



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2056 WESTINGS AVENUE, SUITE 400
NAPERVILLE, IL 60563-2657

January 24, 2025

Mike Mlynarek
Site Vice President
Holtec Decommissioning
International, LLC
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES NUCLEAR PLANT – RESTART INSPECTION REPORT
05000255/2024013

Dear Mike Mlynarek:

On December 31, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Palisades Nuclear Plant. The enclosed inspection report documents the inspection results, which the inspectors discussed on January 8, 2024, with M. Mlynarek and other members of your staff.

No violations of more than minor significance were identified during this inspection.

On June 13, 2022, Palisades ceased permanent power operations and subsequently removed all fuel from the reactor, as detailed in the letter from Entergy to the NRC, "Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel," (ADAMS Accession No. [ML22164A067](#)). On September 28, 2023, Holtec Decommissioning International, LLC (Holtec) submitted a letter to the NRC requesting exemptions from certain portions of the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.82(a)(2) to pursue the potential reauthorization of power operations at Palisades (ADAMS Accession No. [ML23271A140](#)). The NRC's initial acceptance to review Palisades' request for exemptions was documented in ADAMS at Accession No. [ML23291A440](#) on November 3, 2023.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

A handwritten signature in cursive script that reads "April M. Nguyen".

Signed by Nguyen, April
on 01/24/25

April M. Nguyen, Lead
Palisades Restart Team
Division of Operating Reactor Safety

Docket No. 05000255
License No. DPR-20

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to Mike Mlynarek from April Nguyen dated January 24, 2025.

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05000255/2024013

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number: 05000255

License Number: DPR-20

Report Number: 05000255/2024013

Licensee: Holtec Decommissioning International, LLC

Facility: Palisades Nuclear Plant

Location: Covert, MI

Inspection Dates: October 01, 2024 to December 31, 2024

Inspectors: J. Austin, Senior Project Engineer, Region II
E. Fernandez, Senior Reactor Inspector, Region III
E. Magnuson, Reactor Inspector, Region III
J. Mancuso, Senior Resident Inspector
T. Okamoto, Resident Inspector
A. Sanchez, Senior Project Engineer, Region IV
S. Schwind, Senior Resident Inspector, Callaway
C. Speer, Reactor Systems Engineer, NRR
T. Steadham, Senior Resident Inspector, Browns Ferry
D. Werkheiser, Senior Reactor Analyst, Region I
J. Winslow, Senior Project Engineer, Restart Team

Approved By: April M. Nguyen, Lead
Palisades Restart Team
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) performed inspections of the licensee's activities to verify that the reactor coolant system boundary, reactor vessel head, and risk-significant piping system boundaries are appropriately monitored for degradation and that required repairs and replacements are appropriately examined and accepted; systems, structures, and components (SSCs) are appropriately inspected, maintained, and tested to ensure they can perform their required safety functions for potential restart; and human performance issues are being appropriately addressed at a low threshold to prevent more significant issues from occurring.

List of Findings and Violations

None.

Additional Tracking Items

None.

PLANT STATUS

The Palisades Nuclear Plant ceased power operations and subsequently removed all fuel from the reactor, as certified in a letter to the NRC on June 13, 2022. On September 28, 2023, Holtec Decommissioning International, LLC (Holtec) submitted a letter to the NRC requesting exemptions from certain portions of the requirements of 10 CFR 50.82(a)(2) to pursue the potential reauthorization of power operations. The NRC is conducting inspections to evaluate and assess the licensee's activities for potential restoration to an operational status.

The Resident Inspector office was staffed in December 2024 to provide daily, on-site oversight and inspection of Holtec's potential restart activities.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the referenced inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>.

REACTOR SAFETY CORNERSTONES

71111.08P - Inservice Inspection Activities (PWR)

From November 14, 2024, to December 18, 2024, the inspectors observed and verified Holtec Palisades' nondestructive examination (NDE) and repair/replacement activities of the reactor pressure vessel head and Alloy 600 welds, conducted in accordance with the requirements of the ASME Code Section XI. The purpose of these inspections was to verify that the reactor coolant system boundary, reactor pressure vessel head, and risk-significant piping system boundaries are appropriately monitored for degradation. The inspectors also verified that the examination results were thoroughly reviewed and appropriately evaluated, and that required corrective actions to address identified indications and defects will be appropriately implemented. During this quarter, the licensee completed NDE activities and evaluation of data for both the reactor pressure vessel head and Alloy 600 welds in the primary coolant system and began repair/replacement activities in both areas. Further NRC inspections will monitor repair/replacement activities as they are conducted.

The inspectors verified that the following nondestructive examination and repair/replacement activities were conducted appropriately per the ASME Code or required standard, and that any potential indications and defects were identified and evaluated at the proper thresholds:

Nondestructive Examination and Welding Activities (IP Section 03.01)

Alloy 600 Weld Inspection and Mitigation (November 14, 2024–December 18, 2024)

- Dye Penetrant (PT) Examination of weld overlay locations
- Phased Array Ultrasonic Testing (PAUT) of safety injection piping
- Fabrication of full structural weld overlay on hot leg 2 shutdown cooling line

Vessel Upper Head Penetration Inspection Activities (IP Section 03.02)

Reactor Pressure Vessel Head (November 14, 2024–December 18, 2024)

- Preparatory machining activities for control rod drive mechanism (CRDM) nozzle repairs
- PT examination of reactor vessel head vent line
- Inner diameter (ID) profilometry of CRDM nozzle #5

OTHER BASELINE ACTIVITIES

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 03.03)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) PAL-02885, "Adverse Trend in Human Performance Incidents," August 9, 2024

A summary of this review and the inspectors' observations are documented in the Results Section below.

System Return to Service

On December 2, 2024, the inspectors commenced reviews of Phases I and II of the licensee's system return to service (SRTS) plans. The SRTS plans document licensee activities to verify that the configuration and condition of Systems, Structures, and Components (SSCs) are consistent with the design and licensing bases to support potential restart. The inspectors began initial reviews on Phases I and II of the SRTS plans, which include areas such as licensing and design-basis functions, system material conditions, reviewing open and deferred work prior to shutdown, and program applicability. The inspectors conducted these reviews using IP 71152, "Problem Identification and Resolution," and IP 71111.21M, "Comprehensive Engineering Team Inspection (CETI)," as applicable.

The inspectors commenced reviews of the SRTS plans for the following systems:

- Auxiliary Feedwater (AFW)
- AC Power Systems
- Service Water
- DC Power Systems
- Emergency Diesel Generators (EDGs)
- Low Pressure Safety Injection and Shutdown Cooling

These systems were selected based on the importance of the SSCs during normal and emergency plant operating conditions, risk significance and defense-in-depth of the SSCs' specific functions and required work/modifications of the SSCs scheduled prior to potential restart.

INSPECTION RESULTS

Assessment: Adverse Trend in Human Performance Incidents	71152
<p>On August 9, 2024, the licensee wrote issue report (IR) PAL-02885 identifying an adverse trend in human performance incidents at the site. Five incidents in July and August 2024 were noted as part of the trend. An apparent cause evaluation (ACE) was performed to understand the incidents and implement actions to arrest the trend. As part of the ACE analysis, the licensee reviewed additional IRs that identified similar human performance incidents. Additionally, a previous safety and human performance trend identified in IR PAL-01857 on February 21, 2024, and associated corrective actions were reviewed.</p> <p>The licensee identified five causal factors documented in the ACE associated with reinforcement of standards, guidance for procedures “on hold,” standards and expectations for new personnel, ineffective communications on safety and human performance issues, and less than adequate evaluation and corrective actions from previously identified issue reports. Corrective actions completed or planned include, but are not limited to, development of a safety and human performance monitoring and communications plan, reinforcement of expectations for site employees, and performance of an effectiveness review.</p> <p>The inspectors reviewed the licensee’s ACE, including IRs for the human performance incidents reviewed as part of the ACE. They also reviewed the identified causal factors and completed and planned corrective actions discussed in the ACE. The inspectors determined that the corrective actions were appropriate to the circumstances.</p> <p>The licensee has planned to perform an effectiveness review of the corrective actions after all actions have been implemented. The inspectors noted that the methods of verification, process attributes, and success criteria for the effectiveness review are still being identified.</p>	

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On January 8, 2024, the inspectors presented the inspection results to M. Mlynarek, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.08P	Corrective Action Documents	PAL-04217	PT Indications for Alloy 600 Weld Overlay	11/18/2024
		PAL-04220	PT Indications on the Stainless on 1A Safety Injection	11/18/2024
		PAL-04282	PT Indications on 2B Safety Injection Stainless Steel Valve	11/22/2024
		PAL-04303	As-measured Palisades RVCH Thickness	11/25/2024
		PAL-04316	PT Indication on 2A Cold Leg SI Nozzle	11/25/2024
		PAL-04614	PT Indications Following Vent Line Machining	12/18/2024
	NDE Reports	CR-2024-3181-10-UT-001	UT Thickness Measurements of RVCH	11/15/2024
		CR-2024-3181-10-UT-002	UT Thickness Measurements of RVCH	11/22/2024
		CR-2024-3406-07-UT-001	UT Thickness Measurements of RVCH	11/26/2024
		CR-2024-3406-08-UT-001	UT Thickness Measurements of RVCH	12/02/2024
		SI-1A-80-00-PT-001	Liquid Penetrant Examination of 1A SI Nozzle	11/16/2024
		SI-1B-80-00-PT-001	Liquid Penetrant Examination of 1B SI Nozzle	11/26/2024
		SI-2A-80-00-PT-001	Liquid Penetrant Examination of 2A SI Nozzle	11/25/2024
		SI-2B-80-00-PT-001	Liquid Penetrant Examination of 2B SI Nozzle	11/22/2024
	Procedures	54-PT-200-026	Color Contrast Solvent Removable Liquid Penetrant Examination of Components	26
		LMT-10-PAUT-007	Fully Encoded Phased Array Ultrasonic Examination of Dissimilar Metal Piping Welds	3
		LMT-10-PAUT-019	Manual Phased Array Ultrasonic Examination of Dissimilar Metal Piping Welds	0
71152	Corrective Action Documents	PAL-02643	Westinghouse PCS Decon Skid Operator Entered Incorrect Value	07/10/2024

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PAL-02768	Wire Rope Contacting Electrical Cable	07/30/2024
		PAL-02770	Extraction of Personnel from Spider Man Basket	07/30/2024
		PAL-02885	Adverse Trend in Human Performance Incidents	08/09/2024
		PAL-02911	Personal Vehicle/Forklift Incident	08/12/2024
		PAL-03651	NSRB Issue - Human Performance	10/17/2024
	Procedures	ENG-105	System Return to Service Plans	1
		OM-126	Management and Oversight of Supplemental Personnel	0
		RA-102	Corrective Action Program	0