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

May 11, 2022

Mr. Kelly Trice
President
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. 05000293/2022001

Dear Mr. Trice:

On March 31, 2022, 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). 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 inspectors, 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 your staff on April 20, 2022, and are described in the enclosed report.

Within the scope of this inspection, no violations were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (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 M. Dimitriadis

Digitally signed by Anthony M. Dimitriadis
Date: 2022.05.11 12:30:10 -04'00'

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

Docket No. 05000293
License No. DPR-35

Enclosure:
Inspection Report 05000293/2022001
w/Attachment

cc w/encl: Distribution via ListServ

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, PILGRIM NUCLEAR POWER STATION - NRC INSPECTION REPORT NO. 05000293/2022001 DATED MAY 11, 2022

DOCUMENT NAME: https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection Reports/Inspection Reports - Final/PG 2022001 Inspection Report.docx

SUNSI Review Complete: HAnagnostopoulos
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OFFICE	DNMS/RI		DRSS/RIV		DNMS/RI				
NAME	HAnagnostopoulos/HA		REvans/RJE		ADimitriadis/ ad				
DATE	5/2/2022		5/2/2022		05/11/2022				

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Docket No.	05000293
License No.	DPR-35
Report No.	05000293/2022001
Licensee:	Holtec Decommissioning International, LLC (HDI)
Facility:	Pilgrim Nuclear Power Station (PNPS)
Location:	Plymouth, Massachusetts
Inspection Period:	January 1, 2022 to March 31, 2022
Topical Inspection Dates:	February 28, 2022 to March 3, 2022 March 14, 2022 to March 16, 2022
Inspectors:	Harold Anagnostopoulos, Senior Health Physicist Decommissioning, ISFSI, and Reactor Health Physics Branch Division of Radiological Safety and Security, Region I Robert Evans, Senior Health Physicist Decommissioning, ISFSI, and Operating Reactor Branch Division of Radiological Safety and Security, Region IV Shawn Seely, Health Physicist (training accompaniment) Medical and Licensing Assistance Branch Division of Radiological Safety and Security, Region I
Approved By:	Anthony Dimitriadis, Chief Decommissioning, ISFSI, and Reactor Health Physics Branch Division of Radiological Safety and Security, Region I

Enclosure

EXECUTIVE SUMMARY

Holtec Decommissioning International, LLC (HDI)
Pilgrim Nuclear Power Station (PNPS)
NRC Inspection Report No. 05000293/2022001

An announced routine decommissioning inspection was completed at Pilgrim Nuclear Power Station (PNPS) on March 31, 2022. On-site focused topical inspections using four inspection procedures were conducted on February 28 – March 3 and March 14 – March 16, 2022. Additional inspection activities were conducted remotely during the inspection period. The inspection included an evaluation of the conduct of decommissioning performance & status reviews, a focused inspection of non-radiological building demolition, a review of the security barriers for area access control (10 CFR 37), and selected elements of the radiation protection program. The inspection consisted of observations by the inspectors, 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 decommissioning 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 No. 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). On December 14, 2021 HDI notified the NRC of the permanent removal of all spent fuel assemblies from the spent fuel pool, with their placement in dry storage within the Independent Spent Fuel Storage Installation (ISFSI) II cask storage pad (ADAMS Accession No. ML21348A748).

PNPS is now in the active decommissioning phase with no fuel in the spent fuel pool, as described in IMC 2561.

2.0 Decommissioning Performance and Status Review

2.1 Inspection Procedures 71801, 83750, 83801, 86750

a. Inspection Scope

The inspectors evaluated the status of the decommissioning and verified that activities were in accordance with regulatory requirements. The inspectors evaluated the decommissioning progress against established plans and compared the progress to reports of the financial assurance of the decommissioning trust fund. The inspectors reviewed open work requests and a listing of any maintenance backlog for the facilities. The inspectors reviewed the status of any remaining safety-related structures, systems, and components under the 10 CFR 50.65 "Maintenance Rule" and attended a planning meeting as part of the preparation of a License Termination Plan. The inspectors conducted plant walk-downs of the refueling floor, the reactor building, the turbine building, the radiological waste building, and outside areas within the industrial security area.

The inspectors observed activities, interviewed site staff, and reviewed selected records related to the licensee's implementation of its radiation protection program. The inspectors observed the licensee's movement of greater-than-class C wastes from the spent fuel pool and observed the licensee's radiological controls in place during the movement of the wastes and interviewed selected staff responsible for implementing such controls.

The inspectors observed the licensee's continuous air monitors and other air samplers in operation throughout the radiologically restricted area and reviewed the licensee's analyses of selected air samples. This portion of the inspection included a review of recent sample results and how the licensee's staff responded to exceedances of the procedural action level.

The inspectors observed the licensee's routine sampling of the reactor building ventilation exhaust for tritium and airborne particulates, reviewed the associated procedures, observed the sampling in progress, and interviewed the individual who collected the samples.

The inspectors reviewed the licensee's implementation of its respiratory protection program, examined the material condition and storage of the respiratory protection equipment, and interviewed several staff members who implemented the program.

The inspectors reviewed the licensee's implementation of programs on how the site identifies and corrects problems involving the radiation protection program. The inspectors reviewed the status of the quality assurance audit of the radiation protection program. The inspectors also interviewed the lead auditor, as the audit was in progress at the time of the inspection. The inspectors also reviewed the licensee's trending of issue reports involving the radiation protection program.

The inspectors reviewed Holtec's program for control of high and locked high radiation areas, including a review of radiological surveys for a selection of areas and conducted walkdowns to inspect the area posting and controls. The inspectors reviewed the resumes and documents associated with the certification of qualification for all HDI radiation protection and chemistry staff, including a selection of contractor radiation protection supervisors and radiation protection technicians.

The inspectors conducted observations of the non-radiological demolition of the Operations & Maintenance (O&M) building and the associated Warehouse building. The inspectors initiated a review of the procedures that were used to establish the radiological status of the buildings, the conduct of radiological surveys that were performed to establish the radiological status of the buildings, and the associated documentation.

The inspectors also reviewed the site's 10 CFR Part 37 security plan and performed a comprehensive walk-down of temporary security fencing that was erected to facilitate access by non-cleared personnel, machinery, and trucks to the areas of the O&M building and Warehouse (for non-radiological demolition).

b. Observations and Findings

The inspectors noted that there were no remaining 10 CFR Part 50 safety-related systems, structures, or components at the facility, following the placement of all nuclear fuel on the ISFSI II.

The inspectors found that the licensee's staff conducted the movement of the wastes with an emphasis on both radiological and industrial safety. A sufficient number of radiation protection staff were present during movement of the radioactive wastes and effectively controlled the movements. The site staff used calibrated instruments to measure the contact and general area exposures rates, conducted continuous monitoring for airborne radioactive particulates, analyzed air samples for comparison to the action levels, and implemented temporary high radiation area controls in accordance with technical specifications requirements.

The inspectors determined that the licensee's staff effectively implemented programs for both sampling and analysis for potential radioactive airborne hazards. The implementing procedures were well written and easy to read; although, the inspectors identified several potential procedural enhancements and communicated their observations to the licensee's staff. The inspectors concluded that the licensee's programs were sufficient and effective in identifying and quantifying airborne radiological hazards.

The inspectors observed the licensee's staff conduct the reactor building vent sampling and determined it was in accordance with procedural requirements, and the results of sampling indicated that releases were within procedural limits.

The inspectors determined that the site had established and implemented a program for respiratory protection that included sufficient equipment for use as needed, proper storage of the equipment, and had completed training/qualification of an adequate number of workers as needed to conduct work using respirators. At the time of the inspection the type of work being conducted did not require the use of respiratory protection. The inspectors concluded that the licensee's respiratory protection program met regulatory and procedural requirements.

The inspectors found that the licensee had implemented quality assurance audit and corrective action programs for the radiation protection program. The previous audit, conducted in 2019-2020, concluded that the program satisfied 10 CFR Part 20 requirements. The 2021-2022 audit was in progress during this inspection, and the results of this audit will be reviewed in future inspections. The site conducted trending of Issue Reports, in part, to identify potentially negative trends in the radiation protection program. At the time of the inspection, the two primary trends were being monitored by the licensee's staff, including the administrative/training and radwaste shipping programs.

The inspectors determined that the training, qualification, and certification of radiation protection personnel met the requirements of the Defueled Safety Analysis Report and the Holtec Decommissioning Quality Assurance Program (DQAP), however the inspectors also noted that the ANSI/ANS 3.1 Qualification Memo for the Radiation Protection Manager lacked sufficient objective evidence in the evaluation for the inspectors to verify the conclusions. This was corrected by HDI during the inspection period.

The inspectors determined that the establishment of temporary security fencing within the 10 CFR Part 37 industrial security area at the site was an effective approach in facilitating access (to the O&M Building and the Warehouse for demolition) and consistent with the operation of the security organization. The inspectors identified several opportunities to make the temporary security area boundaries more robust, communicated their observations with the HDI security staff and were immediately adopted during the onsite inspection.

c. Conclusions

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

3.0 Exit Meeting Summary

On April 20, 2022, the inspectors 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 inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

J. Moylan - Site Vice President
J. McDonough - Decommissioning Manager
D. Noyes - Senior Compliance Manager
M. Lawson - Radiation Protection Manager
B. McWilliams - Security Manager
M. Dagnello - Maintenance Manager
M. Thornhill - Certified Health Physicist
A. Steward - RP Supervisor

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Audit, Fire Protection, 2021-I-22, dated 1/20/2022
Audit, Operations and Technical Specifications, 2021-I-17, dated 9/3/2021
Defueled Safety Analysis Report, Revision 3
"Disposition Survey Plan and Final Report of the Operations and Maintenance Building Warehouse", Release Record 2022-01, Revision 1 dated 4/9/2022
ENN-MS-S-009-PNP, Pilgrim Safety Classification Site Specific Guidance and System Safety Function Sheets, Revision 7, dated January 11, 2022
Holtec International Audit Plan, Audit No. 2021-I-27, "Radiation Protection, Radwaste, Chemistry, and Environmental Audit Checklist," Revision 1
Holtec Decommissioning Quality Assurance Program (DQAP), CD-20, Revision 1
Issue Reports IR-PIL-04364, 04367, 04402, 04403, 04404, 04405, 04406
Letter, "Holtec Decommissioning International Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations", dated March 31, 2021
List, work order backlog, dated February 21, 2022
Observation, "Calibration of REM-500 Neutron Meter", dated 8/9/2021
Pilgrim Station 10 CFR Part 37 Security Plan, Revision 0
Procedure P-EN-RP-106, "Radiological Survey Documentation," Revision 8
Procedure P-EN-RP-106-01, "Radiological Survey Guidelines," Revision 6
Procedure P-EN-RP-121, "Radioactive Material Control", Revision 20
Procedure P-EN-RP-140, "Radiation Protection Job Coverage," Revision 0
Procedure P-EN-RP-501, "Respiratory Protection Program," Revision 8
Procedure P-EN-RP-502, "Inspection and Maintenance of Respiratory Protection Equipment," Revision 12
Procedure P-EN-RP-503, "Selection, Issue and Use of Respiratory Protection Equipment," Revision 9
Procedure 6.3-061, "Special Radiological Survey Techniques", Revision 31
Procedure 6.4-331, "Operation of Common Radiation Detectors and Air Samplers," Revision 29
Procedure 7.3.25, "Particulate Monitoring at the Reactor Building Vent," Revision 53
Procedure 7.3.31, "Tritium Sampling," Revision 28
Procedure REE 18-031, Addendum 26, Attachment 1, "Preparing for Placing the Hi-Trac/NFWC in the Spent Fuel Pool," dated February 25, 2022

Procedure REE 18-031, Addendum 26, Attachment 2, “Removal of Loaded Hi-Trac/NFWC from the Spent Fuel Pool,” dated March 1, 2022
Radiological Engineering Evaluation, “Radiation Protection Training Qualification Program”, 20-045, Revision 0
Resumes and ANSI/ANS 3.1 evaluations for selected radiation protection staff
Schedule, Pilgrim Major Milestones, dated February 24, 2022
Self-assessment Reports for 2021-1 dated 1/11/2021 and 3/26/2021
Self-assessment Report for 2021-3 dated 8/20/2021
Self-assessment Report for 2022-1 dated 1/25/2022

LIST OF ACRONYMS USED

ADAMS	Agency-wide Document and Access Management System
CFR	Code of Federal Regulations
DCAP	Decommissioning Quality Assurance Program
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
O&M	Operations and Maintenance
PNPS	Pilgrim Nuclear Power Station
RP	Radiation Protection