

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 72-51, 72-1014, 50-247, and 50-286; NRC-2022-0152]

Holtec Decommissioning International, LLC

Indian Point Energy Center

Independent Spent Fuel Storage Installation

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering an exemption request from Holtec Decommissioning International, LLC (HDI) for the Indian Point Energy Center Independent Spent Fuel Storage Installation. This exemption would, if granted, allow HDI to load up to three MPC-32Ms, using Amendment No. 15 for Certificate of Compliance (CoC) No. 1014 for the HI-STORM 100 storage system, with either up to thirty-two fuel assemblies having either Californium (Cf-252) or Antimony-Beryllium (Sb-Be) neutron source assemblies (NSAs) with sufficient cooling time, or a combination of up to five fuel assemblies having primary Plutonium Beryllium (Pu-Be) NSAs and the remaining basket locations with fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time. As discussed further, the proposed exemption would permit HDI to load the fuel assemblies having either Cf-252 or Sb-Be NSAs in any location in the basket and the fuel assemblies having Pu-Be NSAs such that one is located in the center of the basket and one is located in each of the four basket quadrants. The NRC prepared an environmental assessment (EA) and concluded that the proposed action would have no significant environmental impact. Accordingly, the NRC staff is issuing a finding of no significant impact (FONSI) associated with the proposed exemption.

DATES: The EA and FONSI referenced in this document are available on **October 31, 2022..**

ADDRESSES: Please refer to Docket ID **NRC-2022-0152** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2022-0152**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the “For Further Information Contact” section of this document.

- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to PDR.Resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the “Availability of Documents” section.

- **NRC’s PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC’s PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. Eastern Time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Chris Allen, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone: 301-415-6877; email: William.Allen@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is reviewing an exemption request from Holtec Decommissioning International, LLC (HDI) dated March 24, 2022, as supplemented via a June 16, 2022, Microsoft Teams conversation and a September 20, 2022, Microsoft Teams call. Therefore, as required by sections 51.21 and 51.30(a) of title 10 of the *Code of Federal Regulations* (10 CFR), the NRC performed an environmental assessment (EA). Based on the results of the EA, discussed further, the NRC has determined not to prepare an environmental impact statement for the exemption request and is issuing a finding of no significant impact (FONSI).

In its exemption request, HDI stated that it intends to store Pressurized Water Reactor spent fuel at the Indian Point Energy Center Independent Spent Fuel Storage Installation (ISFSI) using the HI-STORM 100 storage system, Certificate of Compliance (CoC) No. 1014, Amendment No. 15 under the general license provisions in 10 CFR part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste." HDI requested an exemption from the requirements of 10 CFR 72.212(b)(3), and the portion of 10 CFR 72.212(b)(11) that states "[t]he licensee shall comply with the terms, conditions, and specifications of the certificate of compliance (CoC)."

Specifically, HDI requested an exemption that, if granted, would allow it to load up to three MPC-32Ms, using Amendment No. 15 for CoC No. 1014, with either up to thirty-two fuel assemblies having either Californium-252 (Cf-252) or Antimony-Beryllium

(Sb-Be) NSAs with sufficient cooling time, or a combination of up to five fuel assemblies having primary Plutonium Beryllium (Pu-Be) NSAs and the remaining basket locations with fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time. Further, as discussed in this notice, the exemption would permit HDI to load the fuel assemblies having either Cf-252 or Sb-Be NSAs in any location in the basket and the fuel assemblies having Pu-Be NSAs such that one is located in the center of the basket and one is located in each of the four basket quadrants. Additionally, although HDI's analysis included information about fuel assemblies having Polonium-Beryllium (Po-Be) NSAs, based on the September 20, 2022 Microsoft Teams call, the NRC staff understands that HDI does not have fuel assemblies with Po-Be NSAs.

Although HDI only requested exemptions from 10 CFR 72.12(b)(3) and (b)(11), to carry out this action, the NRC would also need to grant exemptions from 72.212(a)(2), (b)(5)(i), and 72.214. Consequently, in evaluating the request, the NRC also considered, pursuant to its authority in 10 CFR 72.7, exempting HDI from the requirements in 10 CFR 72.212(a)(2), 10 CFR 72.212(b)(5)(i); and 10 CFR 72.214. For clarity, when this *Federal Register* notice refers to HDI's requested exemption, it means both the two provisions from which HDI requested exemption and the additional provisions from which the NRC staff is considering exempting HDI on its own initiative.

II. Environmental Assessment

Description of the Proposed Action

The proposed action, if granted, would permit HDI to load up to three MPC-32Ms with multiple fuel assemblies that have NSAs, that cannot be removed from the fuel assembly, under Amendment No. 15 of CoC No. 1014. More specifically, the exemption would, if granted, allow HDI to load up to three MPC-32Ms, using Amendment No. 15 for CoC No. 1014, with either up to thirty-two fuel assemblies having either Cf-252 or Sb-Be

NSAs with sufficient cooling time, or a combination of up to five fuel assemblies having primary Pu-Be NSAs and the remaining basket locations with fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time. Appendix D, table 2.1-1, section V, "MPC MODEL: MPC-32M," Item C of Amendment No. 15 for CoC No. 1014 only permits general licensees to load a single NSA per cask. Further, per FSAR table 2.II.1.1, Rev. 22, the single NSA must be located in a cell in the inner part of the basket (i.e., fuel storage location 13, 14, 19, or 20). Accordingly, the exemption, if granted, would also permit HDI to load the fuel assemblies having either Cf-252 or Sb-Be NSAs in any location in the basket and the fuel assemblies having Pu-Be NSAs such that one is located in the center of the basket and one is located in each of the four basket quadrants.

Under the requirements of 10 CFR 51.21 and 10 CFR 51.30(a), the NRC staff developed an EA to evaluate the proposed action. The EA defines the NRC's proposed action (i.e., to grant, if appropriate, an exemption from the requirements of 10 CFR 72.212(a)(2), (b)(3), (b)(5)(i) and 10 CFR 72.214 per 10 CFR 72.7) and the purpose of and need for the proposed action. Evaluations of the potential environmental impacts of the proposed action and alternatives to the proposed action are presented further, followed by the NRC's conclusion.

Need for the Proposed Action

HDI is currently decommissioning Indian Point Unit 2 and Indian Point Unit 3 and, as part of that decommissioning, is transferring all spent fuel assemblies from the Indian Point Energy Center (Indian Point) Units 2 and 3 spent fuel pools to the ISFSI. HDI currently plans to load Indian Point Unit 2 spent fuel assemblies and the NSAs during the fall of 2022. HDI also plans to commence loading Indian Point Unit 3 spent fuel assemblies and the NSAs in February 2023. Without this exemption, the licensee would

have to pause loading until the NRC staff could process a CoC amendment. This would require the licensee to prolong the use of the spent fuel pools and their cleaning system. Longer use of the spent fuel pool cleaning system would generate additional low-level waste in the form of ion exchange resins. Granting an exemption now, if appropriate, would avoid the additional production of waste.

Environmental Impacts of the Proposed Action

This EA evaluates the potential environmental impacts of granting the exemption to allow HDI to load up to three MPC-32Ms, using Amendment No. 15 for CoC No. 1014, with either up to thirty-two fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time, or a combination of up to five fuel assemblies having primary Pu-Be NSAs and the remaining basket locations with fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time. It also evaluates the potential environmental impacts of granting the exemption permitting HDI to load the fuel assemblies having either Cf-252 or Sb-Be NSAs in any location in the basket and the fuel assemblies having Pu-Be NSAs such that one is located in the center of the basket and one is located in each of the four basket quadrants.

On July 18, 1990 (55 FR 29181), the NRC amended 10 CFR part 72 to provide for the storage of spent fuel under a general license in cask designs approved by the NRC. The EA for the 1990 final rule analyzed the potential environmental impact of using NRC-approved storage casks. The NRC has also considered the potential environmental impacts of storing spent fuel in accordance with Amendment No. 15 to the CoC for the HI-STORM 100 storage cask when it issued the direct final rule adding Amendment No. 15 to the list of acceptable casks in 10 CFR 72.214 (86 FR 16291). The EA accompanying the direct final rule determined the environmental impacts resulting from the implementation of Amendment No. 15 would not significantly differ

from the environmental impacts evaluated in the EA supporting the July 18, 1990, final rule. The EA for HI-STORM 100, Amendment No. 15 (86 FR 16291), tiered off the EA issued for the July 18, 1990, final rule. The EA for this exemption tiers off the EA for HI-STORM 100, Amendment No. 15 direct final rule. Tiering off earlier EAs is a standard process under the National Environmental Policy Act by which the impact analyses of previous EAs can be cited by a subsequent EA, such as this one, to include the impacts of the proposed action within the scope of the previous EA. Thus, for the proposed action, this EA will only consider the potential impacts from granting the exemption.

This exemption request involves neither the disturbance of land, the construction of new facilities, nor modifications to current operating practices. The EA for Holtec's HI-STORM 100, Amendment No. 15 analyzed the effects of design-basis accidents that could occur during storage operations. Design-basis accidents account for human-induced events and the most severe natural phenomena reported for the site and surrounding area as well as the resultant effects on the storage cask. The NRC staff evaluated the exemption request and concluded that HDI's proposed exemption did not reflect any structural design changes or fabrication requirement changes; therefore, there is no additional risk of loss of structure or confinement in the event a design-basis accident occurs. Further, because there is no increased risk in the loss of structure or confinement, there is no significant increase in the consequences of design-basis accidents. As a result, the proposed action will result in no change in the types or amounts of any effluent released.

Additionally, this exemption, if granted, would neither introduce shielding design changes nor operational changes. Although the requested exemption would change the source term, HDI submitted dose rate calculations as part of its exemption request,

which the NRC staff reviewed and will discuss in its safety evaluation. As will be discussed further in the staff's safety evaluation, HDI submitted dose rate calculations for the same locations for which it calculated dose for Amendment No. 15 to CoC 1014. These calculations demonstrate that, in most instances, the source term change would only increase the dose rate by small amounts (e.g., a few millirem/hour at the cask surface and less than a millirem/hour at a distance of 1 meter). The greatest dose rate increase at one of these locations occurred when the canister is in the transfer cask at the axial midplane of the transfer cask radial surface. The dose rate would increase by approximately 28 percent, which works out to an increase of 1099.92 millirem/hour and a total dose of 5033.67 millirem/hour. However, most cask operations are not performed at this location. Cask operations that are performed at this location are typically not performed at the surface, but rather approximately 1 meter from the surface. At that distance, the increase in dose rate would fall to approximately 122.69 millirem/hour and the total dose rate, including the increase, would fall to 1445.59 millirem/hour. Given that the workers would only be exposed to this increased dose rate for relatively short periods of time, the NRC staff does not consider this increase significant. Importantly, dose will remain within the applicable limits of 10 CFR part 20. Consequently, the exemption, if granted, will not cause a significant increase in either individual or cumulative radiation exposure to workers.

With regard to public dose rate increases, as previously noted, most of the dose rate increases are only a few millirem/hour at the cask surface and are less than a millirem/hour at a distance of 1 meter. HDI's dose calculations demonstrate that even the highest dose rate increase (at the surface of the transfer cask) would be significantly less at a distance of 1 meter. The dose rates will continue to fall off at even greater distances. Thus, the dose increase at the site boundary—which, under 10 CFR 72.106,

must be at least 100 meters from the spent fuel, will be even smaller and, therefore, not significant. Importantly, dose will remain within applicable 10 CFR part 20 limits as well as the 72.104 and 72.106 limits. Consequently, the proposed exemption would not significantly affect the exposure to the public.

Therefore, the proposed exemption request, if granted, will not result in radiological or non-radiological environmental impacts that significantly differ from impacts evaluated in the EA supporting the HI-STORM 100, Amendment No. 15 direct final rule. Accordingly, the NRC finds that granting the exemption will not significantly impact the quality of the human environment. Based on the foregoing discussion, the NRC staff finds that HDI's requested action, if approved is bounded by the EA for CoC No. 1014, Amendment No. 15.

Environmental Impacts of the Proposed Alternatives to the Proposed Action

In addition to the proposed action, the staff also considered the no-action alternative—the denial of the proposed exemption request. Denial of the exemption would preserve the status quo, i.e., the licensee could continue loading one fuel assembly having an NSA in baskets but could not load multiple fuel assemblies having NSAs in the same basket and could only load that one fuel assembly having an NSA in the inner part of the basket. The NRC staff has previously found that the Indian Point Post-Shutdown Decommissioning Activities Report (PSDAR) contained a discussion providing the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements. Further, the NRC staff has previously found that the licensee provided adequate reasons in its PSDAR and associated request for additional information responses to conclude that, for generic issues, the environmental impacts of decommissioning Indian Point Units 2 and 3 are bounded by the previous environmental

reviews. The effects of preserving the status quo would be bounded by these previous reviews. This is because preserving the status quo, in this regard, would preserve the status considered when the NRC staff reviewed the PSDAR. Under this alternative, the licensee would need to maintain the spent fuel pools for longer periods of time. This would lead to the generation of additional low-level waste from fuel pool cleaning activities. The licensee would need to dispose of this low-level waste, which would itself have environmental impacts. Based on that additional waste, the NRC staff has determined that the environmental impact of the no-action alternative would either be the same or may be greater than the proposed action.

The NRC staff also considered a different alternative to granting the exemption. The licensee could request that the certificate holder, in this case Holtec International, request an amendment to CoC No. 1014. Under this alternative, the licensee could either continue loading canisters with only one fuel assembly having an NSA in the inner part of the basket or postpone loading of multiple spent fuel assemblies that contain NSAs and not load spent fuel assemblies that contain NSAs in basket cells not located in the inner part of the baskets while the CoC holder prepared the request and the NRC staff reviewed it. In either scenario, HDI would extend the timeframe for which it maintained the Indian Point Units 2 and 3 spent fuel pools. Thus, the environmental impacts of the licensee requesting the certificate holder request an amendment, would be the generation of additional low-level waste from fuel pool cleaning activities. The licensee would need to dispose of this low-level waste, which would itself have environmental impacts. Further, if the CoC holder did seek an amendment and the NRC staff granted that requested amendment, the licensee would then load multiple fuel assemblies having NSAs in a single canister, in basket cells not located in the inner part of the baskets, thus ultimately leading to the environmental impacts caused by granting

this exemption. Therefore, the NRC staff has determined that the environmental impact of this alternative would either be the same or may be greater than the proposed action.

Alternative Use of Resources

Issuance of this exemption does not impact the resource implications discussed in previous environmental reviews.

Agencies and Persons Consulted

The NRC provided the New York State Energy Research and Development Authority (NYSERDA) a draft copy of this EA for review in an email dated July 19, 2022. In an email dated August 1, 2022, NYSERDA stated that it had completed its review. NYSERDA provided no comments explicitly addressing the NRC's assessment that granting the HDI exemption request has no significant impacts on the environment. However, NYSERDA noted that increasing the surface dose rate to approximately 3,934 millirem/hour, "appears to be a very large increase."¹ For the reasons previously stated, however, the NRC staff does not consider this increase significant from the perspective of this EA and FONSI.

NYSERDA also provided three comments on the exemptions. The first two comments raised safety concerns with the exemption. The NRC staff will address these concerns, as appropriate, in the safety evaluation report it prepares as part of its review of the requested exemption. NYSERDA also raised a third comment related to transportability/retrievability. The NRC staff responded to this comment in a letter to NYSERDA dated October 14, 2022.

¹ The copy of this EA the NRC staff originally provided to NYSERDA, mistakenly listed the maximum total dose at the radial surface of the transfer cask at the axial midplane as approximately 3,934 millirem/hour, rather than 5033.67 millirem/hour. The NRC staff is interpreting the comment to be referring to the maximum dose generally and responding as if the comment had said 5,034 millirem/hour.

While preparing the safety evaluation, staff identified typographical errors in the draft EA provided to NYSERDA on July 19, 2022, and as noted earlier, participated in a clarification call with HDI about the scope of the exemption. After correcting the typographical errors, as well as incorporating the clarification call information related to Cf-252 and Sb-Be NSAs, the NRC resubmitted the draft EA to NYSERDA for review on September 28, 2022. In an email dated September 29, 2022, NYSERDA reaffirmed their prior comments on the proposed exemption request, as submitted by letter on August 1, 2022, but did not provide additional comments.

Endangered Species Act Section 7 Consultation

Section 7 of the Endangered Species Act (ESA) requires Federal agencies to consult with the U.S. Fish and Wildlife Service or National Marine Fisheries Service regarding actions that may affect listed species or designated critical habitats. The ESA is intended to prevent further decline of endangered and threatened species and restore those species and their critical habitat.

The NRC staff determined that a consultation under section 7 of the ESA is not required because the proposed action will not affect listed species or critical habitat.

National Historic Preservation Act Section 106 Consultation

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to consider the effects of their undertakings on historic properties. As stated in the NHPA, historic properties are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places.

The NRC determined that the scope of activities described in this exemption request do not have the potential to cause effects on historic properties because the NRC's approval of this exemption request will not authorize new construction or land-

disturbing activities. The NRC staff also determined that the proposed action is not a type of activity that has the potential to impact historic properties because the proposed action would occur within the established Indian Point site boundary. Therefore, in accordance with 36 CFR 800.3(a)(1), no consultation is required under section 106 of NHPA.

III. Finding of No Significant Impact

The NRC staff has prepared an EA and associated FONSI in support of the proposed action. As discussed in this notice the proposed action is for the NRC to grant the exemption requested by Indian Point Energy Center that would allow HDI to load up to three MPC-32Ms, using Amendment No. 15 for CoC No. 1014, with either up to thirty-two fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time, or a combination of up to five fuel assemblies having primary Pu-Be NSAs and the remaining basket locations with fuel assemblies having either Cf-252 or Sb-Be NSAs with sufficient cooling time. It would also permit HDI to load the fuel assemblies having either Cf-252 or Sb-Be NSAs in any location in the basket and the fuel assemblies having Pu-Be NSAs such that one is located in the center of the basket and one is located in each of the four basket quadrants. The NRC staff has concluded that the proposed action will not result in radiological or non-radiological environmental impacts that significantly differ from impacts evaluated in the EA supporting the HI-STORM 100, Amendment No. 15 direct final rule. In this EA, the NRC staff considered two alternatives and determined that the environmental impacts of granting this exemption will be less than or the same as both alternatives. No changes are being made in the types or quantities of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposures in granting this exemption request for HDI. Accordingly, the NRC

finds that granting the exemption will not significantly impact the quality of the human environment.

The NRC staff has determined that this exemption would have no impact on historic and cultural resources or ecological resources and therefore no consultations are necessary under section 7 of the ESA or Section 106 of the NHPA.

Therefore, based on the previously noted discussions, the NRC finds that there are no significant environmental impacts from the proposed action, and that preparation of an environmental impact statement is not warranted. Accordingly, the NRC has determined that a FONSI is appropriate.

IV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

DOCUMENT DESCRIPTION	ADAMS ACCESSION No.
Indian Point Energy Center - Request for Exemption from an Allowable Contents Requirement Contained in the Certificate of Compliance No. 1014 for the HI-STORM 100S Version E Cask, dated March 24, 2022.	ML22083A191
Indian Point Exemption Environmental Assessment Conversation Record (6-16-22), date of contact June 16, 2022.	ML22172A174
Neutron Source Assembly Loading Clarification Call, date of contact September 20, 2022.	ML22264A045
Issuance of Certificate of Compliance No. 1014, Amendment No. 15 for the HI-STORM 100 Multipurpose Canister Storage System, dated May 13, 2021.	ML21118A862 (Package)
HI-2002444, Revision 22, Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System, dated August 9, 2021.	ML21221A329
Environmental Assessment and Finding of No Significant Impact, dated October 25, 2022.	ML22215A098
Indian Point Energy Center - Review of Post-Shutdown Decommissioning Activities Report, dated May 2, 2022.	ML22082A220
Email Transmitting Indian Point Exemption Draft EA, dated July 19, 2022.	ML22208A029

New York State Neutron Source Assembly Exemption Comments & Draft Environmental Assessment Review, dated August 1, 2022.	ML22215A042 (Package)
Response to Comments on Exemption Related to Allowable Contents for the Certificate of Compliance No. 1014, HI-STORM 100S Version E Cask, dated October 14, 2022.	ML22234A063
Email Transmitting Revised Indian Point Exemption Draft EA, dated September 28, 2022.	ML22271A849
New York State Revised Draft EA Response Email, dated September 29, 2022.	ML22276A164

Dated: October 26, 2022.

For the Nuclear Regulatory Commission.

/RA/

Yoira K. Diaz-Sanabria, Chief,
Storage and Transportation Licensing
Branch,
Division of Fuel Management,
Office of Nuclear Material Safety
and Safeguards.