



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

March 10, 2020

Docket No. 07201044

License No. DPR-35

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

SUBJECT: NRC INSPECTION REPORT NO. 07201044/2019001,
HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, PILGRIM NUCLEAR
POWER STATION, PLYMOUTH, MASSACHUSETTS

Dear Ms. Cowan:

On February 11, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the Pilgrim Nuclear Power Station (PNPS) Independent Spent Fuel Storage Installation (ISFSI) pre-operational activities. On-site inspections were performed on December 12, 2019. In-office reviews of information supplied by PNPS were also performed during the inspection period from October 1, 2019 to February 11, 2020. The purpose of the inspection was to determine whether ISFSI activities were conducted safely and in accordance with NRC requirements. The inspection consisted of observations by the inspectors, interviews with personnel, and a review of procedures and records. The results of this inspection were discussed with Mr. John Moylan, Site Vice President and other members of the Holtec Decommissioning International (HDI) staff on February 11, 2020 and are described in the enclosed report. No findings of safety significance were identified.

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 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 John Nicholson at 610-337-5236 if you have Any questions regarding this matter.

Sincerely,

/RA/

Anthony Dimitriadis, Chief
Decommissioning, ISFSI and Reactor HP
Branch
Division of Nuclear Materials Safety
Region 1

Docket No. 07201044
License No. DPR-35

Enclosure: Inspection Repot 07201044/2019001
w/Attachment

cc w/encl: Distribution via ListServ

NRC INSPECTION REPORT NO. 07201044/2019001, HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, PILGRIM NUCLEAR POWER STATION, PLYMOUTH, MASSACHUSETTS DATED 3/10/20.

DOCUMENT NAME: G:\DIRHP\Pilgrim\Memo.ISFSI.Pilgrim Pad Inspection.2019.docx

SUNSI Review Complete: JNicholson

After declaring this document An Official Agency Record it will be released to the Public.

ML20070P334

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OFFICE	DNMS/RI	N	NMSS/DFM/MSB	N	DNMS/RI			
NAME	J Nicholson/jn		R Rodriguez/via email		A Dimitriadis/ad			
DATE	3/10/20		3/4/20		3/10/20			

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 072-01044

License No: DPR-35

Report No: 07201044/2019001

Licensee: Holtec Decommissioning International, LLC (HDI)

Facility: Pilgrim Nuclear Power Station (PNPS)

Location: Plymouth, MA

Dates: October 1, 2019 to February 11, 2020

Inspectors: J. Nicholson, Senior Health Physicist
Decommissioning, ISFSI and Reactor HP Branch
Division of Nuclear Materials Safety, Region I

R. Rodriguez, Structural Engineer
Office of Nuclear Material Safety and Safeguards
Division of Fuel Management

Approved by: Anthony Dimitriadis, Chief
Decommissioning, ISFSI and Reactor HP Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Holtec Decommissioning International, LLC (HDI)
Pilgrim Nuclear Power Station (PNPS)
NRC Inspection Report No. 07201044/2019001

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring HDI's performance at PNPS. This report covered on-site inspections and in-office reviews by NRC regional based inspectors of activities related to PNPS pre-operational activities of dry cask storage of spent fuel during the inspection period from October 1, 2019 to February 11, 2020. The inspection included a review of the structural analysis and observation of the construction of the second independent spent fuel storage installation (ISFSI) storage pad at PNPS. The inspection consisted of observations by the inspector, interviews with personnel, a review of procedures, calculations and records, and ISFSI pad walk-downs. The NRC's program for overseeing the safe operation of dry storage of spent fuel at an ISFSI is described in Inspection Manual Chapter 2690, "Inspection Program for Dry Storage of Spent Reactor Fuel at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings."

Based on the results of this inspection, no findings of safety significance were identified.

REPORT DETAILS

1.0 Independent Spent Fuel Storage Installation

1.1 Onsite Fabrication of Components and Construction of an ISFSI (60853)

a. Inspection Scope

The inspector conducted a review of licensee and vendor activities in preparation for the concrete placement #3 for the pad of the ISFSI which will store spent fuel previously generated by PNPS using the Holtec HI-STORM 100 system. The inspector walked down the construction area of the ISFSI pad and examined the rebar installation to verify that the rebar size, spacing, splice length, and concrete coverage on each side complied to licensee-approved drawings, specifications, procedures, and other associated documents. Additionally, the inspector evaluated the pad to determine if compliance with applicable codes, the Certificate of Compliance (CoC), and Technical Specifications (TSs) was met. The inspector also evaluated the concrete formwork installation for depth, straightness, and horizontal bracing to verify the overall dimensions and orientation for compliance with the licensee-approved drawings. The inspector interviewed licensee and contract personnel to verify knowledge of the planned work. The inspector observed the actual concrete placement and vibration for the ISFSI slab, and observed tests for concrete slump and air content, temperature measurements, and the collection/preparation of cylinder samples for compression tests, to verify that the work was implemented in accordance with the approved specifications and procedures. The inspector verified that the pad was being finished according to approved specifications and Code requirements. Following completion of the 7-day and 28-day compression tests by the independent laboratory, the inspector reviewed the results to verify that the acceptance criteria were met. The inspector noted that all tested samples for pad pour #3 satisfied the acceptance criteria.

b. Findings

No findings of significance were identified.

1.2 Review of 10 CFR 72.212(b) Evaluations (IP 60856)

a. Inspection Scope

The inspectors performed an in-office review of ISFSI pad design documentation to determine if the storage pad would adequately support both static and dynamic loads, as required by 10 CFR 72.212(b)(5)(ii). The inspectors reviewed and verified that the assumptions the licensee used in the seismic and liquefaction analyses for the storage pad were appropriate. The inspectors verified that the analysis and design methodology used for PNPS ISFSI pad complied with applicable standards consistent with recommendations of NUREG 1536 and Inspection Procedure 60856 "Review of 10 CFR 72.212(b) Evaluations," as appropriate. The inspectors also determined that the various design loads were in accordance with PNPS's Final Safety Analysis Report.

b. Findings

No findings of significance were identified.

3.0 Exit Meeting

The inspection results were discussed with Mr. John Moylan, Site Vice-President, and other members of the HDI staff, on February 11, 2020. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

J. Moylan, Site Vice-President
F. McGinnis, Regulatory Affairs
R. Manrique, Regulatory Affairs
G. Thomas, Senior Project Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

GEI Report PNH – CS 001 – 01, “Soil and Rock Properties for Design of ISFSI (Preferred Location) at Pilgrim NPS”
GEI Report PNH – CS 002 – 01, “Seismic Site Response for Preferred ISFSI Location at Pilgrim NPS Using the Taft Earthquake”
GEI Report PNH – CS 003 – 01, “Liquefaction Resistance and Post-Earthquake Settlement of Soils for Preferred ISFSI Location at the Pilgrim Nuclear Power Station”
GEI Report PNH - CS 006 - 01, “Settlement of ISFSI Pad (Preferred Location) at Pilgrim NPS”
GEI Report PNH-CS 005-01, “Allowable Bearing Pressure and Modulus of Vertical Subgrade Reaction for ISFSI II at Pilgrim NPS”
Holtec Report HI-2188384, “Design and Installation of ISFSI II and Approach Apron (EC 73908)”
Holtec Report HI-2188491, “Pilgrim ISFSI II Pad Structural Analysis”
Holtec Report HI-2188509, “Soil Structure Interaction (SSI) Analysis of ISFSI Pad at Pilgrim”
Holtec Report HI-2188391, “Pilgrim Approach Apron Analysis”
PNS-CS-005-00, “Sliding and Overturning Stability of ISFSI Pad at Pilgrim NPS”

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System
CoC	Certificate of Compliance
CFR	Code of Federal Regulations
HDI	Holtec Decommissioning International, LLC
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
PNPS	Pilgrim Nuclear Power Station
TS	Technical Specifications