS Accession No. ML041810031)

37. Siemens Power Corporation letter to Director of Nuclear Reactor Regulation (NRC), *EMF-92-153(P)(A) and (NP)(A), HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel, March 1994,* dated March 9, 1994 (ADAMS Accession No. ML20064L240)

38. Entergy letter to NRC, *Supplement to Certification of Permanent Cessation of Power Operations,* dated October 19, 2017 (ADAMS Accession No. ML17292A032)

39. HDI letter to NRC, *Final Safety Analysis Report Update Revision 36,* dated March 31, 2023 (ADAMS Accession No. ML23107A064)

40. Holtec Letter to NRC, *Final Safety Analysis Report Update Revision 37,* dated March 19, 2025 (ADAMS Accession No. ML25078A352)

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Enclosure Attachment

Changes to Updated Final Safety Analysis Report, Revision 35

Changes to Updated Final Safety Analysis Report Revision 35 to be Retained for Transition to Power Operations[1]

- UFSAR Section 1.1.2, *Licensing* History – Retain description of NRC approved transfer of ownership of Palisades from Entergy Nuclear Palisades, LLC, to Holtec Palisades, LLC (Holtec Palisades) and the transfer of operating authority of Palisades to Holtec Decommissioning International, LLC (HDI). This transfer of ownership was approved by the NRC on December 13, 2021. The replacement of the word "plant" with the word "facility" is not retained.
- UFSAR Table 1-1, *Chronological Licensing Events* – Retain chronological additions to Table 1-1 dated December 13, 2021, May 13, 2022, June 13, 2022, and June 28, 2022. These additions to the UFSAR provide historical information in chronological order describing: (1) the NRC approved transfer of Palisades ownership, (2) NRC approval of License Amendment 272 to reflect the permanent cessation of operations and permanent removal of fuel from the reactor vessel, (3) Palisades submittal of the certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel, and (4) NRC approval of License Amendment 273 to reflect transfer of ownership/operation to Holtec Palisades and HDI.
- UFSAR Section 4.2, *Design Basis* – Retain references to Table 4-1, "Primary Coolant System Parameters," and Table 4-2, "Primary Coolant System Code Requirements," in UFSAR Section 4.2. These Tables apply to UFSAR Section 4.2, "Primary Coolant System," to support power operations and are retained. The changes which delete Table 4-1, retitle Table 4-2 as "Historic Primary Coolant System Codes (e)," and add Note (e) stating that the design requirements no longer apply are not retained.
- UFSAR Section 8.1.2, *Description and Operation* – Retain editorial change that corrected the number of transmission circuits connecting the site switchyard to the power system grid from "six" to "seven." This change is consistent with the pre-existing switchyard to grid system line (aka outgoing line) connection descriptions in UFSAR Sections 8.2.2 and 8.2.3. The change to delete the GDC 17 requirements is not retained.
- UFSAR Section 8.2.4, *Transmission System Ownership* – Retain the paragraph: "Palisades does not own the transmission system to which it is connected. Contractual agreements have been executed to assure that transmission system operation, maintenance, and modifications activities are appropriately controlled, and that adequacy, availability and reliability of offsite power will continue to satisfy Palisades design and licensing basis." This paragraph replaces the previous Transmission System Ownership information, which is no longer accurate.
- UFSAR Section 9.11.5, *Spent Fuel Storage at an Independent Spent Fuel Storage Installation* – Retain editorial correction of the Reference numbers for the HI- STORM FW MPC Storage System Final Safety Analysis Report and Certificate of Compliance No. 1032. The correct Reference numbers for the HI-STORM FW MPC Storage System Final Safety Analysis Report is Reference 79 and Reference 80 for Certificate of Compliance No. 1032. These References are listed at the end of Chapter 9.
- UFSAR Section 11.1, *Source Terms* – Retain editorial correction of the Reference to Table 11-10 as presenting the recalculated and expanded source term for 1% failed fuel for AST analyses. The correct Reference is Table 11-17, "Primary Coolant Fission and Corrosion Product Activities for AST Dose Analyses." The change to eliminate discussions of coolant activity during plant operation is not retained.

[1] The changes to UFSAR Revision 35 (that were incorporated into Defueled Safety Analysis Report (DSAR) Revision 36) identified for retention in the POLB UFSAR are based on a review of the changes listed in Enclosure 1 of the 10 CFR 50.71(e) UFSAR update submittal, dated March 31, 2023 (Reference 39 of this Enclosure).

- UFSAR Section 11.6.6.10, *External Radiation Dose Determination* – Retain the change to the reference to "primary thermoluminescent dosimeters" to just "primary dosimeters." This change more accurately describes radiation protection practices, in that other than thermoluminescent dosimeters can be used as primary dosimeters.
- UFSAR Section 11.6.7.4, *Personal Monitoring Instrumentation* – Retain the change to the reference to "Thermoluminescent dosimeters" to "Thermoluminescent or optically stimulated luminescent dosimeters." This change more accurately describes radiation protection practices, in that other than thermoluminescent dosimeters can be used for personal monitoring.
- UFSAR Section 11.6.8.4, *Radiation Protection Instrumentation* – Retain the change to the reference to "Thermoluminescent dosimeters (TLDs)" to "Thermoluminescent dosimeters (TLDs) and/or optically stimulated luminescent dosimeters (OSLs)." This change more accurately describes radiation protection practices, in that other than thermoluminescent dosimeters are provided for dose recording and measurement and are tested and calibrated periodically.
- UFSAR Section 12.3.1, *Procedure Control Requirements* – Retain the descriptions of the Procedure Control Requirements except for the references to the "Entergy Quality Assurance Program Manual (QAPM)." The POLB UFSAR should reference the Palisades Energy, LLC Quality Assurance Program Manual (QAPM), which was submitted to the NRC on August 2, 2024 as part of the Palisades Transition Quality Assurance Plan (TQAP) in accordance with 10 CFR 71.106(b).
- UFSAR Figure 12-1, *Palisades Nuclear Plant Organization* – Retain the Figure 12-1 title "Palisades Nuclear Plant Organization" in the Table of Contents. However, the changes to Figure 12-1 are not retained. The pre-shutdown UFSAR version of Figure 12-1 should be modified to replace the title "Director, Regulatory and Performance Improvement" with "Director, Regulatory and Site Strategies" and "Regulatory Assurance" should be added as reporting to this position.
- UFSAR Section 14.21.1.3.1, *Analysis Method* – Retain the editorial change of the described event from "waste gas accident" to "waste gas incident." The use of the term "Waste Gas Incident" existed previously as the title of UFSAR Section 14.21, is the title listed in the Table of Contents for Section 14.21, and is referenced in Section 14.24.3.1.3.

Changes to Defueled Safety Analysis Report (DSAR) Revision 36 and Retained for Transition to Power Operations[2]

- Update Table 9-1 to remove the instrument air compressor aftercooler system flow requirements to reflect that the service water piping and components to and from the instrument air compressor aftercoolers have been retired in place and are no longer in service.
- Update Figure 9-9 Sheet 1 (Drawing M-222 Sheet 1) to reflect the addition of a cross tie between the Instrument Air System and Nitrogen System that would allow the Instrument Air System to be used as a supply for the Spent Fuel Pool Bulkhead Gate pneumatic seal.
- Update to reflect Dry Fuel Storage (DFS) campaign changes to HI-STORM FW 72.212 Report, NUHOMS 72.212 Report, and VSC-24 72.212 Report. This change currently only applies to the DSAR but the DFS project is expected to revise the documentation to include an update to the POLB UFSAR following Palisades' transition to power operations.
- Update to reflect installation of a new Northeast Yard Power Panel. This new outdoor electrical distribution panel and cable routing are permanent installations for miscellaneous electrical power needs in the vicinity of the old construction building.

[2] The changes to DSAR Revision 36 (that were incorporated into DSAR Revision 37) identified for retention in the POLB UFSAR are based on a review of the changes listed in Enclosure 1 of the 10 CFR 50.71(e) UFSAR update submittal, dated March 19, 2025 (Reference 40 of this Enclosure). Note that these changes also constitute changes to UFSAR Revision 35.

Changes to the Facility for Transition to Power Operations[3]

- *NFPA 805 Penetration Conduit Seals* – Install new 3-hour rated penetration / conduit seals at penetration locations to meet NFPA 805 requirements.
- *NFPA 805 Remove Ventilation Damper* – Replace non-fire rated damper between Emergency Diesel Generators with 3-hour fire barrier.
- *NFPA 805 Fire Detection Upgrade* – Replace obsolete incipient fire detection equipment.
- *NFPA 805 Fire Extinguishers* – Increase the number of fire extinguishers in fire areas for NFPA 10 Code compliance.
- *NFPA 805 Boric Acid Storage Tank Level Control Circuit* – Install separate fuses between NFPA 805 Safe Shutdown Equipment and non-Safe Shutdown Equipment to protect Boric Acid Storage Tank level control circuit from spurious fault in Boric Acid Batch Tank temperature control circuit.
- *NFPA-805 Atmospheric Dump Valve Control Alternative* – Install alternative methods to control Atmospheric Dump Valves (ADVs) locally, and provide manual bypass of ADV air supply solenoid valve for fire related failures.
- *NFPA-805 Component Cooling Water Temperature Control* – Modify Component Cooling Water (CCW) temperature control valves to open on Recirculation Actuation Signal (RAS) and fail open on loss of air, to prevent spurious closure and loss of heat removal to Engineering Safeguards System (ESS) Pumps and Primary Coolant Pump (PCP) Seals.
- *NFPA 805 Power Relief Valve Control* – Modify Power Relief Valve control circuitry and replace cables to prevent spurious energization of Power Operated Relief Valves (PORV) and loss of Primary Coolant System (PCS) inventory.
- *NFPA 805 Auxiliary Shutdown Panel Alternate Power Source* – Install alternate DC power capability to Auxiliary Hot Shutdown Panels.
- *NFPA 805 480VAC Electrical Coordination* – Replace 480VAC circuit breaker for the Turbine Room Crane and circuit breaker for the Main Feedwater Main Feed Lube Oil Purification Pump and 480VAC Weld Outlets to resolve electrical coordination issues.
- *NFPA 805 2400VAC Electrical Coordination* – Adjust circuit breaker / relay settings to Station Power Transformer Feeder Breakers to resolve 2400VAC electrical coordination issues.
- *NFPA 805 125VDC Overcurrent Protection* – Replace or supplement the overcurrent protection in 125VDC Distribution Panels to assure coordination at higher fault currents (125VDC Left Train).
- *NFPA 805 Feedwater Purity Building and Turbine Building Fire Barrier* – Install new 3-hour rated fire barrier Wall and fire rated Door to the Cable and Pipe Gallery between the Feedwater Purity and Turbine Buildings.
- *NFPA 805 Auxiliary Building Fire Doors* – Install new fire rated doors, to restore degraded fire barriers in the Auxiliary Building.
- *NFPA 805 Turbine Building Fire Doors* – Install new fire rated doors, to restore degraded fire barriers in the Turbine Building.
- *NFPA 805 Turbine Building Fire Dampers* – Upgrade existing Turbine Building Lube Oil Room dampers with fire rated dampers.
- *NFPA 805 Containment and Auxiliary Building Fire Barriers* – Update obsolete silicone fire barrier sealant and fill seismic gaps between Containment and the Auxiliary Buildings to meet fire rating requirements.

[3] The identified changes to the facility are ongoing, planned, and pending activities supporting the transition to the POLB which may involve changes to the content of PNP UFSAR Revision 35 (Reference 14) and be incorporated into the POLB UFSAR. The Holtec 10 CFR 50.59 process has been or will be applied to the activities that are completed, including applicable 50.59 screenings and updates to the POLB UFSAR.

- *Containment Crane Replacements* – Replace Containment Boom and Jib Cranes to reduce maintenance burden.
- *Heater Drain Tank Level and Flow Control* – Upgrade Extraction Steam, Heaters, Vent and Drain (HED), replaces Feedwater Reheater Drain Tank analog level and flow controls, and air operated control valves with digital upgrades to increase accuracy and reliability.
- *Auxiliary Feedwater Control* – Upgrade the Auxiliary Feedwater Control (AFW) System with analog to digital and digital to digital design changes to improve function and reliability.
- *Main Feedwater Pump* – Refurbish and upgrade the Main Feedwater Pump Turbine.
- *Main Feedwater Pump Turbine Supervisory Instrumentation* – Upgrade Main Feedwater Pump Turbine Supervisory Instrumentation and Independent Overspeed Protection Systems to improve function and reliability.
- *Main Turbine Supervisory Instrumentation* – Upgrade Main Turbine Supervisory Instrumentation (TSI) to improve function and reliability.
- *Alloy 600 Repair* – Alloy 600 Primary Water Stress Corrosion Cracking (PWSCC) mitigation activities for Primary Coolant System and Pressurizer nozzles.
- *Alloy 600 Repair* – Alloy 600 PWSCC Mitigation activities for Reactor Vessel Head (RVH) removal and replacement of tube support plate and nozzle extensions.
- *Steam Generator Tube Repair* – Repair and/or plugging of steam generator tubes in accordance with in-service inspection program.
- *Incore Instrumentation Patch Panel and Cables* – Upgrade Incore Instrumentation Patch Panel and replace Cables.
- *Containment Spray* – Modify Containment Spray Riser Supports.
- *Building Renovation* – Feedwater Purity Building repurpose to support plant needs, such as office space.
- *Main Turbine Upgrades* – Main Turbine Generator include upgrades to components such as blade shroud, air operated pilot valves, main stop valves, reheat stop valves, main governor valves, main governor valve gasket, gland seal casing, new bearings with improved babbitt, and replacement of obsolete Fiber Vibration Monitor System.
- *Control Room Heating, Ventilation and Air Conditioning System* – Replace the Control Room Heating, Ventilation, and Air Conditioning (HVAC) system Refrigerant Condensing Unit Heat Exchangers and Ventilation Main Supply Fans, i.e. Chillers and Air Handlers.
- *Spent Fuel Pool Cooling* – Provide Alternate Cooling Taps to Spent Fuel Pool (SFP) Heat Exchanger.
- *Spent Fuel Pool Cooling* – Provide temporary cooling to the Spent Fuel Pool, to allow for Component Cooling Water (CCW) heat exchanger modifications.
- *Instrument Air System* – Replace Instrument Air Compressors and Dryer.
- *Building Consolidation* – Upgrade South Rad Waste Storage Building to replace East Radwaste Storage Building.
- *Biasi Critical Heat Flux (CHF) Correlation for Use with the Palisades Main Steam Line Break (MSLB) Analysis* – LAR submitted to the NRC for approval on May 24, 2024 (Reference 34 of this Enclosure). This change will resolve a deviation where the modified Barnett CHF correlation and associated limit non-conservatively predicted Departure from Nucleate Boiling (DNB) for some PNP MSLB cases analyzed.
- *Reactor Vessel Internals* – Leak-Before-Break (LBB) analysis LAR submitted to the NRC for approval on February 5, 2025 (Reference 9 of this Enclosure). First application of LBB analysis following NRC approval expected to be for acceptance of reactor vessel internals loading (core shroud bolt pattern) to support PNP transition to power operations.
- *Repair Thermal Sleeve* – Repair dislodged and rotated High Pressure Safety Injection to Primary Coolant System Cold Leg Thermal Sleeve.

- *Steam Generator* – Install two additional secondary side lower handholes on each steam generator.
- *Pressurizer Spray Valves* – Replace Pressurizer Spray Valves CV-1057 and CV-1059 and piping directly upstream and downstream of valves to lower radiological dose in the area caused by high dose crud buildup and to remedy recurring valve packing leaks.
- *Steam Generator Chemical Cleaning (SGCC)* – Installation of piping connections to support current and future chemical injection and to supply demineralized water.