



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD, SUITE 102
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May 22, 2025

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. 05000003/2025001, 05000247/2025001, 05000286/2025001

Dear Kelly Trice:

On March 31, 2025, 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 Energy Center 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 April 24, 2025, and are described in the enclosed inspection report.

Based on the results of the inspection, one violation of NRC requirements of no or relatively inappreciable (very low) safety significance (severity level IV) is documented in this report. For this violation, because of the significance and because the issue was entered into your corrective action program, the NRC is treating the violation as a non-cited violation (NCV), consistent with Section 2.3.2.a of the Enforcement Policy. If you contest the subject or severity of the NCV, you should provide a response within 30 days of the date of this letter, with the basis for your denial(s), to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; and the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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.

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. 05000003/2025001,
05000247/2025001, and 05000286/2025001
w/Attachment

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, INDIAN POINT ENERGY CENTER UNITS 1, 2 AND 3 - NRC INSPECTION REPORT NOS. 05000003/2025001, 05000247/2025001, AND 05000286/2025001, DATED MAY 22, 2025

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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. 05000003/2025001, 05000247/2025001, and 05000286/2025001

Licensee: Holtec Decommissioning International, LLC (HDI)

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

Location: Buchanan, NY

Inspection Dates: January 1 – March 31, 2025

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

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. 05000003/2025001, 05000247/2025001, and 05000286/2025001

A routine announced decommissioning inspection was completed on March 31, 2025, 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, 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."

List of Violations

One NRC identified severity level IV non-cited violation (NCV) of Title 10 CFR 50.48(f) is documented for the licensee's failure to reasonably prevent fires from occurring. Specifically, the licensee did not properly implement site procedures to adequately protect material during torching activities in Unit 2 vapor containment.

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

The inspectors performed on-site decommissioning inspection activities on January 20 – 23, February 18 – 19, and March 10 – 13, 2025 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 site walk-downs.

2.1 Inspection Procedure (IP) 37801, “Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors”

a. Inspection Scope

The inspectors conducted document reviews and interviews with site personnel to determine if Indian Point Energy Center (IPEC) procedures and processes, including training and qualifications, were adequate and in accordance with the requirements associated with 10 CFR 50.59. The inspectors reviewed a sampling of changes to determine if changes made by IPEC under 10 CFR 50.59 required prior NRC approval.

b. Observations and Findings

The inspectors determined that the reviewed process applicability screenings and 10 CFR 50.59 screenings and evaluations had been adequately performed and did not require prior

NRC approval. Specifically, the inspectors reviewed process applicability determinations for resin liner transport for radioactive waste shipping and storage of greater than class C (GTCC) waste.

c. Conclusions

No violations of more than minor significance were identified.

2.2 IP 40801, "Problem Identification and Resolution at Permanently Shutdown Reactors"

a. Inspection Scope

The inspectors assessed the implementation and effectiveness of IPEC's corrective action program (CAP) by reviewing a sampling of issues, non-conformances, and any conditions adverse to quality that were entered into 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 issue significance. This included a focused review of work group and apparent cause evaluations and a focused review of IR-IP2-01178, which is discussed further in Section 2.6. The inspectors attended several management review committee meetings to determine if IPEC management was engaged in issue disposition and resolution. The inspectors interviewed the Employee Concerns Program representative and several employees to assess site safety culture.

b. Observations

The inspectors determined that issues had been identified, entered into the CAP, and evaluated commensurate with their safety significance through document review and discussion. The inspectors noted adequate management engagement during management review committee meetings. The inspectors determined that the site had an appropriate focus on a safety conscious work environment and that employees were free to raise concerns.

c. Conclusions

No violations of more than minor significance were identified.

2.3 IP 71801, "Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors"

a. Inspection Scope

The inspectors reviewed documentation and met with IPEC management to discuss staffing, status of decommissioning and upcoming activities, among other topics to verify whether the licensee had conducted activities in accordance with regulatory and license requirements. The inspectors performed several plant walk-downs to assess field conditions and decommissioning activities by evaluating the 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 Units 2 and 3 containments, select areas in the Unit 1 sphere and the Unit 3 Fuel

Storage Building, and the solid radwaste storage building. The inspectors observed select pre-job briefings and associated work activities, including reactor head stud cutting in Unit 1 containment, Unit 2 primary auxiliary building boric acid transfer pump removal, and continued Unit 2 and Unit 3 reactor vessel internal segmentation.

b. Observations and Findings

The inspectors noted that during this inspection period, HDI continued segmentation activities of the reactor lower internals for Unit 3 and the upper internals for Unit 2. While conducting walkdowns throughout all levels of Unit 1, 2, and 3 containments, the inspectors noted that material condition and housekeeping were adequate.

c. Conclusions

No violations of more than minor significance were identified.

2.4 IP 83750, "Occupational Radiation Exposure at Permanently Shutdown Reactors"

a. Inspection Scope

The inspectors observed activities, reviewed documentation, and interviewed personnel associated with occupational radiation exposure to determine the adequacy of protection of worker health and safety. The inspectors conducted site walk-downs to check and assess radiological postings and locked high radiation doors and gates. The inspectors observed radiation protection (RP) technicians performing job coverage and surveys to determine if implementation of radiological work controls, training and skill level, and instrumentation were sufficient for the activities being performed. The inspectors reviewed radiation work permits to determine if radiation work activities were pre-planned effectively to limit worker exposure. The inspectors reviewed dose records to determine if occupational doses were within regulatory limits. The inspectors reviewed RP surveys and air sampling surveys of radiologically significant work. This work included dismantlement activities in Unit 2 primary auxiliary building, reactor vessel internal segmentation in Unit 2 and 3 containment, and hot work cutting in Unit 1 containment.

b. Observations and Findings

The inspectors verified a randomly selected sample of technician's training and qualifications were up to date. The inspectors verified that radiological work was planned and observed RP staff during reactor vessel segmentation. The inspectors observed the staging of high efficiency particulate air (HEPA) filters while work was performed in the Unit 1 containment. The inspectors determined that RP staff effectively controlled work activities and used appropriate instrumentation for surveys.

c. Conclusions

No violations of more than minor significance were identified.

2.5 IP 86750, “Solid Radioactive Waste Management and Transportation of Radioactive Materials”

a. Inspection Scope

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 the shipment preparations for a Type B shipment of radioactive material.

b. Observations and Findings

The inspectors observed the shipment preparations for a Type B shipment of radioactive material. This included the staging of radioactive waste, the transfer to transport cask, leak testing, final RP surveying, and briefing to the drivers. The inspectors also observed the placarding of the transport as well. The inspectors determined that shipment preparations were adequate and followed all site procedures.

c. Conclusions

No violations of more than minor significance were identified.

2.6 IP 64704, “Fire Protection Program at Permanently Shutdown Reactors”

a. Inspection Scope

The inspectors assessed the implementation of IPEC’s Fire Protection Program (FPP) to determine if it met commitments and NRC requirements such that no changes negatively affect the overall state of the FPP. The inspectors reviewed documentation such as the defueled fire hazards analysis, surveillance records, hot work permits, and off-site response agreements to ensure adequacy and adherence to site procedures and NRC requirements. The inspectors also conducted walkdowns of storage areas of manual suppression systems, fire protection detection and suppression systems to determine if they were effectively maintained and also reviewed condition reports.

b. Observations and Findings

The inspectors noted that manual suppression systems located throughout the facility were stored adequately in accordance with site procedures. The inspectors conducted walkdowns of surveillance tested equipment such as the diesel fire pump fuel supply and fire water storage tank to assess how surveillances were conducted to ensure they would operate nominally. The inspectors conducted walkdowns of heat detectors in the diesel generator building and determined they were adequate.

c. Conclusions

The inspectors identified one severity level IV NCV of 10 CFR 50.48(f)(1), for the licensee’s failure to reasonably prevent fires from occurring. Specifically, the site did not properly implement site procedure IP-EN-DC-127, “Control of Hot Work and Ignition Sources,” Revision 0 to ensure that combustible material within 35 feet of the work area

was protected by approved materials. The failure to adequately protect the material during torching activities resulted in a fire in Unit 2 vapor containment.

On October 7, 2024, workers on the 95' of the Unit 2 vapor containment performed oxyacetylene torching as part of the Unit 2 reactor head segmentation work. Oxyacetylene torching creates temperatures in the range of 4000 – 6000 degrees Fahrenheit. The head was in a tent for contamination control and a pool liner was beneath the head to capture water during previous diamond wire cutting activities. Welding blankets rated to 1750 degrees Fahrenheit were used to protect combustible materials, including the pool liner and the tenting material, within 35 feet of the work area for which relocation was considered impractical. During burning operations, slag or the flame tip burned through the blanket and the material underneath ignited. A fire watch identified and immediately extinguished the fire. Hot work activities were stopped, and supervision was notified. Follow up air samples and radiological surveys indicated no spread of contamination and no radiological consequences due to the event.

IP-EN-DC-127, "Control of Hot Work and Ignition Sources" step 5.2[15](a)(1) stated that "combustible material within 35 feet of the work area that could become ignited from the Hot Work shall be removed or protected...if relocation is impractical, combustible material should be protected by approved welding curtain, welding blanket, welding pad, or equivalent intended for such use." ANSI/FM 4950 is referenced in the procedure as the standard for welding curtains, blankets, and pads. The inspectors noted that welding blankets are intended to be used for hot work operations that are less severe while welding pads are intended to be used for the most severe hot work operations. Welding pads are designed to be capable of resisting burn-through caused by contact with molten substances and limit heat transfer to the material underneath the pad. Oxyacetylene torching is a severe hot work operation that typically creates molten slag.

Title 10 CFR 50.48(f) requires, in part, that the licensee maintain a fire protection program to address the potential for fires that could cause the release or spread of radioactive materials, including reasonably preventing these fires from occurring. IPEC procedure IP-EN-DC-127, "Control of Hot Work and Ignition Sources," Revision 0 is a quality related procedure that is part of the IPEC fire protection program used to meet 10 CFR 50.48(f). IP-EN-DC-127 requires, in part, that the licensee protect combustible materials when relocation is impractical by an approved welding curtain, welding blanket, welding pad, or equivalent intended for such use.

Contrary to the above, the licensee failed to adequately protect combustible materials while performing hot work. Specifically, on October 7, 2024, the licensee used a welding blanket with a maximum rated temperature well below that expected during torch cutting activities of the Unit 2 reactor head, which resulted in a fire.

This violation was determined to be a severity level IV violation using Section 6.3.d.3 of the NRC Enforcement Policy, dated August 23, 2024, regarding the failure to implement procedures, which has a very low safety significance. This determination was made because there were no occupational dose impacts and there was no spread of radioactive material to the public or the environment.

Because this violation was determined to be of relatively inappreciable safety consequences, was entered into the licensee's CAP as IR-IP2-01178, and the violation was not willful or repetitive, this violation is being treated as a non-cited violation consistent with

2.3.2.a of the Enforcement Policy (NCV 05000247/2025001-001, Failure to reasonably prevent fires from occurring in Unit 2 vapor containment).

3.0 Exit Meeting Summary

On April 24, 2025, 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 DOCUMENTS REVIEWED

Procedures

IP-EN-DC-127, "Control of Hot Work and Ignition Sources," Revision 0

Incident Reports

IR-IP3-01760