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Pre-Submittal Meeting

Palisades Nuclear Plant

License Amendment Request to Support Resumption of Power Operations

December 5, 2023

Meeting Agenda

- Introductions
- Purpose & Outcome
- Background
- License Amendment Request (LAR) Content
- Reason for Proposed Changes
- Power Operations Licensing Basis (POLB) Reinstatement
- Renewed Facility Operating License (RFOL) Reinstatement
- Technical Specifications (TS) Reinstatement
- Environmental Protection Plan (EPP) Administrative Changes
- Regulatory Basis
- Environmental Assessment
- Licensee Actions to Support POLB
- Schedule
- Questions

Introductions

- U.S Nuclear Regulatory Committee (NRC) Staff
- Holtec Decommissioning International, LLC (HDI)
  - Jean Fleming – Holtec International, Vice President of Licensing, Regulatory Affairs & PSA
  - Michael Schultheis – HDI, Manager of Regulatory Assurance for Palisades
  - Jim Miksa – HDI, Regulatory Assurance Engineer for Palisades

Purpose & Outcome

- Purpose:
  - Present proposed changes to the Palisades Nuclear Plant (PNP) operating license:
    - Renewed Facility Operating License (RFOL)
    - Technical Specifications (TS) – Appendix A
    - Environmental Protection Plan (EPP) – Appendix B
- Outcome:
  - Solicit NRC Staff questions and comments ahead of submittal
  - Provide schedule information to support NRC resource allocation

Background

- The Governor of the State of Michigan voices support for power operations at Palisades Nuclear Plant (PNP) (April 20, 2022, and September 9, 2022)
- PNP Docketed 10 CFR 50.82(a)(1) Certifications, Permanent Cessation Power Operations, Permanent Removal of Fuel from Reactor Vessel (June 13, 2022)
- Permanently Defueled Technical Specifications implemented at PNP (June 15, 2022)
- PNP ownership and license transferred from Entergy to Holtec (June 28, 2022)
- Holtec holds a public meeting to present a proposed regulatory path for return of PNP to power operations (March 20. 2023)
- Holtec holds a public meeting to present a proposed regulatory framework for return of PNP to power operations with emphasis on exemption request to 10 CFR 50.82(a)(2) (May 24, 2023)

Background

- The State of Michigan legislature expressed their support for the restart of PNP by approving a 2024 budget that includes 150 million dollars for the return of PNP to power operations (June 28, 2023)

- HDI submitted Exemption to 10 CFR 50.82(a)(2) on September 28, 2023 (ADAMS Accession Number ML23271A140)

- PNP Renewed Facility Operating License (RFOL) remains active (i.e., it has not been terminated)

- The PNP License Renewal 20-year term ends on March 24, 2031 (i.e., PNP return to power operations is currently within the License Renewal term)

LAR Content

- Reason for Proposed Changes
- Use of previously docketed Power Operations Updated Final Safety Analysis Report (UFSAR) Revision 35.
- Design Basis Accidents (DBAs)
- Description of Each Change with Basis
- Applicable Regulatory Requirements
- Precedent
- No Significant Hazards Consideration
- Environmental Evaluation
- Mark-ups and Clean RFOL, TS, and EPP Pages
- Mark-ups of the TS Bases (for information only)

Reason for Proposed Change

- Supports State of Michigan clean energy initiative
  - Governor of the State of Michigan Letters to US Secretary of Energy
  - Legislature State of Michigan 2024 Budget Approval 150 Million dollars for return of Palisades Nuclear Plant (PNP) to power operations
- Supports reinstatement of PNP POLB
- One of five key licensing actions
  - 10 CFR 50.82(a)(2) exemption to remove operational restrictions
  - License transfer application for operational authority
  - License amendment for Power Operations Technical Specifications (This proposed change)
  - License amendment for technical specifications administrative changes
  - License amendment for a power operations emergency plan

POLB Reinstatement

- UFSAR to reflect power operations plant
  - Restored to Revision 35
    - Last docketed power operations version of the UFSAR that was in effect prior to the 10 CFR 50.82(a)(1) decommissioning certifications
    - Changes made to the UFSAR after Revision 35 that are appropriate for retention will be evaluated against the reinstated PNP POLB in accordance with 10 CFR 50.59, “Changes, tests and experiments.“
  - UFSAR Chapter 14 DBA and transient scenarios
    - Restored to the UFSAR Revision 35 version
    - No changes to the Revision 35 needed to restore the PNP POLB
  - Implemented in accordance with 10 CFR 50.59
    - Implemented coincident with the reinstatement key licensing actions

POLB Reinstatement

- Defueled Safety Analysis Report (DSAR) DBAs retained in the power operations UFSAR
  - Postulated Cask Drop Accidents
    - No analysis needed to restore POLB
  - Fuel Handling Incident (FHA)
    - DSAR added analysis to FHA for Spent Fuel Pool (SFP) cases to support removal of mitigating ventilation systems from PDTS
    - FHA is reinstated to UFSAR Revision 35 version with reinstatement of mitigating ventilation systems in the power operations technical specifications (POTS) Supported by restored mitigating system TSs
      - TS 3.7.10, “Control Room Ventilation CRV Filtration”
      - TS 3.7.11, “Control Room Ventilation (CRV) Cooling”
      - TS 3.7.12, “Fuel Handling Area Ventilation System”
    - Reinstates the FHA in containment

POLB Reinstatement

- Liquid Waste Incident
  - No analysis needed to restore POLB
- Waste Gas Incident
  - No analysis needed to restore POLB

RFOL Reinstatement

- Restores the License Conditions removed or modified by PDTS Amendment 272, with the below exceptions
  - Superseded License Condition 1.B not reinstated
  - Historical License Conditions 2.C.(4), 2.C.(7), 2.H, and 2.I not reinstated
  - License Condition 2.C.(5) which was added to restrict movement of a fuel cask in or over the spent fuel in Amendment 272 will be deleted with reinstatement of mitigating ventilation system TS
- No new License Conditions are added
- Placeholders added to identify occurrences of text modified by the License Transfer Application, such as proposed authorized operator
  - Text is bracketed and shown in bold italics (e.g., ***[Palisades Energy]***)

RFOL Reinstatement

- Fire Protection License Condition (2.C.(3))
  - NFPA-805 Transition License Condition 2.C.(3) is restored to the version removed by the PDTS Amendment 272
  - License Condition requires compliance with 10 CFR 50.48(a) and 10 CFR 50.48(c) for an operating plant
  - Transition License Conditions actions are planned for completion prior to reactor startup.

TS Reinstatement

- Technical Specification (TS) Table of Contents
  - Contained in the PDTS
  - Not retained in the POTS
    - Table of Contents does not include information required to be in the TS by 10 CFR 50.36
  - This is an administrative change

  - Most recent precedent
    - Southern Nuclear Operating Company fleet – approved 9/29/2021

TS Reinstatement

- TS Section 1.0, Use and Application:
  - TS 1.1 Definitions
    - Restores Amendment 271 definitions removed by the PDTS Amendment
  - TS 1.2 Logical Connectors
    - Restores Amendment 271 Purpose, Background, and Examples changed by the PDTS Amendment
  - TS 1.3 Completion Times
    - Restores Amendment 271 Background, Description, and Examples changed by the PDTS Amendment
  - TS 1.4 Frequency
    - Restores Amendment 271 Description and Examples changed by the PDTS Amendment

TS Reinstatement

- TS Section 2.0, Safety Limits
  - Restores Amendment 271 Safety Limits removed by the PDTS Amendment
- TS 3.0 Limiting Condition for Operation (LCO) Applicability
  - Restores Amendment 271 TS LCO 3.0.1 and LCO 3.0.2 that were changed by the PDTS Amendment
  - Restores Amendment 271 TS LCO 3.0.3 through LCO 3.0.9 removed by the PDTS Amendment
- TS 3.0 Surveillance Requirement (SR) Applicability
  - Restores Amendment 271 TS SR 3.0.1 through SR 3.0.4 that were changed by the PDTS Amendment

TS Reinstatement

- Restore TS Sections 3.1 through 3.9 removed or modified by PDTS Amendment 272 with the below exceptions
  - SR 3.1.4.3 (Control Rod Movement) had an obsolete cycle specific Note that will not be reinstated
  - TS 3.7.14, Spent Fuel Pool (SFP) Water Level, TS 3.7.15, Spent Fuel Pool (SFP) Boron Concentration, and TS 3.7.16, Spent Fuel Pool Storage which are included in the PDTS
    - Changed to restore the NOTE in the Actions ("LCO 3.0.3 is not applicable") to conform to the reinstatement of TS LCO 3.0.3
    - SR 3.7.14 and 3.7.15 frequencies are changed to reference the Surveillance Frequency Control Program (SFCP) as approved in Amendment 271

TS Reinstatement

- TS Section 4.0, Design Features

- TS 4.2 Reactor Core
  - Restores Amendment 271 sections 4.2.1 Fuel Assemblies and 4.2.2 Control Rod Assemblies removed by the PDTS Amendment

- TS 4.3 Fuel Storage
  - Restores Amendment 271 sections 4.3.1 Criticality and 4.3.3 Capacity (for new fuel storage) changed by the PDTS Amendment

TS Reinstatement

- TS Section 5.0 Administrative Controls, 5.5 Programs and Manuals
- Restores Amendment 271 sections removed by the PDTS Amendment
  - TS 5.5.2, Primary Coolant Sources Outside Containment
  - TS 5.5.5, Containment Structural Integrity Surveillance Program
  - TS 5.5.6, Primary Coolant Pump Flywheel Surveillance Program
  - TS 5.5.8, Steam Generator (SG) Program
  - TS 5.5.9, Secondary Water Chemistry Program
  - TS 5.5.10, Ventilation Filter Testing Program
  - TS 5.5.11, Fuel Oil Testing Program
  - TS 5.5.13, Safety Functions Determination Program (SFDP)
  - TS 5.5.14, Containment Leak Rate Testing Program
  - TS 5.5.16, Control Room Envelope Habitability Program
  - TS 5.5.17, Surveillance Frequency Control Program

TS Reinstatement

- Restores 5.6 Reporting Requirements sections that were modified by PDTS Amendment 272
  - Sections revised to change term “facility” to “plant”
    - TS 5.6.2, Radiological Environmental Operating Report
    - TS 5.6.3, Radioactive Effluent Release Report

- Restores 5.6 Reporting Requirements sections that were removed by PDTS Amendment 272
  - TS 5.6.5, Core Operating Limits Report (COLR)
  - TS 5.6.6, Post Accident Monitoring Report
  - TS 5.6.7, Containment Structural Integrity Surveillance Report
  - TS 5.6.8, Steam Generator Tube Inspection Report

EPP Administrative Changes

- Environmental Protection Plan (EPP) changes:

- Restore operational terms changed by PDTS Amendment 271 - Examples
  - “handling and storage of spent fuel” with “construction and operation”
  - “facility is maintained” with “plant is operated”
  - “facility” with “Plant or Station”
  - “power level” term reinstated

- Terminology changes are Administrative only

Regulatory Basis

- Applicable Regulations:
  - 10 CFR 50.36, Technical Specifications
  - 10 CFR 50.36b, Environmental Conditions
  - 10 CFR 50.48(a) and (c), Fire Protection
  - 10 CFR 50.51, Continuation of license
  - 10 CFR 50, Appendix A, General Design Criteria for Nuclear Power Plants
  - 10 CFR 50, Appendix H, Reactor Vessel Material Surveillance Program Requirements
  - 10 CFR 50, Appendix J, Primary Reactor Containment Leakage Testing for Water Cooled Power Reactors

Environmental Assessment

- 10 CFR 51.22(c)(9) Categorical Exclusion
- No Significant Hazards Consideration
  - No changes proposed to the power operations design basis configuration or operation of the plant as originally designed / constructed / operated
  - No relaxations in criteria used to establish safety limits or safety system settings or TS LCOs that were in effect during power operations prior to the decommissioning certifications
- No significant change in the types or significant increase in the amounts of any effluents that may be released offsite
  - No physical plant changes
  - Restoration of SSCs to monitor and limit the amounts of effluents released ensures the 1972 Final Environmental Statement (FES), the 1978 final addendum, and the 2006 license renewal Supplemental Environmental impact Statement (SEIS) environmental impacts are not significantly changed
  - Resumed power operations conducted under existing environmental permits

Environmental Assessment

- No significant increase in individual or cumulative public or occupational dose
  - Plant programs and processes to support an operating plant will be restored to ensure 10 CFR 20 limits are not exceeded. The previous radiological impacts to the public, as evaluated in the FES and 1978 Addendum for the original 40 years and the SEIS for the additional 20 years is still bounding.
  - References 10 CFR 50.82(a)(2) Exemption submitted on September 28, 2023 (ADAMS Accession Number ML23271A140) which included an independent environmental review against revised Generic Environmental Impact Statement (GEIS).
  - The independent environmental review validated that the proposed licensing actions are bounded by the environmental impact findings of the PNP Final Environmental Statement (FES, NUREG-0343) with 1978 Addendum, and the PNP RFOL Supplemental Environmental Impact Statement (SEIS, NUREG 1427, Supp 27).

Licensee Actions to Support POLB

- Restore commitments closed based on decommissioning certification
- Restore Updated Final Safety Analysis Report (UFSAR) to reflect power operations plant
- Restore compliance to NRC Orders and industry initiatives
- Develop Return to Service Plans for Safety Related and Important to Safety SSCs
- Restore Regulatory Programs and Operating Procedures (e.g.)
  - Quality Assurance Program
  - Inservice Inspection Program
  - Emergency Operating Procedures

Schedule

Title	Submit	Request Approval	Effective
Exemption	September 28, 2023	December 31, 2024	Aug 2025
License Transfer	Dec 2023	Jan 2025	Aug 2025
Power Ops Tech Specs	Dec 2023	Jan 2025	Aug 2025
Power Ops Admin Tech Specs	Jan 2024	Feb 2025	Aug 2025
Emergency Plan – Power Ops	Jan - Mar 2024	Feb - Apr 2025	Aug 2025
10 CFR 50.82(a)(7)- PSDAR	Mar 2023	N/A	N/A
Notification of Transition – POLB	Aug 2025	N/A	N/A

Effective Date – Transition Date, Palisades Transitions from Facility in Decommissioning to Power Operations Plant

Questions

- NRC Staff Questions or Comments?

Thank You

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