



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

May 31, 2023

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

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, OYSTER CREEK
NUCLEAR GENERATING STATION – NRC INSPECTION REPORT NO.
05000219/2023001

Dear Kelly Trice:

On March 31, 2023, 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 Oyster Creek Nuclear Generating Station (Oyster Creek). 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 this inspection were discussed with Jeffrey Dostal, Site Vice President, and other members of your staff on April 20, 2023, and are described in the enclosed 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 and 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 Andrew Taverna of my staff at 610-337-5119 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: 05000219

License No: DPR-16

Enclosure: Inspection Report 05000219/2023001
w/Attachment

cc w/encl: Distribution via ListServ

SUBJECT: HOLTEC DECOMMISSIONING INTERNATIONAL, LLC, OYSTER CREEK NUCLEAR GENERATING STATION – NRC INSPECTION REPORT NO. 05000219/2023001 DATED MAY 31, 2023

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DOCUMENT NAME: https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection Reports/Inspection Reports - Final/OC_1Q2023_IRep.docx

SUNSI Review Complete: A. Taverna **ADAMS ACCESSION NO.** ML23150A047

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OFFICE	DRSS/RI	DRSS/RI	DRSS/RI	DRSS/RI
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DATE	5/30/23	5/31/23	5/31/23	5/31/23

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 050-00219

License No: DPR-16

Report No: 05000219/2023001

Licensee: Holtec Decommissioning International, LLC

Facility: Oyster Creek Nuclear Generating Station

Location: Forked River, New Jersey

Dates: January 1, 2023 – March 31, 2023

Inspectors: A. Taverna, Health Physicist
S. Veunephachan, Health Physicist
O. Masnyk Bailey, Health Physicist
K. Barnes, Health Physicist (In Training)
J. Ayala, Health Physicist

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
Oyster Creek Nuclear Generating Station
NRC Inspection Report No. 05000219/2023001

An announced decommissioning inspection was completed at the permanently shutdown Oyster Creek Nuclear Generating Station (Oyster Creek) on March 31, 2023. A combination of on-site and remote inspection activities were performed over the inspection period. On-site inspections were conducted on February 6 – 9, February 14 – 15, February 22, and March 27 – 30. The inspection included a review of problem identification and resolution at permanently shutdown reactors; fire protection program, decommissioning performance, and status reviews; occupational radiation exposure; and solid radioactive waste management and transportation of radioactive materials. The inspection consisted of observations by the inspectors, interviews and discussions with site personnel, a review of procedures and records, and plant walk-downs. The U.S. Nuclear Regulatory Commission's (NRCs) 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 more than minor safety significance were identified.

REPORT DETAILS

1.0 Background

On September 25, 2018, Oyster Creek certified the permanent removal of fuel from the reactor vessel [Agencywide Document Access and Management System (ADAMS) Accession No. ML18268A258]. This met the requirements of Title 10 or the *Code of Federal Regulations* (10 CFR) 50.82(a)(1)(i) and 50.82(a)(1)(ii). On October 1, 2018, the NRC notified Oyster Creek that the Operating Reactor Assessment Program had ceased, and that implementation of the Decommissioning Power Reactor Inspection Program would begin on October 1, 2018 (ADAMS Accession No. ML18274A221). On July 1, 2019, an amended license was issued transferring the license from Exelon Generation Co., LLC to Holtec Decommissioning International, LLC (ADAMS Accession No. ML19164A157). Oyster Creek is currently in the “Actively Decommissioning, No Fuel in the Spent Fuel Pool” phase of decommissioning as described in IMC 2561.

2.0 Active Decommissioning Performance and Status Review

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

a. Inspection Scope

The inspectors performed on-site decommissioning inspections on February 6 – 9, February 14 – 15, February 22, and March 27 – 30, supplemented by in-office reviews and periodic phone calls during the inspection period. 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 Oyster Creek’s corrective action program (CAP) by reviewing a sampling of issues, and conditions adverse to quality entered 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 Oyster Creek assigned timely and appropriate prioritization for issue resolution commensurate with the significance of the issue. Evaluated Oyster Creek’s safety culture through review and assessment of the effectiveness controls in identifying, resolving, and correcting issues.

The inspectors attended select management meetings, including station oversight committee and management review committee meetings. Inspectors reviewed documentation and met with Oyster Creek management and discussed staffing, status of decommissioning and upcoming activities, among other topics to determine if Holtec had conducted activities in accordance with regulatory and license requirements. The inspectors performed several plant walkdowns to assess field conditions and decommissioning activities by evaluating material condition of structures, systems, and components, housekeeping, system configurations, and worker level of knowledge or procedure use and adherence. These walkdowns included new radwaste building, reactor building, Low Level Rad Waste Storage Facility (LLRWSF), and Radiologically Controlled Area (RCA). The inspectors observed select pre-job briefings and associated work activities, including but not limited to “A” evaporator tube bundle removal, Spent Fuel Pool (SFP) cleanup activities, liner movement into a shipping container, and

“C” tank sludge cleanout. The inspectors toured the document storage area and discussed storage and access procedures for records required by 10 CFR 50.75(g) with cognizant licensee personnel.

The inspectors observed activities, reviewed documentation, and interviewed personnel associated with occupational radiation exposure to evaluate the licensee’s protection of worker health and safety and radiological protection department staffing. The inspectors conducted site walk-downs, including radiologically controlled areas, to examine and verify radiological postings, and airborne and contamination controls. 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, and attended various briefings discussing radiological and industrial safety during work activities. The inspectors observed radiation protection (RP) technicians and supervisors perform work activities. The inspectors observed the RP coverage during the following work activities: (1) lifting and movement of the liner; (2) “A” Evaporator tube bundle removal; (3) pool cleanup activities on the 119’ of the reactor building (4) “C” tank sludge cleanout. Additionally, the inspectors observed the following activities: (1) staff donning and doffing protective clothing and equipment; (2) RP techs changing out air samples and checking Breathing Zone (BZ) lapel filters. During the inspector’s walk down of the reactor building and new radwaste building, various instruments were checked for their condition and calibration.

Additionally, inspectors observed a demonstration of source checks of Oyster Creek’s instrumentation that are used in the field; and observed the use of the calibrator to demonstrate the site’s ability to calibrate their own instruments. Inspectors performed a walkdown of the “A” and “B” evaporator tube bundle removals job area to evaluate ALARA controls and worker safety issues such as ventilation and contamination controls.

The inspectors observed activities, interviewed personnel, performed walkdowns, and reviewed documentation to verify the effectiveness of the licensee’s programs for the handling, storage, and transportation of licensed radioactive material and waste. Inspectors looked at a sample of sealed sources located in the LLRWSF. The inspectors conducted walkdowns of waste storage areas and stored radioactive materials. The inspectors also reviewed records of the shipment packaging, surveying, labeling, marking, placarding, vehicle checks, and emergency instructions to determine compliance with the applicable NRC and Department of Transportation regulations. The inspectors observed multiple waste transfers into shipping containers and the use and demonstration of the site’s vehicle portal monitor. The inspectors also performed a walkdown of a waste processing system in the reactor building, and a walkdown of the LLRWSF looking at Part 37 controls.

The inspectors evaluated Oyster Creek’s Fire Protection Program (FPP) to determine if HDI maintained it in a state of operational readiness and if changes made to the program continued to meet commitments, NRC requirements, and if such changes had negatively affected the overall state of the FPP. The inspection consisted of interviews with site personnel, a documentation reviews that included procedures and records, and plant walk-downs.

A review of procedures included those controlling storage of combustibles and flammables, any ignition sources, transient combustibles, and emergency lighting units.

Pre-fire plans were reviewed to determine if they were updated and reflected the plant's decommissioning status. The inspectors reviewed changes to the FPP including decommissioning of systems and the implementation of the incipient fire brigade (offsite response as primary responder).

The inspectors conducted walk-downs of active plant detection systems, suppression systems, fire barriers, and fire pumps/water sources to assess the material condition and determine if it was maintained in accordance with applicable requirements. This included a review of fire pump testing to determine if an adequate water supply was available to the necessary systems and standpipes for fire suppression/firefighting activities. The inspectors performed a focused review of the installed fire detection, suppression systems, and fire barriers in fire areas associated with the Reactor building, new radwaste, and LLRWSF to determine if they were appropriately maintained.

b. Observations and Findings

The inspectors determined that issues had been identified, entered the CAP, and evaluated commensurate with their safety significance through document review, interviews, and observation of several management review committee meetings. The inspectors determined that Oyster Creek had appropriately performed activities as described in the DQAP.

The inspectors noted that during this inspection period, the site continued decommissioning and dismantlement activities in the new radwaste building and continued cleanup of the refuel floor. The inspectors noted that for the areas of the plant toured, the material condition and housekeeping was adequate. The inspectors noted through plant tours, document reviews, and observations of activities that Oyster Creek conducted activities in accordance with the regulatory requirements. The inspectors noted that workers were knowledgeable of and adhered to plant procedures and work plans, and pre-job briefings were thorough and highlighted specific safety concerns. The inspectors determined site staffing was adequate and personnel qualifications and training were up to date. The inspectors determined that the maintenance backlog was minimal, manageable, and that items important to safety were appropriately prioritized and tracked. Evaluation of Oyster Creek's safety culture through its CAP and interview with the Employee Concerns Program (ECP) manager demonstrated that the site had an effective work safety program.

The inspectors verified that the RWP's, ALARA work plans, and micro-ALARA plans were implemented to limit worker exposure. The inspectors determined that RP staff effectively controlled observed work activities and used appropriate equipment during those work activities. The inspectors verified that selected technician training and qualifications were up to date. The inspectors verified that selected instruments during walk-downs were in calibration and in working condition. The inspectors noted that the qualifications reviewed for selected staff were current.

The inspectors verified that solid radioactive waste was adequately stored, monitored, and that inventories were up to date. The inspectors verified that radioactive waste shipping paperwork was properly completed, and site personnel were knowledgeable of their duties and responsibilities. The inspectors determined that radioactive waste shipped for disposal at land disposal facilities was properly classified, described, packaged, marked, and labeled, and was in proper condition for transportation. Security

controls were adequate and in accordance with 10 CFR 37 for LLRWSF during the inspectors' observations of security pathways.

Through observations, walkdowns, and interviews, Oyster Creek's FPP was determined to be adequate and maintained in accordance with NRC requirements and applicable fire protection plans. Various fire protection items were evaluated at designated fire areas within the reactor building, new radwaste, and LLRWSF. Those items included but not limited to fire extinguishers, fire barriers, and transient combustibles.

HDI maintained the leadership, staffing, and training of the onsite incipient fire brigade. Agreements had been appropriately established with the local fire department to be the primary responder for potential onsite fires. Additionally, procedures for response and measures for coordination with offsite responders were appropriately established. The inspectors verified that HDI had conducted training with offsite responders on facility layout, fire hazards, fire pre-fire plans, firefighting equipment, radiological hazards, and health physics relevant to firefighting operations.

c. Conclusions

No violations of more than minor safety significance were identified.

3.0 Exit Meeting

On April 20, 2023, the inspectors presented the inspection results to Jeffrey Dostal, Site Vice President, and other members of the Oyster Creek staff who acknowledged the inspection results. No proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Oyster Creek Personnel

J. Dostal, HDI Oyster Creek Site Vice President
L. Berlinski, Oversight Assessor
A. Farenga, Senior Radiation Protection Specialist
R. Fitts, Corrective Action Process Manager
M. Hassler, Decommissioning Manager
S. Johnson, Site Licensing Manager
K. Leonard, Waste Removal Manager
J. Sisak, Decommissioning Facility Manager
H. Tritt, Site Engineering Manager
K. Wolf, Radiation Protection, Chemistry, and Environmental Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

None

PARTIAL LIST OF DOCUMENTS REVIEWED

Condition Reports

OYS-03241	OYS-03244	OYS-03245	OYS-03246	OYS-03248	OYS-03249
OYS-03232	OYS-03224	OYS-03227	OYS-03188	OYS-03190	OYS-03192
OYS-03197	OYS-03171	OYS-03172	OYS-03176	OYS-03177	OYS-03178
OYS-03125	OYS-03154	OYS-03170			

Miscellaneous

Shipping Package OC-23-1011 WP-9516
Shipping Package OC-23-3004 WP-9401
Shipping Package OC-23-3005
Shipping Package OC-23-8001
RWP Number 23-905, Micro-ALARA Plan
Semiannual Inventory Leak Test
Oyster Creek CSS WO-00080, A Evap Work Order
9300-ADM-4010.02, ALARA Review
OC-1-23-00607, Radiological Work Permit
OC-23-008, Work Group Evaluation
OP-DC-201-007, Fire Protection Impairment Control
CC-DC-211-1001, Fire Protection Engineering Evaluations for Decommissioning Facilities
LS-DC-128-F-01, Fire Protection Change Regulatory Review

Procedures

CC-DC-211, Fire Protection Program for Decommissioning Facilities, Revision 3
RP-AA-600-1008, Radioactive Waste Shipments to WCS Disposal Facility
RP-AA-228, 10CFR50.75(g) And 10CFR72.30(f) Documentation Requirements

Radiological Surveys

N5V-23-693, N5V-23-685, N5V-22-920, N3U-91-1

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System
ALARA	As Low As Reasonably Achievable
BZ	Breathing Zone
CAP	Corrective Action Program
10 CFR	<i>Code of Federal Regulations</i>
DQAP	Decommissioning Quality Assurance Program
ECP	Employee Concerns Program
FPP	Fire Protection Program
GPO	Government Printing Office
HDI	Holtec Decommissioning International, LLC
IMC	Inspection Manual Chapter
LLRWSF	Low Level Rad Waste Storage Facility
NRC	U.S. Nuclear Regulatory Commission
Oyster Creek	Oyster Creek Nuclear Generating Station
RCA	Radiologically Controlled Area
RP	Radiation Protection
RWP	Radiation Work Permits
SFP	Spent Fuel Pool