



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

August 10, 2021

Pamela B. Cowan
Sr. Vice President and COO
Holtec Decommissioning International, LLC
Krishna P. Singh Campus
1 Holtec Blvd.
Camden, NJ 08104

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, PILGRIM NUCLEAR
POWER STATION - NRC INSPECTION REPORT NO. 05000293/2021002

Dear Ms. Cowan:

On June 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed its quarterly inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shutdown Pilgrim Nuclear Power Station (PNPS). An on-site inspection was performed from June 7 - 11, 2021. Additional inspection activities (in office reviews) were conducted remotely as a consequence of the COVID-19 public health emergency (PHE) during the inspection period. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and the conditions of your license. The inspection consisted of observations by the inspector, interviews with site personnel, a review of procedures and records, and plant walk-downs. The results of the inspection were discussed with Mr. John Moylan, Site Vice President, and other members of the PNPS staff on July 14, 2021, and are described in the enclosed report.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, if any, should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Radioactive Waste; Decommissioning of Nuclear Facilities**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's Website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy** (Under 'Related Information'). You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

No reply to this letter is required. Please contact Harold (Harry) Anagnostopoulos at 610-337-5322 if you have any questions regarding this matter.

Sincerely,

Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health
Physics Branch
Division of Radiological Safety and Security

Docket No. 05000293

License No. DPR-35

Enclosure: Inspection Report 05000293/2021002
w/Attachment

cc w/encl: Distribution via ListServ

HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, PILGRIM NUCLEAR POWER STATION - NRC INSPECTION REPORT NO. 05000293/2021002, DATED AUGUST 10, 2021

DOCUMENT NAME: [https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection Reports/Inspection Reports - Final/PG 2020004 Inspection Report_22FEB2021_HWA Final.docx](https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection%20Reports/Inspection%20Reports%20-%20Final/PG%202020004%20Inspection%20Report_22FEB2021_HWA%20Final.docx)

SUNSI Review Complete: HAnagnostopoulos

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Docket No. 05000293
License No. DPR-35
Report No. 05000293/2021002
Licensee: Holtec Decommissioning International, LLC (HDI)
Facility: Pilgrim Nuclear Power Station (PNPS)
Location: Plymouth, Massachusetts
Inspection Period: April 1, 2021 to June 30, 2021
Topical Inspection Dates: June 7 - 11, 2021
Inspector: Harold Anagnostopoulos, Senior Health Physicist
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Radiological Safety and Security

Approved By: Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Radiological Safety and Security

EXECUTIVE SUMMARY

Holtec Decommissioning International, LLC (HDI)
Pilgrim Nuclear Power Station (PNPS)
NRC Inspection Report No. 05000293/2021002

An announced routine decommissioning inspection of Pilgrim Nuclear Power Station (PNPS) was completed on June 30, 2021. An on-site focused topical inspection using three inspection procedures was conducted from June 7 - 11, 2021. Additional inspection activities were conducted remotely during the inspection period as a consequence of the COVID-19 public health emergency (PHE). The inspection included a review of the results of routine radiological effluent and environmental monitoring, inspection of radioactive waste processing and storage equipment & areas, changes to the Offsite Dose Calculation Manual (ODCM), inspection of the 10 CFR Part 37 security program, and an observation of Onsite Safety Review Committee activities. The inspection consisted of observations by the inspector, interviews with site personnel, a review of procedures and records, and plant walk-downs. The U.S Nuclear Regulatory Commission's (NRC's) program for overseeing the safe operation of a shutdown nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program."

Based on the results of this inspection, no violations of NRC requirements were identified.

REPORT DETAILS

1.0 Background

On June 10, 2019, Entergy Nuclear Operations, Inc. (ENOI) certified cessation of power operations and the permanent removal of fuel from the PNPS reactor vessel (ADAMS Accession Number: ML19161A033). This met the requirements of 10 CFR 50.82(a)(1)(i) and 50.82(a)(1)(ii). On June 11, 2019, the NRC notified PNPS that the NRC would no longer perform its oversight activities in accordance with the Operating Reactor Assessment Program and that oversight would be conducted under the provisions outlined in IMC 2561 "Decommissioning Power Reactor Inspection Program" (ADAMS Accession No. ML19162A033). On August 27, 2019 an amendment was issued transferring the license from ENOI to Holtec International, LLC., (HDI) (ADAMS Accession No. ML19235A050). PNPS is in the active decommissioning phase with fuel in the spent fuel pool as described in IMC 2561.

2.0 Decommissioning Performance and Status Review

a. Inspection Scope [Inspection Procedures 84750, 86750, 87137]

The inspector performed a walk-down of selected waste processing systems to verify that the system configurations and operations were in agreement with the descriptions in the Decommissioning Safety Analysis Report (DSAR), the Offsite Dose Calculation Manual (ODCM), and the Process Control Program (PCP).

The inspector reviewed the most recent radiological surveys of radioactive waste storage and processing areas to assess their radiological conditions, and then entered a selection of these areas to observe their material condition.

The inspector reviewed any changes made to the ODCM, PCP, and the radioactive waste system design and operation.

The inspector observed the condition of the liquid effluent radioactive waste radiation monitor, its associated valves, and walked-down the exposed portions of the discharge piping. The inspector reviewed the results of a recent pressure-drop test of the liquid radioactive waste discharge line, which was performed to verify the integrity of the piping and its connections.

The inspector selected a sample of effluent radiation monitors and to determine if they were appropriately calibrated.

The inspector performed a walk-down of the Reactor Building and Turbine Building roof areas. The inspector toured the accessible portions of the reactor containment (drywell 23 foot elevation), and observed the storage of control rod drive mechanisms in a storage area of the main turbine deck. The inspector performed direct observations of the conditions of the turbine building air effluent radiation monitors.

The inspector reviewed the Annual Radioactive Effluent Release Report and the Annual Radiological Environmental Operating Report for any anomalous results to verify that reported doses were below regulatory requirements.

The inspector observed a selection of environmental sampling stations to evaluate their location, placement, and material condition. The inspector reviewed the implementation of the Groundwater Protection Initiative program, attended a meeting of the Onsite Safety Review Committee to observe management processes, and reviewed the results of the Phase 1 site characterization effort.

Using inspection procedure 86750 (and portions of 87137 as a technical reference), the inspector evaluated implementation of the licensee's security plan associated with 10 CFR 37, walked-down the storage areas, and discussed the security strategies for these areas with the Security Manager.

b. Observations and Findings

The inspector verified that HDI had identified problems associated with radioactive waste storage, processing, and transportation activities, entered them into the corrective action program, and had implemented appropriate corrective actions.

The inspector determined that recent changes to the Radiological Environmental Monitoring Program (REMP) were appropriate to the change in plant status and plant conditions following permanent cessation of operations (and the associated decay of short-lived radionuclides).

The inspector determined that the air effluents from the turbine building were minimal (following permanent cessation of operations) and appropriately accounted for by the reactor building ventilation monitor. The turbine building gaseous effluent monitoring system has been removed from service.

The inspector observed the wind-related damage to the turbine building roof membrane and verified that the damage was not likely to cause any immediate challenge to the ability to manage water infiltration or the safe storage of radioactive materials. The planned timeline for repairs was determined to be adequate.

The inspector determined the Onsite Safety Review Committee's activities to be intrusive, challenging, and an effective management tool to ensure safe and compliant decommissioning activities.

c. Conclusions

Based on the results of this inspection, no violations of NRC requirements were identified.

3.0 Exit Meeting Summary

On July 14, 2021, the inspector presented the inspection results to Mr. John Moylan, Site Vice President, and other members of the HDI staff. No proprietary information was retained by the inspector or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

J. Moylan, Site Vice President
J. McDonough, Operations Manager
D. Noyes, Senior Compliance Manager
M. Lawson, Radiation Protection Manager
F. McGinnis, Regulatory Assurance Specialist
J. O'Donnel – Operations Shift Manager
M. Thornhill, Certified Health Physicist

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

10 CFR Part 37 Security Plan
10 CFR Part 37 security program annual reviews for 2019 and 2020
“Air Station Location Study at the Pilgrim Nuclear Power Station Based on 2016 – 2019 Meteorological Data”, Holian Environmental, LLC, May 2020
“Annual Radioactive Effluent Release Report, January 1 through December 31, 2020”, dated 5/6/2021
“Annual Radiological Environmental Operating Report, January 1 through December 31, 2020”, dated 5/6/2021
“Comparison Study of Meteorological Data from the 220-Foot Primary and 160-Foot Backup Towers at the Pilgrim Nuclear Power Station”, Holian Environmental, LLC, August 2019.
EN-NS-101, “Unescorted Access Authorization Program”, Revision 26
EN-NS-101-03, “Processing Individuals for UAA/UA and SGI Access”, Revision 4
EN-NS-101-06, “Terminating, Denial and Appeal of Unescorted Access Authorization/Unescorted Access”, Revision 4
EN-NS-224, “SOCA Access Controls”, Revision 3
EN-RW-105, “Process Control Program”, Revision 6
Issue Reports PIL-01595, 01907, 01915, 02301, 02312, 02397, 02425, 02512, 02600, 02636, 02783, 02877, 03165
Photographs, overboard discharge line effluent flange
Procedure 2.01, “Station Access Control”, Revision 54
Process Radiation Monitor Calibration Package, RBV “A”, dated 7/28/2020
Process Radiation Monitor Calibration Package, RBV “B”, dated 3/19/2020
Process Radiation Monitor Calibration Package, Liquid Radwaste, dated 6/12/2019
“Pilgrim Nuclear Power Station Defueled Safety Analysis Report”, Revision 1
PNPS Groundwater Tritium Results, spreadsheet
PNPS-ODCM, “Pilgrim Nuclear Power Station Offsite Dose Calculation Manual”, Revision 14.
“PNPS Radiological Support Group 1st Half 2020 Self Assessment Report”, dated 7/31/2020
Presentation, “Amended Environmental Site Assessment Work Plan Briefing”, dated 5/24/2021
Radiological Evaluation 21-051, “Basis for Removing the Turbine Building GEMS from Service and Removing it from the ODCM in Revision 14”, Revision 0
Radiological survey map #100, dated 10/30/2020
Radiological survey map #100, dated 6/8/2021
Radiological survey map #103A, dated 4/26/2021

Radiological survey map #113, dated 10/6/2020
 Radiological survey map #115, dated 4/20/2021
 Radiological survey map #117, dated 6/2/2021
 Radiological survey map #118, dated 6/2/2021
 Radiological survey map #118, dated 6/16/2021 at 0900
 Radiological survey map #118, dated 6/16/2021 at 1400
 Radiological survey map #125, dated 9/11/2019
 Radiological survey map #125, dated 2/7/2020
 Radiological survey of the monitor pump room, dated 8/22/2019
 Radiological survey of the treated water pump and tank rooms, dated 8/22/2019
 Radiological survey PNP-1709-0152
 Radiological survey PNP-1711-0112
 Radiological survey PNP-1906-00089
 Report, "PNPS Waste Focus Meeting", dated 6/10/2021
 Work order PIL-WR-2869-15, "Confirm buried portion of liquid radwaste discharge piping between valve 20-HO-316 and discharge canal outlet diffuser is leak tight".

LIST OF ACRONYMS USED

ADAMS	Agency-wide Document and Access Management System
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DSAR	Decommissioning Safety Analysis Report
ENOI	Entergy Nuclear Operations, Inc
GPO	Government Printing Office
HDI	Holtec Decommissioning International, LLC
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Issue Report
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PHE	Public Health Emergency
PCP	Process Control Program
PNPS	Pilgrim Nuclear Power Station
REMP	Radiological Environmental Monitoring Program
SFP	Spent Fuel Pool
SNM	Special Nuclear Material
TI	Transport Index