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

July 17, 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 05000255/2025003

Dear Mr. Mike Mlynarek:

On June 30, 2025, 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 July 15, 2025, with yourself 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,

Signed by Nguyen, April
on 07/17/25

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

Docket No. 05000255
License No. DPR–20

Enclosure:
As stated

cc: Distribution via LISTSERV®

Letter to Mike Mlynarek from April Nguyen dated July 17, 2025.

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000255
License Number:	DPR–20
Report Number:	05000255/2025003
Enterprise Identifier:	I-2025-003-0065
Licensee:	Holtec Decommissioning International, LLC
Facility:	Palisades Nuclear Plant
Location:	Covert, MI
Inspection Dates:	May 01, 2025, to June 30, 2025
Inspectors:	P. Cataldo, Senior Reactor Inspector, Region I L. Flores, Resident Inspector, South Texas Project N. Floyd, Senior Reactor Inspector, Region I A. Golio, Reactor Inspector, Region I N. Hansing, Mechanical Engineer D. Hoang, Civil Engineer K. Kirchbaum, Senior Operations Engineer, Region II D. Lanyi, Senior Operations Engineer, Region II J. Mancuso, Senior Resident Inspector K. Mangan, Senior Reactor Inspector D. McHugh, Reactor Inspector E. Miller, Senior Reactor Inspector V. Myers, Senior Health Physicist T. Okamoto, Resident Inspector C. Padilla, Reactor Inspector J. Robb, Operations Engineer A. Shaikh, Senior Reactor Inspector C. Speer, Reactor Systems Engineer C. St. Peters, Senior Project Engineer K. Warner, Senior Health Physicist, Region I J. Winslow, Senior Project Engineer

Enclosure

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

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) performed inspections of the licensee's activities to verify that modifications performed during increased risk-significant configurations that could cause initiating events or impact the availability and functional capability of mitigating systems or barriers are identified and resolved; to verify that the safety functions of important safety systems and the design bases, licensing bases, and performance capability of systems, structures, and components (SSCs) have not been degraded through modifications; to verify that appropriate risk assessments and corresponding work controls and risk management actions are implemented during planned and emergent maintenance 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; SSCs are appropriately inspected, maintained, and tested to ensure they can perform their required safety functions for potential restart; and radiation safety activities are appropriately performed.

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 inspectors, as well as supplemental inspectors, continue to provide daily oversight of the restart activities occurring at the site.

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

71111.01 – Adverse Weather Protection

Impending Severe Weather (IP Section 03.02)

(1) The inspectors evaluated the adequacy of the overall preparations to protect risk-significant systems from impending heavy rainfall during the week of June 23, 2025. The inspectors focused their reviews on external flood protection measures for the service water system and turbine building.

71111.04 – Equipment Alignment

Partial Walkdown (IP Section 03.01)

The inspectors evaluated system configurations during a partial walkdown of the following system/train:

(1) Emergency diesel generator 1-1 during the rear-bus outage on May 7, 2025

71111.05 – Fire Protection

Fire Area Walkdown and Inspection (IP Section 03.01)

The inspectors evaluated the implementation of the fire protection program during work on the National Fire Protection Association (NFPA) 805 modification project by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) Pre-fire Plan Area 3: 1D switchgear room & north cableway on May 22, 2025

71111.07 – Heat Exchanger/Sink Performance

Annual Review (IP Section 03.01)

The inspectors observed and evaluated the licensee's inspection and maintenance activities of the following heat exchanger:

(1) Component cooling water (CCW) heat exchanger E-54A from May 29, 2025 through June 12, 2025

71111.08P - Inservice Inspection Activities (PWR)

From May 1 through June 30, 2025, the inspectors observed and verified the licensee's nondestructive examination (NDE) and repair/replacement activities of the reactor vessel closure head, Alloy 600 weld mitigation activities, and steam generator plugging, stabilization, and sleeving, conducted in accordance with the requirements of the ASME Code Section XI and other guidance documents. The purpose of these inspections was to verify that the reactor coolant system boundary, reactor vessel closure head, steam generators, 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 are being appropriately implemented. During this quarter, the licensee conducted repair/replacement activities for the reactor vessel closure head, steam generator tubes, and Alloy 600 welds in the primary coolant system and in other areas. Further NRC inspections will monitor repair/replacement activities as they are conducted.

The inspectors verified that the following NDE 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)

(1) Safety Injection nozzle 1A, 1B, 2A, and 2B weld overlays ultrasonic examination reports
(2) Safety Injection valve 1A, 1B, 2A, and 2B weld overlays ultrasonic examination reports
(3) Pressurizer surge line nozzle weld overlay ultrasonic examination reports

Vessel Upper Head Penetration Inspection Activities (IP Section 03.02)

(1) Reactor head penetration Alloy 690 nozzle welding

Steam Generator Tube Inspection Activities (IP Section 03.04)

(1) Steam generator 'A' tube sleeving and eddy current testing

71111.13 – Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management (IP Section 03.01)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned work activities to ensure configuration changes and appropriate work controls were addressed:

(1) Risk management for the coordination of activities involving foreign material recovery during steam generator 'A' repair work, reactor vessel head weld machine troubleshooting, and rear-bus outage during the work week of May 5, 2025

71111.18 – Plant Modifications

Permanent Modifications (IP Section 03.02)

The inspectors evaluated the following permanent modification:

(1) Alternate spent fuel pool cooling modification and core boring activities on June 2, 2025

71111.20 – Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01)

The inspectors verified that the following outage activities important to safety were appropriately managed:

(1) Control room performance during primary coolant system drain-down to midloop and temporary head lift on May 22, 2025
(2) Clearance and foreign material exclusion control during steam generator 'B' nozzle dam installation mock-up training on June 11, 2025

RADIATION SAFETY

Radiation Safety – Occupational and Public

From June 23, 2025, to June 27, 2025, the inspectors evaluated various activities related to occupational and public radiation safety. The inspectors looked at various aspects of the radiological effluent controls and radiological environmental monitoring programs. This included review of the newly revised Offsite Dose Calculation Manual (ODCM) that, for restart purposes, re-incorporated portions of the manual that had been removed while in decommissioning. This included review of items such as iodine sampling in the environment and secondary side effluent monitoring instrumentation requirements. The inspectors reviewed this revision against the revision in place prior to shutdown and assessed any difference between these revisions for technical validity. The inspectors also reviewed the 2024 Radioactive Effluent Release Report and Radiological Environmental Operating Report. In addition, the inspectors observed preparation of a liquid batch discharge (LRW-062625). This included direct observations of

tank sampling, analysis of the samples for gamma emitters and tritium, preparation of the liquid discharge permit, and dose calculations.

The inspectors also focused on various aspects of the installed radiation monitoring instrumentation system. This included review of calibration/maintenance records for the spent fuel pool area radiation monitors (RIA-2313 and RIA-5709) and the radwaste ventilation monitor (RIA-1809), which have been maintained since the facility was shutdown. In addition, the inspectors assessed aspects of radiation monitoring instrumentation that are not required in the current state but are expected to be re-incorporated into the operational Technical Specifications (TS). This included a record review of the recent calibration of the west engineered safeguards room ventilation radiation monitor (RIA-1811) and direct observation of the calibration of the containment atmosphere gaseous activity monitor (RIA-1817) from both the control room and the detector location in containment.

In addition, the inspectors performed various walkdowns of the facility. This included walkdowns of the auxiliary building and track alley, which contain components of the liquid and gaseous effluent systems. The inspectors also walked down the containment building to observe radiological postings and controls for ongoing work activities and interviewed staff in relation to radiological controls.

The inspectors conducted these reviews using IP 71124.01 Radiological Hazard Assessment and Exposure Controls, IP 71124.05, “Radiation Monitoring Instrumentation,” IP 71124.06 “Radioactive Gaseous and Liquid Effluent Treatment,” and IP 71124.07 “Radiological Environmental Monitoring Program.”

OTHER BASELINE ACTIVITIES

71152 – Problem Identification and Resolution

System Return to Service

During the inspection period, the inspectors continued 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 reviewed 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:

- alternate shutdown panel
- buildings and grounds
- chemical addition
- containment isolations and penetrations
- containment purge

- containment air coolers
- digital electro-hydraulics
- turbine electro-hydraulic controls
- emergency lighting
- feedwater purity air
- main steam
- spent fuel pool and auxiliary building

The inspectors completed initial reviews of the SRTS plans for the following systems:

- air ejection
- steam generator blowdown
- condensate and condenser
- containment building and miscellaneous equipment
- containment spray
- diesel generator room heating, ventilation, and air conditioning (HVAC)
- demineralized makeup water
- domestic water
- high pressure safety injection
- engineered safeguards room HVAC
- fuel handling
- heaters, extraction steam, and drains
- high pressure air
- hydrogen monitoring
- instrument air and service air
- miscellaneous gas
- pressurizer pressure and level control
- radiation monitoring
- liquid radioactive waste
- solid radioactive waste
- reactor primary shield cooling
- electrical equipment, switchgear, and cable spreading room HVAC
- switchyard
- waste gas system

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 SSC's specific functions and required work/modifications of the SSCs scheduled prior to potential restart.

The inspectors evaluated the initial SRTS plans for each system to identify if planned licensee activities will verify that the configuration and condition of the SSCs are consistent with the proposed operational design and licensing bases to support restart and verify readiness of the SSCs to support a return to service. The inspectors noted that the SRTS plans are intended to be living documents with a phased approach to SRTS. As the licensee progresses through the

SRTS phases, the SRTS plans will undergo additional reviews by NRC inspector to ensure appropriate SSC restoration and operability/functionality.

INSPECTION RESULTS

No additional inspection results.

EXIT MEETINGS AND DEBRIEFS

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

- On July 15, 2025, 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
71111.01	Engineering Evaluations	DBD-7.08	Plant Protection Against Flooding	6
	Procedures	AOP-38	Acts of Nature	23
71111.04	Corrective Action Documents	PAL-03759	K-6A EDG 1-1 Exhaust and Lube Oil Leak	10/22/2025
		PAI-03897	Oil On EDG 1-1 3L Head Cover	10/29/2025
		PAL-03899	EDG 1-1 Minor Lube Oil Leak	10/29/2025
		PAL-03900	EDG 1-1 Jacket Water Leak	10/29/2024
	Procedures	SOP-22	Emergency Diesel Generator 1-1	85
71111.05	Fire Plans	PFP	Pre-Fire Plan	6
	Procedures	EN-MA-133	Control of Scaffolding	25
71111.07A	Corrective Action Documents	PAL-07568	CCW Heat Exchanger, E54-A, Drawing M0014, Sh. 0026, Rev. 8 Error	06/06/2025
		PAL-07821	Tubes Identified for Plugging on E-54A CCW Heat Exchanger	06/16/2025
		PAL-07956	Weeping Welded Plugs Identified on E-54A	06/20/2025
	Procedures	SEP-HX-PLP-001	Heat Exchanger Condition Assessment Program	0
		WI-MA-302	Component Cooling Water Heat Exchanger Maintenance	0
	Work Orders	WO 00583173-07	E-54A Inspect “As-Found” Condition of Heat Exchanger Tubes	05/29/2025
		WO 583173-08	Eddy Current Report for Holtec International Palisades Nuclear Power Plant Unit 1 CCW E-54A	06/2025
71111.08P	NDE Reports	PAL1-ISI-VE-24-0004	Pressurizer Surge Elbow to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-001	Pressure Operated Relief Valve (PORV) Nozzle to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-002	Pressurizer Surge Line Nozzle to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-003	Pressurizer Safe End to Elbow Weld	03/05/2025
		PAL1-ISI-VE-24-005	Pressurizer Surge Line Nozzle to Safe End Weld	03/05/2025

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PAL1-ISI-VE-24-006	1A Safety Injection Valve to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-007	1A Safety Injection Nozzle to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-008	1B Safety Injection Valve to Safe End Weld	03/13/2025
		PAL1-ISI-VE-24-009	1B Safety Injection Nozzle to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-010	2A Safety Injection Valve to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-011	2A Safety Injection Nozzle to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-012	2B Safety Injection Valve to Safe End Weld	03/05/2025
		PAL1-ISI-VE-24-013	2B Safety Injection Nozzle to Safe End Weld	03/05/2025
	Procedures	55-GWP01-024	Framatome General Welding Procedure	07/31/2024
		55-OI0033-022	Framatome Ambient I.D.T.B Welding of CEDM/CET Penetration of Reactor Vessel Closure Heads Utilizing Modified Local Cavity Weld Head	03/19/2025
		55-SPP09-013	Framatome Special Process Procedure	12/05/2019
71111.13	Corrective Action Documents	PAL-06910	Unannounced MIOSHA Visit	05/08/2025
71111.18	Engineering Changes	AWA-01	Advance Work Authorization for WO 587572	3
		EC 93369	Alternate Component Cooling Water Connections to SFP Heat Exchanger E-53A/E-53B	10/03/2024
71111.20	Corrective Action Documents	PAL-07259	Temporary Reactor Head Is Leaking	05/23/2025
	Procedures	RFL-SG-2	S/G Primary Nozzle Dam Installation and Removal	11
		SOP-1B	Primary Coolant System Cooldown	21
		SOP-1B Attachment 8	PCS Equipment Elevations and Volumes	21
		SOP-3	Safety Injection and Shutdown Cooling System	109

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71124.01	Corrective Action Documents	PAL-07410	Worker Cutting Through Posted Area	05/31/2025
	Radiation Surveys	20251075	Containment 607 Radiological Survey	05/30/2025
71124.05	Procedures	RR-9M	Containment Atmosphere Gas Monitor RIA-1817 Calibration and Channel Functional Test	16
	Work Orders	50084215	RIA-1809 Calibration	08/08/2024
		52985234	RIA-1811 Calibration	05/20/2025
		53008855	Area Monitor Operation Check	12/13/2024
71124.06	Miscellaneous	LRW-062625	Liquid Discharge Permit for Tanks 87 A/B	06/26/2025
		N/A	Land Use Census Report	08/07/2024
		ODCM	Offsite Dose Calculation Manual	36
	Procedures	CH 6.42	LADTAP	9
		CHM-101	Radioactive Liquid Release	0
		CHM-311	TRICARB Liquid Scintillation	0
71152	Miscellaneous	PLP-SRTSP-AES	Air Ejectors	Draft A
		PLP-SRTSP-ASP	Alternate Shutdown Panel	0
		PLP-SRTSP-BAG	Buildings and Grounds	Draft B
		PLP-SRTSP-BLD	Steam Generator Blowdown	Draft A
		PLP-SRTSP-CDS	Condensate and Condenser	Draft A
		PLP-SRTSP-CHM	Chemical Addition	Draft A
		PLP-SRTSP-CIS	Containment Isolations and Penetrations (Airlocks)	Draft A
		PLP-SRTSP-CLP	Containment Building and Miscellaneous Equipment	Draft B
		PLP-SRTSP-CPG	Containment Purge	Draft A
		PLP-SRTSP-CRS	Containment Air Coolers	Draft A
		PLP-SRTSP-CSS	Containment Spray System	Draft A

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PLP-SRTSP-DEH	Digital Electro-Hydraulics	Draft A
		PLP-SRTSP-DGV	Diesel Generator Room HVAC	Draft A
		PLP-SRTSP-DMW	Demineralized Makeup Water	Draft A
		PLP-SRTSP-DWS	Domestic Water	Draft A
		PLP-SRTSP-EHC	Turbine Electro-Hydraulic Controls	Draft A
		PLP-SRTSP-ELU	Emergency Lighting	Draft A
		PLP-SRTSP-ESV	Engineered Safeguards Room HVAC	Draft A
		PLP-SRTSP-FHS	Fuel Handling	Draft A
		PLP-SRTSP-FPA	Feedwater Purity Air	Draft A
		PLP-SRTSP-HED	Heaters, Extraction Steam, and Drains	Draft A
		PLP-SRTSP-HPA	High Pressure Air	Draft A
		PLP-SRTSP-HPI	High Pressure Safety Injection	Draft A
		PLP-SRTSP-HYM	Hydrogen Monitoring	Draft A
		PLP-SRTSP-IAS	Instrument Air and Service Air	Draft A
		PLP-SRTSP-LRW	Liquid Radioactive Waste	Draft A
		PLP-SRTSP-MGS	Miscellaneous Gas	Draft A
		PLP-SRTSP-MSS	Main Steam System	Draft A
		PLP-SRTSP-PZR	Pressurizer Pressure and Level Control	0
		PLP-SRTSP-RIA	Radiation Monitoring	0
		PLP-SRTSP-SCS	Reactor Primary Shield Cooling	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PLP-SRTSP-SCV	Electrical Equipment, Switchgear, and Cable Spreading Room HVAC	Draft A
		PLP-SRTSP-SRW	Solid Radioactive Waste	Draft A
		PLP-SRTSP-SWY	345KV Switchyard	Draft A
		PLP-SRTSP-VAS	Spent Fuel Pool and Auxiliary Building HVAC	Draft A
		PLP-SRTSP-WGS	Waste Gas System	Draft A