



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD, SUITE 102
KING OF PRUSSIA, PA 19406-1415

August 6, 2024

Kelly Trice
President - HDI
Holtec Decommissioning International, LLC
Krishna P. Singh Technology Campus
1 Holtec Boulevard
Camden, NJ 08104

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, INDIAN POINT ENERGY
CENTER UNITS 1, 2 AND 3 - NRC INSPECTION REPORT NOS.
05000003/2024002, 05000247/2024002, 05000286/2024002

Dear Kelly Trice:

On June 30, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shut down Indian Point Nuclear Generating Station Units 1, 2 and 3. The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations, and the conditions of your licenses. 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 Frank Spagnuolo, Site Vice President, and other members of your staff on July 16, 2024, and are described in the enclosed inspection report.

Within the scope of this inspection, no violations of more than minor safety significance 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 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).

K. Trice

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No reply to this letter is required. Please contact Storm Veunephachan of my staff at (610) 337-5366 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 Nos. 05000003, 05000247, and 05000286
License Nos. DPR-5, DPR-26, and DPR-64

cc w/encl: Distribution via ListServ

Enclosure: Inspection Report Nos. 05000003/2024002,
05000247/2024002, and 05000286/2024002
w/Attachment

K.Trice

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SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, INDIAN POINT ENERGY CENTER UNITS 1, 2 AND 3 - NRC INSPECTION REPORT NOS. 05000003/2024002, 05000247/2024002, AND 05000286/2024002, DATED AUGUST 6, 2024

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DATE	07/16/2024		07/16/2024		08/06/2024			

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Docket Nos. 05000003, 05000247, and 05000286

License Nos. DPR-5, DPR-26, and DPR-64

Report Nos. 05000003/2024002, 05000247/2024002, and 05000286/2024002

Licensee: Holtec Decommissioning International, LLC (HDI)

Facility: Indian Point Energy Center, Units 1, 2 and 3

Location: Buchanan, NY

Inspection Dates: April 1 – June 30, 2024

Inspectors: K. Warner, CHP, Senior Health Physicist
Decommissioning, ISFSI and Reactor Health Physics Branch
Division of Radiological Safety and Security

S. Veunephachan, Senior Health Physicist
Decommissioning, ISFSI and Reactor Health Physics Branch
Division of Radiological Safety and Security

R. Turtill, Senior Financial Analyst
Financial Assessment Branch
Division of Rulemaking, Environmental, and Financial Support
Office of Nuclear Materials Safety and Safeguards

Accompanied By: C. Allen, Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery, and Waste
Programs
Office of Nuclear Materials Safety and Safeguards

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

Enclosure

EXECUTIVE SUMMARY

Holtec Decommissioning International, LLC (HDI)
Indian Point Energy Center Units 1, 2, and 3 (IP-1, IP-2, and IP-3)
NRC Inspection Report Nos. 05000003/2024002, 05000247/2024002, and 05000286/2024002

A routine announced decommissioning inspection was completed on June 30, 2024, at the permanently shut-down Indian Point Units 1, 2, and 3. A combination of on-site and remote inspection activities were performed over this period. The inspection included a review of problem identification and resolution, fire protection, decommissioning performance and status reviews, financial assurance, occupational radiation exposure, and solid radioactive waste management and transportation. 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 shut-down 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 more than minor safety significance were identified.

REPORT DETAILS

1.0 Background

IP-1 was a pressurized water reactor that was granted a 40-year Operating License in 1962 and was permanently shut down in 1974. Pursuant to the June 19, 1980 “Commission Order Revoking Authority to Operate Facility” and the “Decommissioning Plan for Indian Point Unit No. 1,” approved by the NRC in an Order, dated January 31, 1996, the reactor remains in a defueled status.

The NRC received the certifications of cessation of power operations and permanent removal of fuel for Units 2 and 3 on May 12, 2020, and May 11, 2021, respectively (ADAMS Accession Numbers: ML20133J902 and ML21131A157). On May 28, 2021, the NRC issued license amendments transferring Indian Point Unit Nos. 1, 2, and 3 facility licenses from Entergy Nuclear Operations, Inc. to Holtec Indian Point 2, LLC; Holtec Indian Point 3, LLC; and Holtec Decommissioning International, LLC (ADAMS Accession No. ML21126A004).

IP-1 and IP-2 are physically contiguous and share systems, such as the integrated liquid waste system and the air handling system; and facilities, such as the chemistry and health physics laboratories. Liquid waste from IP-3 will be transported to and processed at IP-1. Radiological effluent limits are met on an overall site basis and specific operating limits and surveillance requirements for effluent monitoring instrumentation are discussed in the Offsite Dose Calculation Manual.

IP-1, IP-2 and IP-3 were inspected under the “Actively Decommissioning (DECON), No Fuel in the Spent Fuel Pool” category. The categories of decommissioning are described in IMC 2561.

2.0 Active Decommissioning Performance and Status Review

2.1 Inspection Procedures 40801, 64704, 71801, 83750, 86750, and 92702

a. Inspection Scope

The inspectors performed on-site decommissioning inspection activities on April 15 - 17, April 23, May 13 - 15, and June 11 – 13, supplemented by in-office reviews and periodic phone calls. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant walk-downs.

The inspectors assessed the implementation and effectiveness of IPEC’s corrective action program (CAP) by reviewing a sampling of issues associated with identifying, resolving, and correcting issues in the CAP. The inspectors reviewed a representative selection of CAP documents to determine if a sufficiently low threshold for problem identification existed, if follow-up evaluations were of sufficient quality, and if IPEC assigned timely and appropriate prioritization for issue resolution commensurate with the significance of the issue, including corrective actions for the Notice of Violation described in NRC IRs 05000003/2023004, 05000247/2023004, 05000286/2023004 (ML24017A236). The

inspectors attended several management review committee meetings to determine if IPEC management was adequately engaged in issue disposition and resolution. The inspectors reviewed two incidents in the Unit 2 reactor cavity during welding repair activities on the cavity liner documented in IR IP2-01098 and IR IP2-01117 to determine the safety significance and if the site appropriately responded to each condition.

The inspectors reviewed documentation and met with IPEC management to discuss staffing, status of decommissioning and upcoming activities, among other topics to determine if Holtec Indian Point had conducted activities in accordance with regulatory and license requirements. The inspectors performed several plant walk-downs to evaluate field conditions and decommissioning activities by assessing material condition of structures, systems, and components, housekeeping, system configurations, and worker level of knowledge or procedure use and adherence. These walk-downs included all levels of the Unit 1 sphere, general areas of the Unit 1 Chemical Systems, Fuel Storage, and Nuclear Services Buildings, Unit 2 and 3 vapor containment 95', and the solid radwaste storage building. The inspectors observed select pre-job briefings and associated work activities, including Reactor Coolant System (RCS) pipe cutting work in Unit 1, reactor cavity repair work in Unit 2, lower reactor internals segmentation and support activities in Unit 3, and preparations for a radioactive waste shipment. The inspectors met with the Employee Concerns Program representatives and discussed implementation of the program at IPEC.

The inspectors reviewed the status of the decommissioning trust fund and met with HDI staff to determine whether the funds were used as expected and if any changes had the potential to significantly impact the site's decommissioning financial assurance.

The inspectors reviewed staffing requirements and training for select radiation protection program personnel to determine if it is applicable for current decommissioning status. The inspectors reviewed personnel qualifications and training records to assess whether it was current and properly documented.

The inspectors conducted site walk-downs of radiologically controlled areas and observed select work activities to examine and assess Radiological Protection (RP) controls including airborne and contamination controls, and radiological postings. The inspectors reviewed Radiation Work Permits (RWP's), As Low As Reasonably Achievable (ALARA) work plans to determine if radiation work activities were pre-planned effectively to limit worker exposure. The inspectors observed a source check of a telepole, a source check and calibration of an alpha frisker, and a calibration of an alpha bench counter to assess function and proper use of the instruments.

The inspectors observed activities, interviewed personnel, performed walkdowns, and reviewed documentation to assess the licensee's programs for handling, storage, and transportation of radioactive material. The inspectors observed workers handling and packaging radioactive waste and performed walk-downs of radioactive waste storage locations, including radioactive material pens 1, 2, and 3, the solid radwaste storage building, and the 53' of the Unit 1 Nuclear Services Building to evaluate if the licensee had properly classified and stored radioactive materials. The inspectors observed personnel surveying, labeling, and placarding vehicles used for transporting radioactive waste and reviewed work packages for shipments of radioactive waste.

The review included records of shipment packaging, surveying, labeling, marking, placarding, vehicle checks, and emergency instructions to determine compliance with NRC and Department of Transportation (DOT) regulations. The inspectors reviewed training records to determine if radwaste personnel were qualified to implement the site solid radwaste program.

b. Observations

The inspectors conducted document reviews and interviews of site personnel and determined that issues had been identified, entered into the CAP, and evaluated commensurate with their safety significance. The inspectors reviewed an apparent cause evaluation regarding a discrepancy in a shipment manifest associated with a radiological shipment. The inspectors determined that the corrective actions were timely and addressed the cause of the issue. The inspectors determined that the site appropriately responded to the small fire incidents, one involving the reactor vessel segmentation gantry saw bellow and the other on a small tie wrap. The inspectors noted that during both occasions the fire watch identified the small flame, and the flame was immediately extinguished. The inspectors identified that contamination surveys of the first fire were not completed in a timely fashion, which the licensee entered into its CAP as IP2-01106. The inspectors noted that there were no radiological safety consequences from either incident.

The inspectors reviewed decommissioning trust fund documentation, including HDI's annual report on the status of decommissioning funding and met with HDI representatives. The inspectors noted that a November 2, 2023, letter from HDI to the NRC included a notification of a schedule change in accordance with 10 CFR 50.82(a)(7). This schedule change is related to a delay in the start of segmentation activities for the reactor pressure vessel and partial site release. The partial site release date was changed from July 9, 2033, to July 9, 2041, based on New York State legislation (S.6893/A.7208) prohibiting the "discharge any radiological substance into the Hudson River in connection with the decommissioning of a nuclear power plant". The inspectors reviewed the schedule changes reflected in the annual decommissioning status report as well as HDI's reported increase in the total cost estimate. The inspectors will continue review of the annual financial report during upcoming inspection activities. The inspectors reviewed the corrective actions completed at the time of the inspection for the Notice of Violation documented in NRC inspection report 2023004. These included a work group evaluation, and extent of condition of community outreach expenditures, and the restoration of compliance. The inspectors determined that these items had been adequately completed. The inspectors will review long-term corrective actions listed in the NOV response under "Corrective Steps that Will be Taken" when available during a future inspection.

The inspectors noted that during this inspection period, IPEC staff continued lower internal segmentation at Unit 3, work continued to repair the Unit 2 reactor cavity liner, commenced cleaning the Unit 3 spent fuel pool racks, and continued cutting and removing Unit 1 piping. The inspectors noted that for the areas of the plant toured, the material condition and housekeeping was generally adequate and radiological work was adequately controlled. The inspectors determined that the licensee performance of source and calibration checks were adequately performed, and the staff conducting these activities was sufficiently knowledgeable of the instruments and the site procedures.

The inspectors determined that solid radioactive waste was adequately stored and monitored and worker radwaste training and qualifications were up to date. The inspectors discussed liquid radioactive waste storage capacity at IPEC with site management and did not identify any immediate concerns. The inspectors also determined that radioactive waste shipping paperwork was properly completed and HDI and HDI contractor personnel were knowledgeable of their duties and responsibilities. The inspectors determined that radioactive waste shipped was properly described, classified, packaged, marked, and labeled, and was in proper condition for transport. The inspectors determined that Holtec's radwaste shipments were in compliance with NRC and DOT regulations. Specifically, the inspectors reviewed three radioactive waste shipment packages and observed portions of a Type B Part 37 Category II shipment and determined that work activities were adequately performed and documented.

c. Conclusions

No violations of more than minor safety significance were identified.

3.0 Exit Meeting Summary

On July 16, 2024, the inspectors presented the inspection results to Frank Spagnuolo, Site Vice President, and other members of the IPEC organization. No proprietary information was retained by the inspectors or documented in this report.

SUPPLEMENTARY INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

F. Spagnuolo, Site Vice President
B. Noval, HDI Director Regulatory Affairs
M. Johnson, Nuclear Manager
W. Wittich, Senior Licensing Specialist
W. O'Brien, Radiation Protection Superintendent
R. Fuchek, Radiation Protection Manager
R. Whitely, RV Segmentation Decommissioning Manager
M. Kempski, Maintenance Manager
C. Bohren, Operations Manager
D. Quinn, Radiological Supervisor
J. McMickens, Senior Radiation Protection Technician
D. Maruco, Radiation Protection Supervisor
D. Budds, Radiation Protection Technician

ITEMS OPEN, CLOSED, AND DISCUSSED

None

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures

DSP-RA-001, Corrective Action Procedure, Revision 1
0-RP-IDC-605, Calibration of the Eberline Model SAC-4 Alpha Counter, Revision 9
IP-EN-RP-303, Source Checking of Radiation Protection Instrumentation
0-RP-IC-402, Calibration and Use of the MGP Telepole, Revision 3
EN-DC-127, Control of Hot Work and Ignition Sources, Revision 21

Issue Reports Reviewed

IR IP2-01098
IP2-01117
IP3-01638
IP3-01542

Issue Reports Generated from Inspection

IR IP2-01107
IP2-01112
IP2-01106

Licensing Bases Documents

Indian Point 1 Technical Specifications, Amendment 63
Indian Point 2 Technical Specifications, Amendment 299
Indian Point 3 Technical Specifications, Amendment 275
Indian Point 2 Defueled Safety Analysis Report, Revision 1
Indian Point 3 Defueled Safety Analysis Report, Revision 1
Post Shutdown Decommissioning Activities Report (IPEC 1, 2, and 3 PSDAR), December 19, 2019

Miscellaneous

Shipping Package SR-M1092-0027, April 23, 2024

Notification of Changes in Schedule in accordance with 10 CFR 50.82(a)(7), November 2, 2023

Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI), March 29, 2024

IPEC NDT Inv Summary and Detail by Unit, April 30, 2024

Indian Point Unit 1 NDT Credit for Reimbursed Donations – December 2023 Addendum, January 11, 2024

Indian Point Unit 2 NDT Credit for Reimbursed Donations – December 2023 Addendum, January 11, 2024

Indian Point Unit 3 NDT Credit for Reimbursed Donations – December 2023 Addendum, January 11, 2024

Reply to a Notice of Violation EA-2024-010, March 20, 2024

Radiological Surveys 24-2-1223 and 24-2-1443

ALARA Plan 2024-3028, Removal of Spent Fuel Racks and Support Activities for Disposal, April 29, 2024

User's Manual ICN 9237000D

RT-100 Pre-Shipment Leak Test, Revision 4

Ludlum Measurements, INC Calibration Procedures Model: 2360 Detector: 43-93, March 12, 2018

Champion Form 1.5-D, Investigation Employee Witness Statement, April 2, 2024, various

Cask Model RT-100 2024 Annual Maintenance, Completion Date April 5, 2024

203-015-PR-CB-004, Loading Table Procedure for RT-100 Transport cask, August 1, 2023

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ALARA	As Low As-Reasonably Achievable
CAP	Corrective Action Program
DECON	Actively Decommissioning
DOT	Department of Transportation
GPO	Government Printing Office
Holtec/HDI	Holtec Decommissioning International, LLC (HDI)
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IPEC	Indian Point Energy Center
IP-1	Indian Point Unit 1
IP-2	Indian Point Unit 2
IP-3	Indian Point Unit 3
NRC	Nuclear Regulatory Commission
RCS	Reactor Coolant System
RP	Radiation Protection
RWP	Radiation Work Permits