



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

August 3, 2022

Mr. 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 – INTEGRATED INSPECTION REPORT  
05000255/2022002

Dear Mr. Mlynarek:

On June 13, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Palisades Nuclear Plant. On June 21, 2022, the NRC inspectors discussed the results of this inspection with Mr. Darrell Corbin, Site Vice President, Entergy Nuclear Operations, Inc., and other members of your staff. The results of this inspection are documented in the enclosed report.

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

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 "Elise C. Eve".

Signed by Burket, Elise  
on 08/03/22

Elise C. Eve, Acting Chief  
Branch 2  
Division of Reactor Projects

Docket No. 05000255  
License No. DPR-20

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

Letter to Mike Mlynarek from Elise C. Eve dated August 3, 2022.

SUBJECT: PALISADES NUCLEAR PLANT – INTEGRATED INSPECTION REPORT  
05000255/2022002

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**Inspection Report**

Docket Number: 05000255

License Number: DPR-20

Report Number: 05000255/2022002

Enterprise Identifier: I-2022-002-0051

Licensee: Entergy Nuclear Operations, Inc.<sup>1</sup>

Facility: Palisades Nuclear Plant

Location: Covert, MI

Inspection Dates: April 1, 2022 to June 13, 2022

Inspectors: J. Dykert, Acting Senior Resident Inspector  
R. Edwards, Senior Reactor Inspector  
J. Mancuso, Acting Senior Resident Inspector  
C. St. Peters, Resident Inspector

Approved By: Elise C. Eve, Acting Chief  
Branch 2  
Division of Reactor Projects

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<sup>1</sup> License transferred to Holtec Decommissioning International, LLC on June 28, 2022

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Palisades Nuclear Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

### **List of Findings and Violations**

No findings or violations of more than minor significance were identified.

### **Additional Tracking Items**

None.

## PLANT STATUS

The plant began the inspection period at full power. On May 20, 2022, power operations ceased. All reactor fuel was removed from the reactor vessel and safely stored in the spent fuel pool by June 10, 2022. By letter dated June 13, 2022, Entergy Nuclear Operations, Inc. submitted a Certification of Permanent Cessation of Power Operations to the NRC certifying that the plant had permanently ceased power operations and that all fuel had been permanently removed (ADAMS Accession No. [ML22164A067](#)). Effective June 13, 2022, the NRC notified Entergy Nuclear Operations, Inc. that oversight activities will no longer be conducted in accordance with the Operating Reactor Assessment Program and that oversight activities will be conducted in accordance with the Decommissioning Power Reactor Program (ADAMS Accession No. [ML22164A432](#)). On June 28, 2022, Entergy Nuclear Operations, Inc. informed the NRC of the successful purchase and sale transaction closing of the Palisades facilities to Holtec Decommissioning International, LLC (ADAMS Accession No. [ML22179A075](#)). On the same day, the NRC issued license amendments transferring the Palisades Nuclear Plant facility license from Entergy Nuclear Operations, Inc. to Holtec Palisades, LLC; and Holtec Decommissioning International, LLC (ADAMS Accession No. [ML22173A179](#)).

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the 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>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed activities described in IMC 2515, Appendix D, "Plant Status," observed risk significant activities, and completed on-site portions of IPs. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

## REACTOR SAFETY

### 71111.04 - Equipment Alignment

#### Partial Walkdown Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) 1-2 emergency diesel generator, during routine 1-1 emergency diesel generator surveillance on May 2, 2022
- (2) Left train containment spray following routine surveillance on containment spray pump P-54B on May 5, 2022

#### 71111.05 - Fire Protection

##### Fire Area Walkdown and Inspection Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the implementation of the fire protection program 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) Fire Area 16: component cooling water pump room; elevation 590', 607'-6", & 625' on April 6, 2022
- (2) Fire Area 2: cable spreading room; elevation 607' on April 22, 2022
- (3) Fire Area 13G: spent fuel pool heat exchanger room, elevation 590' on May 13, 2022

#### 71111.06 - Flood Protection Measures

##### Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Component cooling water pump room on April 1, 2022

#### 71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

##### Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the control room during reactor shutdown on May 20, 2022.

#### 71111.12 - Maintenance Effectiveness

##### Maintenance Effectiveness (IP Section 03.01) (1 Sample)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Emergency diesel generator system on May 4, 2022

#### 71111.13 - Maintenance Risk Assessments and Emergent Work Control

##### Risk Assessment and Management Sample (IP Section 03.01) (2 Samples)

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

- (1) Protected equipment walkdown during elevated shutdown risk on May 31, 2022
- (2) Elevated risk due to reduced inventory on June 2, 2022

## 71111.15 - Operability Determinations and Functionality Assessments

### Operability Determination or Functionality Assessment (IP Section 03.01) (1 Sample)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) Immediate operability determination due to door-142 being declared non-functional on May 15, 2022

## 71111.19 - Post-Maintenance Testing

### Post-Maintenance Test Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the following post-maintenance testing activities to verify system operability and/or functionality:

- (1) Component cooling water periodic maintenance on April 14, 2022
- (2) Ultrasonic flow monitor repair on May 6, 2022
- (3) 1-3 emergency diesel generator planned work on May 10, 2022
- (4) Diesel driven fire pump post-maintenance test following planned maintenance on May 17, 2022
- (5) Bench test following replacement of nuclear instrument, NI-2/4A, NI-1/3A spare drawer on May 26, 2022

## 71111.20 - Refueling and Other Outage Activities

### Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated final shutdown activities from May 20 to June 10, 2022.

## 71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance testing activities to verify system operability and/or functionality:

### Surveillance Tests (other) (IP Section 03.01) (2 Samples)

- (1) RO-128, 1-1 emergency diesel generator 24-hour load run on April 4-5, 2022
- (2) QO-14A, service water pump P-7A on May 18, 2022

### Inservice Testing (IP Section 03.01) (1 Sample)

- (1) QO-16B, containment spray inservice test on May 3, 2022

### RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

- (1) Control rod drive mechanism 23 elevated leak rate from May 16 to May 20, 2022

FLEX Testing (IP Section 03.02) (1 Sample)

- (1) Annual FLEX Testing on April 21, 2022

**OTHER ACTIVITIES – BASELINE**

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (1 Sample)

- (1) Unit 1 (April 1, 2021 through March 31, 2022)

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (1 Sample)

- (1) Unit 1 (April 1, 2021 through March 31, 2022)

71152A - Annual Follow-Up Problem Identification and Resolution

Annual Follow-Up of Selected Issues (Section 03.03) (1 Sample)

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

- (1) Corrective actions and evaluation of the 1-1 emergency diesel generator 5R fuel line support stud failure as documented in CR-PLP-2022-00283

**INSPECTION RESULTS**

No findings were identified.

**EXIT MEETINGS AND DEBRIEFS**

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

- On June 21, 2022, the inspectors presented the integrated inspection results to Mr. Darrell Corbin, Site Vice President, Entergy Nuclear Operations, Inc., and other members of the licensee staff.



## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Procedures	SOP-22	Emergency Diesel Generators	85
		SOP-3	Safety Injection and Shutdown Cooling System	109
71111.05	Fire Plans	Pre-Fire Plan 13G	Spent Fuel Pool Heat Exchanger Room; Elevation 590'	6
		Pre-Fire Plan 16	Component Cooling Pump Room, Elevation 590', 607'-6", and 625'	6
		Pre-Fire Plan 2	Cable Spreading Room, Elevation 607' -6", Room 224	6
71111.06	Calculations	EA-C-PAL-95-1526-01	Internal Flooding Evaluation for Plant Areas Outside of Containment	4
	Miscellaneous	DBD-7.08	Design Basis Document for Plant Protection Against Flooding	6
	Procedures	AOP-39	Internal Plant Flooding	2
		MSM-M-16	Inspection of Watertight Barriers	19
71111.11Q	Procedures	GOP-8	Power Reduction and Plant Shutdown to Mode 2 or Mode 3 = 525°	40
		GOP-9	Mode 3 = 525° to Mode 4 or Mode 5	37
71111.12	Miscellaneous	Engineering Report PLP-RPT-12-00026, Attachment 2	Maintenance Rule Scoping Document	4
		System Health Report	Q4-2021, Unit 1, Emergency Diesel Generators	10/01/2020 – 06/30/2021
		System Health Report	Q4-2020 Unit 1, Emergency Diesel Generators	10/01/2020 - 12/31/2020
		System Health Report	Q2-2020, Unit 1, Emergency Diesel Generators	04/01/2020- 06/30/2020
		System Health Report	Q2-2021, Unit 1, Emergency Diesel Generators	04/01/2021 - 06/30/2021
71111.13	Procedures	GOP-14	Shutdown Cooling Operations	54
71111.15	Corrective Action Documents Resulting from	CR-PLP-2022-00838	Door-142, Entrance to "C" Bus Area, Watertight Door has Small Gap on Lower Right Portion as You Enter "C" Bus Area with the Normal Single Dog Closed	05/06/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Inspection			
	Procedures	4.02	Control of Equipment	92
		FPIP-4	Fire Protection Systems and Fire Protection Equipment	42
71111.19	Procedures	QO-15	Inservice Test Procedure - Component Cooling Water Pumps	42
	Work Orders	00572797-01	EC-999; UFM is No Longer Able to Communicate - T/S & Repair	01/25/2022
		00572797-04	EC-999; UFM is No Longer Able to Communicate - T/S & Repair	12/28/2021
		00572797-06	EC-999; UFM is No Longer Able to Communicate - T/S & Repair	04/28/2022
		00573309-02	M-1000; (K-5) OPS-PMT	05/17/2022
		00573479	NI-2/4A; Spare Drawer Checkout Cont. Replacement	03/21/2022
		00574082-02	K-5; Fuel Leak Beneath Fuel Pump - Severity 2 - PMT	05/17/2022
		00576343-01	M-1005; Failed to Run During PMT & CNTRL Shows Volt Reg Fault	03/17/2022
		00576343-02	M-1005; Failed to Run During PMT & CNTRL Shows Volt Reg Fault	03/17/2022
		00576343-03	M-1005; Failed to Run During PMT & CNTRL Shows Volt Reg Fault	03/17/2022
		00576343-04	M-1005; Failed to Run During PMT & CNTRL Shows Volt Reg Fault	03/18/2022
		00576343-07	M-1005; Failed to Run During PMT & CNTRL Shows Volt Reg Fault	03/17/2022
		52975478-02	FPSP-RM-3 for K-5 (P-9B); OPS-PMT	05/17/2022
		52986171-01	P-52A Pump Bearing Oil Change	04/06/2022
		52986171-02	P-52A, Pump Bearing Oil Change (OP5553)	04/06/2022
		52994396-02	QO-15A -P-52A ISI Test Procedure - Component Cooling Pump	03/31/2022
71111.20	ALARA Plans		Work Order 52957914; Disassembly of the Reactor Head / (Reset RX Head in Cavity) and Associated Work Activities (1DF1)	03/03/2022
	Procedures	DWC-2	PCS Radiochemistry Analysis	43
		GOP-9	Mode 3 = 525°F tot Mode 4 or Mode 5	37

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PO-2	PCS Pressure and Temperature Data	7
	Work Orders	52957464	RIA-2316/17 Fuel Handling Monitor Adjustments	03/24/2022
		568781-01	PCS Hot Leg Level LT-0106 Calibration	03/24/2022
71111.22	Engineering Changes	92896	Document Acceptability of Leaving Pipe Cooling Tool for CRDM Leak-Off Line in Containment While at Power	
	Procedures	RO-128-1	Diesel Generator 1-1 24 Hour Load Run	28
	Work Orders	5296254-01	FLEX Standby PM: P-990 One Year Operational Test (FSB B)	04/19/2022
		5296362-01	FLEX Standby PM: K-1-FLEX One Year Operational Test (FSB A)	04/19/2022
		5296368-01	FLEX Standby PM: K-2-FLEX One Year Operational Test (FSB B)	04/19/2022
		52968248-01	FLEX Standby PM: P-1003 One Year Operational Test (FSB A)	04/19/2022
		578663-01	MV-CC195, CRDM Leak-Off Isolation Valve Set-Up and Operate Pipe Qwik-Freeze Tool	04/03/2022
71151	Miscellaneous		NRC Performance Indicators - Safety System Functional Failures	04/01/2021 - 03/31/2022
			NRC Performance Indicators - Unplanned Power Changes per 7000 Critical Hours	04/01/2021 - 03/31/2022
71152A	Corrective Action Documents	CR-PLP-2022-00283	After K-6A, Emergency Diesel Generator 1-1 was Secured Following a MO-7A-1 Diesel Run, NPOs Found Sheared Stud on the Ground	02/07/2022
	Miscellaneous	Apparent Cause Analysis for CR-PLP-2022-00283	EDG 1-1 High Pressure Fuel Tube Stud Failure	03/10/2022
		Vendor Manual	Alco Instruction Manual	97