



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO THE REQUEST FOR TRANSFER OF CONTROL OF
FACILITY OPERATING LICENSE NO. DPR-6,
RENEWED FACILITY OPERATING LICENSE NO. DPR-20,
AND THE GENERAL LICENSES FOR THE
INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS
FROM ENERGY NUCLEAR OPERATIONS, INC. AND
ENERGY NUCLEAR PALISADES, LLC
TO HOLTEC INTERNATIONAL AND HOLTEC DECOMMISSIONING INTERNATIONAL, LLC
BIG ROCK POINT PLANT AND PALISADES NUCLEAR PLANT
DOCKET NOS. 50-155, 50-255, 72-007, AND 72-043

1.0 INTRODUCTION

By application dated December 23, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20358A075) (license transfer application (LTA)), as supplemented by information provided in letters from Holtec Decommissioning International, LLC (HDI) dated December 23, 2020, December 23, 2020, and October 29, 2021 (ADAMS Accession Nos. ML20358A232, ML20358A239, and ML21302A064, respectively), Entergy Nuclear Operations, Inc. (ENOI), on behalf of itself, Entergy Nuclear Palisades, LLC (ENP), Holtec International (Holtec), and HDI (collectively, the Applicants), requested, pursuant to Section 184, "Inalienability of Licenses," of the Atomic Energy Act of 1954, as amended (AEA), and Sections 50.80, "Transfer of licenses," and 72.50, "Transfer of license," of Title 10 of the *Code of Federal Regulations* (10 CFR), that the U.S. Nuclear Regulatory Commission (NRC, the Commission) consent to the transfer of control of Renewed Facility Operating License (RFOL) No. DPR-20 for the Palisades Nuclear Plant (Palisades), the general license for the Palisades Independent Spent Fuel Storage Installation (ISFSI), Facility Operating License (FOL) No. DPR-6 for Big Rock Point Plant (Big Rock Point), and the general license for the Big Rock Point ISFSI (referred to collectively as the Sites and the licenses) to a Holtec subsidiary to be known as Holtec Palisades, LLC (Holtec Palisades). The Applicants also requested that the NRC consent to the transfer of ENOI's operating authority (i.e., its authority to conduct licensed activities at the Sites) to HDI. Finally, the Applicants requested that the NRC approve conforming administrative amendments to the licenses to reflect the proposed transfer of the licenses from ENOI to HDI and the planned name change from ENP to Holtec Palisades

pursuant to 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit."

The supplemental information provided by HDI in support of the LTA is:

- (1) A December 23, 2020, post-shutdown decommissioning activities report (PSDAR) and site-specific decommissioning cost estimate (SSCE) for Palisades, contingent upon NRC approval of the LTA and the consummation of the proposed transfer transaction;
- (2) A December 23, 2020, request for exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) to allow the use of funds from the Palisades decommissioning trust fund (DTF) for spent fuel management and site restoration activities at Palisades and to allow disbursements from the Palisades DTF for these activities to be made without prior notice, similar to withdrawals in accordance with 10 CFR 50.82(a)(8); and
- (3) An October 29, 2021, update to the LTA to reflect two changes in the executive management positions.

Upon an NRC approval of the LTA and the consummation of the proposed transfer transaction, Holtec Palisades would be the licensed owner for Big Rock Point and Palisades. Holtec Palisades would also own each site's associated assets and real estate, including the Palisades DTF, title to spent nuclear fuel, and rights pursuant to the terms of the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste with the U.S. Department of Energy (DOE standard contract). A wholly-owned subsidiary of Holtec, Nuclear Asset Management Company, LLC (NAMCo), would acquire all equity interests in the parent companies owning the Sites and would emerge as the direct parent company owner of Holtec Palisades.

Holtec Palisades would enter into an operating agreement for decommissioning services with HDI, which would act as its agent, and Holtec Palisades would pay for HDI's decommissioning, spent fuel management, and site restoration costs incurred at Big Rock Point and Palisades; HDI would be the licensed operator for Big Rock Point and Palisades. Comprehensive Decommissioning International, LLC (CDI), a general contractor to HDI, would perform day-to-day activities at the Sites, including decommissioning activities, pursuant to a general contractor agreement between HDI and CDI, subject to HDI's direct oversight and control as the licensed operator.

NAMCo and HDI would be direct, wholly-owned subsidiaries of Holtec Power, Inc. (Holtec Power), which is a direct, wholly-owned subsidiary of Holtec.

Notice of NRC consideration of approval of the LTA was published in the *Federal Register* on February 4, 2021 (86 FR 8225) and included an opportunity to comment, request a hearing, and petition for leave to intervene. The NRC staff reviewed the comments and hearing requests received and considered them in its review of the LTA, as discussed in Section 11.0 of this safety evaluation (SE). The topics of the comments and hearing requests received that were within the scope of the NRC staff's review of the LTA, such as decommissioning funding and the financial and technical qualifications of Holtec and its partners and subsidiaries, are addressed in this SE.

The supplemental information in the letter dated October 29, 2021 provided additional information that clarified the application and did not expand the scope of the application as originally noticed in the *Federal Register* on February 4, 2021.

2.0 REGULATORY EVALUATION

2.1 Background

Big Rock Point is located in Hayes, Michigan, in Charlevoix County, on the northern shore of Michigan's Lower Peninsula. Big Rock Point permanently ceased operations on August 29, 1997. Subsequently, all spent nuclear fuel was transferred to an ISFSI. In 2007, decommissioning and dismantlement of the facilities was completed and in accordance with an approved license termination plan, all property, other than an onsite parcel of land of approximately 30 acres within which the ISFSI is located and an additional non-impacted parcel of approximately 75 acres adjacent to the ISFSI, was released.

Palisades is located in Covert, Michigan, in Van Buren County, on the eastern shore of Lake Michigan. Palisades is a pressurized-water reactor with a thermal rating of 2,565 megawatts thermal. Commercial operations of Palisades began on December 31, 1971. Pursuant to 10 CFR 50.82(a)(1)(i), by letter dated January 4, 2017 (ADAMS Accession No. ML17004A062), as supplemented by letters dated September 28, 2017, and October 19, 2017 (ADAMS Accession Nos. ML17271A233 and ML17292A032, respectively), ENOI certified to the NRC its decision to permanently cease power operations at Palisades no later than May 31, 2022. Once ENOI certifies that it has permanently defueled the Palisades reactor vessel and placed the fuel in the spent fuel pool (SFP), pursuant to 10 CFR 50.82(a)(2), the Palisades license will no longer authorize operation of the reactor.

The LTA provided that if the NRC were to consent to the license transfer, the Applicants would enter into a transaction under which the Sites would be transferred to Holtec and its subsidiary. This transaction would occur under the terms of a "Membership Interest Purchase and Sale Agreement" (see Attachment C of the LTA). Pursuant to the purchase and sale agreement, Holtec Palisades would be the licensed owner for the Sites. In addition, HDI would assume from ENOI the responsibility of the Sites' licensed operator. Holtec Palisades would be a direct, wholly-owned subsidiary of NAMCo, which would be a direct, wholly-owned subsidiary of Holtec Power. HDI would be a direct, wholly-owned subsidiary of Holtec Power. Holtec Power would be a direct, wholly-owned subsidiary of Holtec. HDI would contract with CDI, a company jointly formed and owned by Holtec and SNC-Lavalin Group, as the decommissioning general contractor. CDI would perform day-to-day activities at the Sites, including decommissioning activities, subject to HDI's direct oversight and control as the licensed operator. CDI, although jointly formed and owned by Holtec and SNC-Lavalin Group, would be the decommissioning general contractor after the proposed transfer transaction and would have no direct or indirect ownership or licensing authority at the Sites. Figures 1 and 2 of the LTA show the corporate ownership structure, including the identity of the licensed owner and licensed operator, before and after the proposed transfer transaction.

The LTA also identifies the principal officers and directors of the transferees, including those of Holtec, Holtec Power, NAMCo, Holtec Palisades, and HDI. Holtec would be the ultimate parent company of the proposed licensed entities. Holtec is a privately held corporation and is controlled by its Board of Directors, all of whom are U.S. citizens. It is owned by its shareholders as follows: (1) The Great Banyan Trust, 36.33 percent ownership interest and

(2) Multi-Decades Trust, 63.67 percent ownership interest. Dr. Krishna Singh of Holtec controls these trusts.

The LTA provided that the purpose of the requested transfer of the licenses to Holtec and its subsidiary is to permit the decommissioning of the Sites and the unrestricted release of all portions of the Sites, other than the ISFSIs, on an accelerated schedule. Specifically, following the consummation of the proposed transfer transaction, HDI plans to complete the transfer of spent nuclear fuel at Palisades to the Palisades ISFSI as soon as practicable and to promptly proceed with decontamination and dismantlement of the site (other than the ISFSI) beginning in 2022. The projected goal for completing the radiological decommissioning, site restoration, and release for unrestricted use of the non-ISFSI portions of Palisades is within 20 years after the transfer, with a potential target date of 2041, as depicted in the cash flow analysis presented in the LTA. This envisioned decommissioning method is different than the 60-year SAFSTOR decommissioning method envisioned under the current ownership of the licenses. Pursuant to the purchase and sale agreement, the proposed transfer transaction is subject to the condition that, prior to closing, Palisades shall have been permanently shut down and all spent fuel shall have been removed from the Palisades reactor and placed in the SFP.

By letter dated December 23, 2020, HDI provided a PSDAR (the HDI PSDAR), including an SSCE, reflecting its proposed decommissioning method if the LTA were to be approved and the proposed transfer transaction consummated. The HDI PSDAR and SSCE describe the planned decommissioning activities to be undertaken for Palisades and the Palisades ISFSI, along with a schedule for their accomplishment, an estimate of expected costs, and an evaluation of environmental impacts consistent with the discussion provided in the LTA. The decommissioning schedule as presented in the HDI PSDAR reflects decommissioning beginning in 2022 and that the majority of decommissioning activities would occur, and associated decommissioning expenses would be incurred, by 2040, resulting in anticipated partial site release at that time. HDI indicated that the PSDAR was developed consistent with NRC Regulatory Guide (RG) 1.185, Revision 1, "Standard Format and Content for Post-Shutdown Decommissioning Activities Report" (ADAMS Accession No. ML13140A038), and includes an SSCE for license termination costs associated with radiological decommissioning, as well as cost estimates for spent fuel management and site restoration activities. The HDI exemption request dated December 23, 2020, also discusses cost projections related to radiological decommissioning, spent fuel management, and site restoration activities.

2.2 Regulations and Guidance

The proposed transaction described in the LTA involves the transfer of control of the licenses and, therefore, requires prior NRC approval. Generally, to approve the LTA, the NRC must find that the proposed transferee is qualified to be the holder of the licenses and that transfer of the licenses is otherwise consistent with applicable provisions of law, regulations, and orders issued by the NRC pursuant thereto.

The request for approval of the transfer of control of the licenses, as described above and as discussed in this SE, is made pursuant to 10 CFR 50.80(a), which states:

No license for a production or utilization facility (including, but not limited to, permits under this part and part 52 of this chapter, and licenses under parts 50 and 52 of this chapter), or any right thereunder, shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

In addition, the regulations at 10 CFR 50.80(b) and (c) apply. Section 50.80(b) of 10 CFR states that an application for a license transfer shall include as much of the information described in 10 CFR 50.33, "Contents of applications; general information," and 10 CFR 50.34, "Contents of applications; technical information," with respect to the identity and technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license.

Section 50.80(c) of 10 CFR states, in part:

...the Commission will approve an application for the transfer of a license, if the Commission determines: (1) That the proposed transferee is qualified to be the holder of the license; and (2) That transfer of the license is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.

In 10 CFR 50.33(a) through (d), the NRC requires applicants to provide information, including the name of the applicant, address of the applicant, description of the corporate structure of the applicant, citizenship of the applicant, and foreign ownership, control, or domination (FOCD) of the applicant, as applicable.

In addition, 10 CFR 50.33(f) states, in part:

Except for an electric utility applicant for a license to operate a utilization facility of the type described in [10 CFR] 50.21(b) or [10 CFR] 50.22, [each application shall state] information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought.

Section 50.2, "Definitions," of 10 CFR states, in part, that an electric utility means:

[A]ny entity that generates or distributes electricity and which recovers the cost of this electricity, either directly or indirectly, through rates established by the entity itself or by a separate regulatory authority.

In 10 CFR 50.33(k)(1), the NRC requires that applicants provide the information described in 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," indicating how reasonable assurance will be provided that funds will be available to decommission the facility.

The regulation at 10 CFR 50.75 specifies how a licensee will provide reasonable assurance that funds will be available for the decommissioning process. Specifically, 10 CFR 50.75(b) requires that decommissioning financial assurance be provided in an amount not less than the minimum

formula amount in 10 CFR 50.75(c). In 10 CFR 50.75(e), the NRC includes the methods acceptable to the agency for covering this decommissioning financial assurance amount, including using a DTF. Finally, 10 CFR 50.75(f) and (h) provide additional requirements for the reporting and management of DTFs.

In addition, 10 CFR 50.82(a)(8)(i) states that licensees may use DTFs if:

- (A) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in [10 CFR] 50.2;
- (B) The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise and;
- (C) The withdrawals would not inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license.

In accordance with 10 CFR 50.2, the term “decommission” means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use and termination of the license or (2) release of the property under restricted conditions and termination of the license.

In 10 CFR 50.82(a)(8)(v), the NRC also requires power reactor licensees that have permanently ceased operations to provide to the NRC annually, by March 31, a decommissioning financial assurance status report. The report must include additional financial assurance to cover any projected shortfalls.

In 10 CFR 50.54(bb), the NRC requires, in part, a licensee to submit, for NRC review and preliminary approval, the program by which the licensee intends to manage and provide funding for the management of all spent fuel at the reactor following permanent cessation of operation of the reactor until title to the spent fuel and possession of the spent fuel is transferred to the DOE for its ultimate disposal in a repository. In addition, 10 CFR 50.82(a)(8)(vii) provides, in part, for the licensee’s annual submittal to the NRC of a report on the status of its funding for managing spent fuel. If the funds accumulated do not cover the projected cost, a plan to obtain additional funds to cover the cost must be included.

In 10 CFR 50.34(b)(6), the NRC requires applicants to provide certain information on facility operation, including:

- (i) The applicant’s organizational structure, allocations or responsibilities and authorities, and personnel qualifications requirements.
- (ii) Managerial and administrative controls to be used to assure safe operation.

In 10 CFR 50.34(b)(7), the NRC also requires applicants to provide:

The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

The NRC staff uses, in part, the following regulatory guidance to evaluate whether the financial and technical qualifications of licensees would be affected by proposed transfers:

- (1) NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," Chapter 13, "Conduct of Operations," Section 13.1.1, Revision 6, "Management and Technical Support Organization," dated August 2016 (ADAMS Accession No. ML15005A449), which provides guidance for the review of changes to the technical organization or personnel qualifications proposed as a result of a license transfer. Specifically, Section I.4, "Reviews of Operating License Transfers," states that the applicant for transfer of an operating license should provide a description of the organization to support plant operations, which should include (1) organizational charts of the corporate-level management and technical support organizations, emphasizing the changes to be made as a result of the transfer, (2) the relationship of the nuclear-oriented parts of the organization to the rest of the corporate organization, and (3) description of the specific provisions that have been made for uninterrupted technical support for operations.
- (2) NUREG-0800, Chapter 13, Sections 13.1.2 - 13.1.3, Revision 7, "Operating Organization," dated August 2017 (ADAMS Accession No. ML15007A296), which provides guidance for the review of changes to the operating organization proposed as a result of a license transfer.
- (3) NUREG-1577, Revision 1, "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," dated December 2001 (ADAMS Accession No. ML013330264), which describes the process used to review the financial qualifications and methods of providing decommissioning funding assurance required of power reactor license applicants and licensees.
- (4) NUREG-1713, "Standard Review Plan for Decommissioning Cost Estimates for Nuclear Power Reactors," dated December 2004 (ADAMS Accession No. ML043510113), which provides a list of items for which decommissioning trust funds can be used. The bases for NUREG-1713 can be found in two documents that reference decommissioning at a pressurized-water reactor and at a boiling-water reactor, respectively: NUREG/CR-5884, "Revised Analyses of Decommissioning for the Reference Pressurized Water Reactor Power Station" (ADAMS Accession No. ML14008A187), and NUREG/CR-6174, "Revised Analyses of Decommissioning for the Reference Boiling Water Reactor Power Station" (ADAMS Accession No. ML14008A186). The Palisades facility is a Combustion Engineering pressurized-water reactor. As such, NUREG/CR-5884 applies.
- (5) RG 1.202, "Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors," dated November 2001 (ADAMS Accession No. ML050230008), which provides guidance for licensees to use in meeting the NRC's regulatory requirements for the various cost estimates that the agency requires for different stages and methods of decommissioning.

The purpose of the NRC staff's technical qualifications evaluation is to ensure that the proposed corporate management is involved with, informed of, and dedicated to the safe operation,

maintenance, and decommissioning of the facility, and that adequate technical and financial resources will be provided to support these activities.

In addressing FOCD issues, Sections 103d and 104d of the AEA provide, in relevant part, that no license may be issued to:

[A]ny corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.

The NRC regulation at 10 CFR 50.38, "Ineligibility of certain applicants," is the regulatory provision that implements the FOCD provisions of the AEA. The NRC staff evaluates license transfer applications in a manner that is consistent with the guidance provided in the NRC "Final Standard Review Plan on Foreign Ownership, Control, or Domination" (SRP on FOCD) published in the *Federal Register* on September 28, 1999 (64 FR 52355), to determine whether the proposed transferee is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. The NRC's position on FOCD, outlined in the SRP on FOCD, states that "the foreign control limitation should be given an orientation toward safeguarding the national defense and security." Further, the SRP on FOCD outlines how the effects of foreign ownership may be mitigated through implementation of a "negation action plan" to ensure that any foreign interest is effectively denied control or domination over the licensee.

The NRC staff also reviews information that relates to nuclear onsite property damage insurance requirements under 10 CFR 50.54(w) and the Price-Anderson insurance and indemnity requirements under Section 170 of the AEA and 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements."

With respect to the transfer of control of a license for an ISFSI, 10 CFR 72.50(a) states, in part:

No license or any part included in a license issued under [10 CFR Part 72] for an ISFSI ... shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

Section 72.6(b) of 10 CFR states:

A general license is hereby issued to receive title to and own spent fuel, high-level radioactive waste, or reactor-related GTCC [greater than Class C] waste without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to acquire, deliver, receive, possess, use, or transfer spent fuel, high-level radioactive waste, or reactor-related GTCC waste except as authorized in a specific license.

Section 72.210 of 10 CFR states, in part:

A general license is hereby issued for the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 CFR part 50....

Section 72.30 of 10 CFR discusses financial assurance for decommissioning ISFSIs.

Finally, with respect to the requested conforming license amendments, 10 CFR 50.90 states, in part:

Whenever a holder of a license ... desires to amend the license..., application for an amendment must be filed with the Commission ... fully describing the changes desired, and following as far as applicable, the form prescribed for original applications.

Pursuant to 10 CFR 2.1315, where administrative license amendments are necessary to reflect an approved license transfer, such amendments will be included in the order that approves the transfer.

3.0 FINANCIAL EVALUATION

3.1 Financial Qualifications

As noted above, pursuant to 10 CFR 50.2, "decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits (1) release of the property for unrestricted use and termination of the license or (2) release of the property under restricted conditions and termination of the license. As explained below, the NRC staff's review of financial qualifications for the proposed license transfer assesses whether the Applicants have provided reasonable assurance that funds will be available to the transferees to cover estimated costs for radiological decommissioning and spent fuel management activities at Palisades and Big Rock Point, in accordance with the requirements of 10 CFR 50.33(f), 10 CFR 50.33(k)(1), 10 CFR 50.75, 10 CFR 50.82(a), and 10 CFR 72.30.

As previously noted, Big Rock Point permanently ceased operations on August 29, 1997 with decommissioning and dismantlement of the Big Rock Point facility completed in 2007, and in accordance with an approved license termination plan, all property, other than an onsite parcel of land of approximately 30 acres within which the ISFSI is located and an additional non-impacted parcel of approximately 75 acres adjacent to the ISFSI, was released. As such, there are no decommissioning costs associated with Big Rock Point except for the cost to decommission the ISFSI after the spent fuel is removed. Holtec provided an estimate of this cost in Attachment E to the LTA. With respect to spent fuel management, Holtec also provided in Attachment E to the LTA an estimate of the annual costs for operating the Big Rock Point ISFSI.

Pursuant to the purchase and sale agreement, the proposed transfer transaction is subject to Palisades also having permanently ceased operations. Accordingly, HDI (the proposed licensed operator for decommissioning) would not be authorized under the Palisades license to operate or load fuel in the Palisade reactor pursuant to 10 CFR 50.82(a)(2) and, therefore, would not conduct the operations contemplated by the financial qualifications provisions of 10 CFR 50.33(f). Rather, all of HDI's licensed activities would involve the possession of radioactive material in connection with maintaining the safe condition of Palisades and the Big Rock Point and Palisades ISFSIs, radiological decommissioning of Palisades and the Big Rock Point and Palisades ISFSIs, license termination, and operational responsibilities associated with spent fuel management. Thus, following the proposed transfer, Holtec Palisades (the proposed licensed owner) would maintain the existing Palisades DTF and would be responsible for funding all of the expenses associated with radiological decommissioning and the operational costs for spent fuel management at Palisades and Big Rock Point. Therefore, as described in this SE, the NRC staff's evaluation of the HDI and Holtec Palisades financial qualifications

consists of an analysis of the projected costs for decommissioning Palisades and the Big Rock Point and Palisades ISFSIs and managing spent fuel at Big Rock Point and Palisades until the DOE takes title and possession of the fuel.

As stated in the LTA, Holtec Palisades would provide the decommissioning financial assurance required by 10 CFR 50.75, 10 CFR 50.82(a), and 10 CFR 72.30 for Palisades and the Palisades ISFSI using the prepayment method in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1). Holtec Palisades would retain the Palisades DTF, which, as of December 31, 2020, contained \$553.84 million (as documented in ENOI's March 25, 2021, Decommissioning Funding Status Report (ADAMS Accession No. ML21084A811)). According to the LTA, the right to draw on the funds of the Palisades DTF and the estimate of expected decommissioning, spent fuel management, and site restoration costs referred to in the LTA and reflected in the HDI PSDAR provide the requisite financial information for the proposed license transfer consistent with 10 CFR 50.33(f). Specifically, the LTA concludes that the projected DTF value at the closing of the proposed transfer transaction is expected to fully fund HDI's SSCE for radiological decommissioning and spent fuel management costs, as well as site restoration costs, at Palisades. The NRC staff's analysis of the transferees' financial qualifications follows.

3.1.1 Estimated Costs for Decommissioning Palisades

The existing DTF for Palisades was created in compliance with 10 CFR 50.75, and the funds within the DTF were collected while the facility was operating. As described below, the NRC staff's review of financial qualifications for Palisades assesses whether the Applicants have provided reasonable assurance that funds will be available to cover estimated costs for radiological decommissioning of Palisades and its ISFSI and spent fuel management.

Separate from the LTA, HDI submitted a PSDAR reflecting its plans for radiological decommissioning, spent fuel management, and site restoration at Palisades if the license transfer is approved and the proposed transfer transaction is consummated. The NRC staff treated this submittal as a supplement to the LTA. The HDI PSDAR includes the following:

- a description of the planned decommissioning activities along with a schedule for their accomplishment and
- estimates of expected decommissioning costs, including an SSCE, for decommissioning the Palisades site.

The HDI PSDAR reflects HDI's plan to complete the decommissioning of the non-ISFSI portions of the Palisades site within approximately 20 years after the proposed transfer transaction is consummated. The HDI PSDAR also contains the most recent decommissioning cost estimate and plan for spent fuel management and site restoration.

Following the partial site release scheduled for 2040 (i.e., the unrestricted release of the entirety of the Palisades site with the exception of the ISFSI), HDI plans to remove stored spent fuel and GTCC waste from the site, decommission the ISFSI, terminate its NRC licenses, and release the remainder of the Palisades site for unrestricted use in 2041. In accordance with the requirements of 10 CFR 72.30 for ISFSI decommissioning, the cost estimate for decommissioning the Palisades ISFSI reflects: (1) the cost of HDI's decommissioning contractor performing the decommissioning activities, (2) a contingency allowance of

25 percent, and (3) the cost of meeting the criteria for unrestricted use. The cost summary for decommissioning the Palisades ISFSI is presented in Appendix A of the HDI PSDAR.

As part of its review of the LTA, the NRC staff reviewed the SSCE provided with the HDI PSDAR to ensure that it contains the appropriate information pursuant to NUREG-1713 for decommissioning planning purposes, which includes:

- A description of the decommissioning cost estimating methodology,
- A description of the overall decommissioning project,
- A summary decommissioning cost estimate by major activity and phase,
- A schedule of the major decommissioning activities,
- A summary of the decommissioning management with support staff levels, and
- An estimate of radioactive waste volume.

NUREG-1713 also states that if the amount of an SSCE is less than the minimum formula amount in 10 CFR 50.75(c), a licensee must provide adequate justification for the difference.

The SSCE identified radiological decommissioning costs of \$443,215,000 (2020 dollars) for Palisades, including costs for decommissioning the Palisades ISFSI; spent fuel management costs of \$166,122,000; and site restoration costs of \$34,679,000 for total costs of \$644,015,000.

The estimated Palisades radiological decommissioning costs of \$443,215,000 is lower than the 10 CFR 50.75(c) minimum formula amount of \$486,730,000, as reported by ENOI in its March 25, 2021, decommissioning funding status report. In the LTA, the Applicants provided their justification for using a radiological decommissioning cost estimate value that is less than the minimum formula amount. Specifically, the Applicants stated that the HDI SSCE is a more reliable and precise estimate of decommissioning costs because it is based on Palisades site-specific plant data and historical information, actual site conditions, regulatory requirements applicable to Palisades, and actual pricing information, as compared to the 10 CFR 50.75(c) minimum formula amount, which is based on generic inputs. Additionally, the Applicants stated that the HDI SSCE was reviewed against the estimates of costs associated with license termination (i.e., radiological decommissioning) in NUREG/CR-5884 and benchmarked against similar estimates of dismantlement, demolition, and waste management activities for other HDI decommissioning projects. Finally, the Applicants stated that at the closing of the transfer transaction, certain decommissioning planning and initial decommissioning activities will already have been completed. The Applicants added that the regulations governing licensees in decommissioning, 10 CFR 50.82, do not include provisions requiring that an SSCE equal or exceed the minimum formula amount in 10 CFR 50.75(c). The NRC staff's review determined that this justification for the Palisades radiological decommissioning cost estimate being less than the minimum formula amount is adequate.

With respect to the 12 percent contingency allowance used in the radiological decommissioning estimate (except for the ISFSI decommissioning estimate, which includes a 25 percent contingency allowance), spent fuel management estimate, and site restoration estimate for Palisades, HDI discussed its use of risk modeling tools to evaluate the impacts of uncertainty and risk events on the project, its schedule, and its costs. The use of these tools, coupled with reliance on decommissioning subject matter experts at HDI and CDI, helped HDI conclude in

the SSCE that the 12 percent contingency allowance was reasonable and adequate. As stated by HDI:

Based on an evaluation of estimate uncertainty and discrete risk events, combined with experience gained through decommissioning efforts at Oyster Creek [Nuclear Generating Station] and Pilgrim [Nuclear Power Station], newly formed waste contracts, and contingency allowances used for other decommissioning projects, a Contingency Allowance of 12 percent was determined to reasonably bound the universe of risks that are appropriate to be taken into account at the estimate phase (considering industry practice, accepted NRC methodology, and the information that is available today) for the Palisades decommissioning project.

The NRC staff reviewed the estimated costs associated with each of the five periods of the Palisades decommissioning identified in the SSCE (pre-decommissioning planning and preparation; plant deactivation; safe storage operations; dismantlement; and ongoing ISFSI operations), as well as program management costs. In particular, the staff considered the costs associated with Period 4, the dismantlement period, and the overall program management costs, which, when combined, represent approximately 96 percent of the estimated radiological decommissioning expenses at Palisades. Work completed during Period 4 will result in removed reactor components that will be packaged, placed in containers, and transported to storage, treatment, or disposal facilities; radioactive waste that will be packaged and shipped for disposal; and buildings that will be cleared of all radioactive components and declared ready for free release or demolition. The NRC staff's review of the estimated costs associated with these activities determined that the costs appear to be reasonable and to involve plausible assumptions and forecasts.

Regarding spent fuel management expenses at Palisades, the NRC staff reviewed the following information submitted as part of the LTA:

- Estimated costs to transfer spent fuel to dry fuel storage canisters,
- Estimated costs to move and then place spent fuel into long term storage at the ISFSI,
- Operational costs of the ISFSI until all spent fuel is placed at the ISFSI, and
- Operational activities and affiliated costs from the time that all spent fuel is in storage at the ISFSI until spent fuel and GTCC waste is removed from the ISFSI for receipt by the DOE.

HDI's decommissioning plan would result in 20 spent fuel storage casks being placed in dry storage at the site. The 49 casks that are currently stored on the existing ISFSI pads will be consolidated to the East ISFSI pad. The 69 casks projected to be in dry storage after shutdown excludes any additional casks that may be used for GTCC storage.

Regarding spent fuel removal, the Applicants provided that Palisades possesses spent fuel that has early eligibility for removal by the DOE once it begins accepting spent fuel from the commercial nuclear industry. While dates by which the DOE will begin to accept spent fuel remain uncertain, the Applicants' spent fuel management plan assumes a start date of 2030. Based on this assumption and on the DOE-authorized exchange rights allowed for by the DOE standard contract, the Applicants estimated that for Palisades, spent fuel removal will begin in 2030 and finish in 2040.

Regarding site restoration activities, HDI's decommissioning plan for Palisades anticipates the majority of site restoration expenditures to occur during the final seven years of decommissioning at the site (beginning in, and including, 2035). The description of site restoration activities provided by the Applicants identifies costs associated with building demolition, including equipment required for demolition, personnel costs, permit requirements, and surveys to perform hazardous waste (asbestos and lead paint) removal from buildings and components; demolition of site buildings to 3 feet below grade and backfill with clean fill material; demolition of above ground tanks; removal of parking lot surfaces; final grading; and final site restoration activities after ISFSI decommissioning and demolition is completed. In addition, the schedule for site restoration considers the required coordination with radiological decommissioning and spent fuel management activities.

The LTA, as supplemented by the HDI PSDAR, provided a comprehensive cost estimate reflecting the full scope, schedule, cost, and contingency baselines for the radiological decommissioning of Palisades and for spent fuel management at Palisades, as well as for site restoration activities. Consistent with guidance in NUREG-1713 and RG 1.202, the Applicants provided information on the decommissioning cost estimating methodology; a description of, and schedules for, planned decommissioning activities; and estimates of expected costs, including decommissioning of the ISFSI. Schedule and cost details were provided for pre-decommissioning planning and preparation activities; facility shutdown activities; dismantlement activities within the radiologically controlled area; waste processing, storage, and disposal activities; site infrastructure and operation activities; project management, engineering, and support activities; spent fuel and nuclear material management activities; and site restoration activities. Therefore, the NRC staff determined that the LTA, as supplemented, addressed in sufficient detail the activities and associated costs required for decommissioning and spent fuel management at Palisades.

Based on its independent review of the LTA, as supplemented, the NRC staff determined that the Applicants have adequately addressed and evaluated all of the activities required to complete the decommissioning of Palisades and to manage spent fuel, as well as site restoration activities, and their costs. Therefore, the staff concludes that the Applicants' estimated costs for decommissioning Palisades appear to be reasonable and to involve plausible assumptions and forecasts.

3.1.2 Availability of Funds for Decommissioning Palisades

The LTA indicated that the proposed new owner of Palisades, Holtec Palisades, would fully fund all decommissioning costs from the Palisades DTF acquired in the proposed transfer transaction. With respect to the adequacy of this funding, the NRC staff reviewed the cost estimates, the DTF balance, the pre-license transfer spending forecasts, and the projected DTF growth. The staff performed an independent cash flow analysis of the Palisades DTF over the proposed 20-year period beginning in, and including, 2022, which includes all phases of the

decommissioning project,¹ and determined the projected earnings² for the DTF. This cash flow analysis is in Attachment A to this SE.

Attachment A to this SE reflects the NRC staff's cash flow analysis based on the decommissioning costs presented by the Applicants, which, as discussed above, the staff determined appear to be reasonable and to involve plausible assumptions and forecasts. These costs are divided into three categories: license termination (i.e., radiological decommissioning), spent fuel management, and site restoration. As reflected in the attached cash flow analysis, after annual withdrawals for decommissioning activities associated with Palisades and the Palisades ISFSI are considered, as well as withdrawals for annual expenditures associated with spent fuel management and site restoration activities, and including an annual 2-percent real rate of return on remaining trust assets, excess funds are present in the Palisades DTF at the end of 2040, the anticipated date of partial site release (i.e., the unrestricted release of the entirety of the site with the exception of the ISFSI). Specifically, the excess funds in the DTF under this scenario equal approximately \$40.8 million. When evaluating total decommissioning costs, including spent fuel management, site restoration, and ISFSI decommissioning costs, to 2041, the staff again found a positive balance in the Palisades DTF. Specifically, the excess funds in the DTF under this scenario equal approximately \$27.3 million.

In assessing the adequacy of the Palisades DTF to cover decommissioning costs, the NRC staff also considered the impact on returns in the equity markets as a result of the Coronavirus Disease 2019 (COVID-19) public health emergency and the potential impacts that this might have to the asset balances in the DTF. Equity markets declined by 32 to 36 percent between mid-February to mid-March 2020, as measured by the Standard and Poor's 500 equity index (S&P 500) and the Dow Jones industrial average index. Since that time, however, these market indices have more than fully recovered from their March 2020 low valuations. As a result of these market recoveries, and recognizing that equity markets fluctuate with time, the staff was satisfied that the beginning DTF value used by the Applicants in the LTA appears to be reasonable. Additionally, despite the COVID-19 public health emergency, the S&P 500 index increased at an annualized rate of approximately 19 percent during the period between September 2019 to October 2021, after accounting for inflation and including reinvestment of dividends. Annualized returns from the S&P 500 index, after accounting for inflation and including reinvestment of dividends, equate to approximately 8.1 percent, 7.1 percent, and 13.9 percent, for the preceding 30-year, 20-year, and 10-year periods, respectively. Accordingly, the staff continues to consider the 2-percent annual real rate of return allowed by the NRC's regulations to be conservative over the 20-year period of the planned Palisades decommissioning.

Based on its review, and in consideration of its independent cash flow analysis provided in Attachment A to this SE, the NRC staff concludes that the Applicants have provided information sufficient to demonstrate that there is reasonable assurance that, after the proposed license

¹ The 20-year period covers the radiological decommissioning period beginning in, and including, 2022, leading to the partial site release of Palisades, as well as the period of spent fuel management and ISFSI decommissioning prior to license termination. The NRC staff's analysis also considered site restoration expenses during this period.

² Projected earnings were determined consistent with 10 CFR 50.75(e)(1)(i), which states, in part, "A licensee that has prepaid funds based on a site-specific estimate ... may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return ... through the projected decommissioning period," and 10 CFR 50.82(a)(8)(vi), which discusses, in part, DTF earnings "calculated at not greater than a 2 percent real rate of return...."

transfer, funds will be available to cover estimated costs for decommissioning and spent fuel management at Palisades.

3.1.3 Decommissioning Big Rock Point

The LTA provided a cost estimate for the decommissioning of the Big Rock Point ISFSI and supporting information. According to the LTA, the estimated cost to decommission the Big Rock Point ISFSI is approximately \$2.7 million (including a 25-percent contingency allowance). The Applicants stated that Holtec would provide the required ISFSI decommissioning financial assurance through the prepayment method, as allowed by 10 CFR 72.30(e)(1). The Applicants stated that the financial assurance provided by Holtec would meet the requirements of 10 CFR 72.30(b), (c), and (e) for decommissioning the Big Rock Point ISFSI.

Additionally, the Applicants provided the actual annual costs for operating the Big Rock Point ISFSI in 2019 and the estimated costs for 2020 of approximately \$2.7 million. The LTA provided that Holtec would fund the Big Rock Point spent fuel management costs from a dedicated fund containing one year's worth of estimated operating costs and a parent support agreement to continually maintain that fund with that amount. The fund and the parent support agreement would be established at or before closing of the transfer.

Based on its independent review of the LTA, as supplemented, the NRC staff determined that the Applicants have adequately addressed and evaluated all of the activities required to complete the decommissioning of the Big Rock Point ISFSI and to manage spent fuel, their costs, and the sources of funds to cover these costs. Therefore, the NRC staff concludes that the Applicants have provided information sufficient to demonstrate that there is reasonable assurance that, after the proposed license transfer, funds will be available to cover estimated costs for decommissioning and spent fuel management at Big Rock Point.

3.1.4 Financial Qualifications Summary

The NRC staff determined that the Applicants adequately addressed and evaluated all decommissioning costs associated with all phases of decommissioning Palisades and Big Rock Point. Additionally, information provided by the Applicants further addressed the differences in estimated site-specific decommissioning costs and the minimum formula amount for decommissioning Palisades and provided greater detail on the models and approaches for determining the contingency allowance used in developing the Palisades decommissioning cost estimate. Therefore, the staff determined that the Applicants' estimate of radiological decommissioning costs of \$443,215,000, spent fuel management costs of \$166,122,000, and site restoration costs of \$34,679,000 for Palisades appears to be reasonable and to involve plausible assumptions and forecasts. Further, based on its review, and in consideration of its independent cash flow analysis, the NRC staff determined that, with respect to the Palisades DTF, which would be transferred to Holtec Palisades as part of the proposed transfer transaction and used as the source of funds for decommissioning, there would be a significant, positive balance at both the time of partial site release in 2040 and the time of license termination in 2041. With respect to Big Rock Point, decommissioning costs would be covered by the prepayment method, as allowed by 10 CFR 72.30(e)(1), and spent fuel management costs would be covered by a dedicated fund containing one year's worth of estimated operating costs and a parent support agreement to continually maintain that fund with that amount. Therefore, the staff determined that the Applicants provided reasonable assurance of the transferees obtaining the funds necessary to cover the estimated decommissioning costs. Taken together, the staff concludes that the Applicants provided reasonable assurance that the

transferees would be financially qualified to be the holders of the Palisades and Big Rock Point licenses in accordance with the requirements of 10 CFR 50.33(f), 10 CFR 50.33(k)(1), 10 CFR 50.75, 10 CFR 50.82(a), and 10 CFR 72.30.

3.2 Spent Fuel Management Funding at Palisades; Exemption to Use Funds from the Palisades DTF

For a facility in decommissioning, a licensee is required to execute financial plans for spent fuel management under 10 CFR 50.54(bb) and report annually on the status of funding dedicated towards radiological decommissioning and spent fuel management under 10 CFR 50.82(a)(8)(v) – (vii). At the close of the proposed transfer transaction, Holtec Palisades would hold title to the spent fuel at Palisades and the related DOE standard contract, including all rights and obligations under the terms of that contract (see Section 4.0, “DOE Standard Contract for Disposal of Spent Nuclear Fuel,” of this SE for further discussion on this topic).

The LTA provided that the transferees’ funding plan for spent fuel management at Palisades, as well as for site restoration activities, would rely on the use of funds from the Palisades DTF in excess of those needed for radiological decommissioning. In order to use excess funds from the DTF for these purposes, HDI submitted to the NRC an exemption request dated December 23, 2020. Separate from this SE, the NRC staff reviewed and approved the exemption request (ADAMS Accession No. ML21286A581). The staff is issuing its approval of the exemption request concurrent with its approval of the LTA; the exemption is effective immediately, but will only apply to Holtec Palisades and HDI if and when the proposed transfer transaction is consummated.

The NRC staff’s review and independent analysis of the exemption request found that there was reasonable assurance that adequate funds would be available in the Palisades DTF to complete the radiological decommissioning of the Palisades site, including the decommissioning of the ISFSI, and also to pay for the entirety of the estimated costs for spent fuel management and site restoration. This was based on an estimate of the Palisades DTF balance of \$552.0 million at the consummation of the proposed transfer transaction in 2022 and an estimate of the Palisades total decommissioning costs, including spent fuel management and site restoration costs of \$644,015,000, all of which estimates, as discussed above, the NRC staff determined appeared to be reasonable and to involve plausible assumptions and forecasts. The following table provides a summary breakdown of these estimated costs.

	Palisades
Radiological Decommissioning Costs	\$443,215,000
Spent Fuel Management Costs	\$166,122,000
Site Restoration Costs	\$34,679,000
Totals	\$644,015,000

In its analysis and to confirm the Applicants’ assumptions and calculations, the NRC staff, consistent with 10 CFR 50.75(e)(1)(i) and 10 CFR 50.82(a)(8)(vi), applied a 2-percent annual real rate of return to the Palisades DTF balance, less annual costs for radiological decommissioning, spent fuel management, and site restoration, which resulted in a significant, positive DTF balance at the time that all license termination activities are projected to be completed, as explained above. Specifically, the staff’s cash flow analysis in Attachment A to this SE projects that the Palisades DTF would contain approximately \$27.3 million after the

completion of all radiological decommissioning (including ISFSI decommissioning), spent fuel management, and site restoration activities in 2041, considering partial site release in 2040 and the use of the DTF to pay for all of these activities. The staff's cash flow analysis aligns with the cash flow analysis provided by the Applicants.

The NRC staff considered the findings from its evaluation of the exemption request as part of its review of the LTA. These findings support the staff's conclusion that the proposed use of the Palisades DTF for spent fuel management and site restoration will not negatively impact the availability of funding for radiological decommissioning. Therefore, the staff concludes that the use of excess funds from the DTF for spent fuel management provides a reasonable source of funding to cover the costs associated with those activities because, even after these withdrawals and withdrawals for site restoration activities, the decommissioning schedule proposed in the LTA would result in a significant, positive ending balance in the DTF at license termination.

Additionally, Holtec Palisades expects to recover from the DOE through litigation or settlement of their claims the spent fuel management costs that will be incurred as a result of the DOE's breach of its obligations under the standard contract. In recent years, DOE reimbursements have become more consistent and predictable despite the longevity of the litigation process and complexity of the DOE standard settlement agreements. Therefore, the NRC staff concludes that DOE reimbursements provide a reasonable source of funds to cover spent fuel management costs at Palisades. However, the Applicants' annualized cash flows do not take credit for any DOE reimbursements and, instead, show that, even without DOE reimbursements, the Palisades DTF will be sufficient to cover the costs of radiological decommissioning, spent fuel management, and site restoration at Palisades, with a significant, positive balance at license termination. Therefore, the potential for DOE reimbursements provides added conservatism to the Applicants' demonstration of spent fuel management funding.

Based on its determination that the assumptions, activities, and associated costs of the spent fuel management plan for Palisades appear to be reasonable and that the Palisades DTF appears to be sufficient to cover these costs, the NRC staff concludes that there is reasonable assurance of the transferees obtaining the funds necessary to cover estimated costs for spent fuel management in accordance with 10 CFR 50.33(f) and 10 CFR 50.54(bb).

3.3 Financial Evaluation Conclusion

As discussed above, the NRC staff has concluded that the Applicants' estimate of decommissioning and spent fuel management costs, as well as site restoration costs, appears to be reasonable and to involve plausible assumptions and forecasts. With the acquisition of the Palisades DTF by Holtec Palisades and the covering of the Big Rock Point decommissioning costs by the prepayment method, as allowed by 10 CFR 72.30(e)(1), and the Big Rock Point spent fuel management costs by a dedicated fund containing one year's worth of estimated operating costs and a parent support agreement to continually maintain that fund with that amount, the transferees have reasonable assurance of obtaining the funds necessary to cover decommissioning and spent fuel management costs in accordance with 10 CFR 50.33(f), 10 CFR 50.33(k)(1), 10 CFR 50.54(bb), 10 CFR 50.75, 10 CFR 50.82(a), and 10 CFR 72.30.

Based on a regulatory commitment in the LTA, HDI will be required to provide to the NRC satisfactory documentary evidence that Holtec Palisades will enter into a decommissioning

operator services agreement with HDI prior to the planned closing date for the proposed transfer transaction. Therefore, the order approving the transfer will be conditioned as follows.

At least 2 business days before the planned closing date of the purchase and sale transaction, HDI shall provide the Directors of the NRC's Office of Nuclear Material Safety and Safeguards (NMSS) and Office of Nuclear Reactor Regulation (NRR) with satisfactory documentary evidence that Holtec Palisades and HDI will enter into a decommissioning operator services agreement that provides for HDI to act as the agent for Holtec Palisades and for Holtec Palisades to pay HDI's costs of post-shutdown operations, including decommissioning and spent fuel management costs.

Additionally, based on a regulatory commitment in the LTA, ENOI will be required to provide to the NRC notice of the planned closing date for the proposed transfer transaction at least 2 business days prior to the date planned so that the NRC staff can timely issue the conforming administrative license amendments. Therefore, the order approving the transfer will be conditioned as follows:

At least 2 business days before the planned closing date of the purchase and sale transaction, ENOI shall provide the Directors of NMSS and NRR with notice of the planned closing date of the purchase and sale transaction.

Finally, based on a regulatory commitment and statements in the LTA, HDI will be required to provide to the NRC satisfactory documentary evidence that a fund for the prepayment of decommissioning and a fund for the annual costs for operating the Big Rock Point ISFSI have been established before the planned closing date of the purchase and sale transaction. Additionally, based on a regulatory commitment, HDI will establish a parent support agreement to continually maintain the operating costs in the amount of one year's worth of estimated operating costs. Therefore, the order approving the transfer will be conditioned as follows:

At least 2 business days before the planned closing date of the purchase and sale transaction, HDI shall provide the Directors of NMSS and NRR satisfactory documentary evidence that, for the Big Rock Point ISFSI, a fund satisfying the prepayment method of 10 CFR 72.30(e)(1) for decommissioning has been established.

At least 2 business days before the planned closing date of the purchase and sale transaction, HDI shall provide the Directors of NMSS and NRR satisfactory documentary evidence that, for the Big Rock Point ISFSI, a fund containing one year's worth of estimated operating costs, along with a parent support agreement to continually maintain that fund with one year's worth of estimated operating costs, has been established.

Considering the foregoing evaluation and conditions, the NRC staff concludes that Holtec Palisades is financially qualified to be the licensed owner of FOL No. DPR-6 for Big Rock Point and RFOL No. DPR-20 for Palisades, and that HDI is financially qualified to be the licensed operator of the licenses, as proposed.

4.0 DOE STANDARD CONTRACT FOR DISPOSAL OF SPENT NUCLEAR FUEL

By the terms of the proposed transfer transaction, Holtec Palisades will continue to hold title to the spent nuclear fuel at Palisades and Big Rock Point and will continue to maintain the DOE Standard Contract, including all rights and obligations under that contract. Standard Contract No. DE-CR01-83NE44373, dated as of June 3, 1983, was entered into by the previous owners and the United States of America, represented by the DOE, to govern the disposal of the spent fuel generated at the Palisades and Big Rock Point. Holtec Palisades expects to recover from the DOE through litigation or settlement of its claims the spent fuel management costs that it will incur as a result of the DOE's breach of its obligations under the standard contract.

5.0 ANTITRUST REVIEW

The AEA does not require or authorize antitrust reviews of post-operating license transfer applications (*Kansas Gas and Electric Co., et al.* (Wolf Creek Generating Station, Unit 1), CLI-99-19, 49 NRC 441 (1999)). The LTA post-dates the issuance of the operating licenses under consideration in this SE and, therefore, no antitrust review is required or authorized.

6.0 FOREIGN OWNERSHIP, CONTROL, OR DOMINATION

The LTA provided that Holtec is a privately held corporation and is controlled by its Board of Directors, all of whom are U.S. citizens. The directors are ultimately appointed by Holtec's owners, who are trust companies organized in the State of Florida and are controlled by U.S. citizens. Holtec has been U.S.-owned since its inception in 1986 without any non-U.S. control or domination. The NRC has previously found that Holtec is not foreign owned, controlled, or dominated (see ADAMS Accession Nos. ML19095A457, ML19170A250, and ML20297A333, regarding the transfers of the licenses for Oyster Creek Nuclear Generating Station (Oyster Creek), Pilgrim Nuclear Power Station (Pilgrim), and the Indian Point Energy Center (IPEC), respectively). Holtec Power, NAMCo, Holtec Palisades, and HDI are all directly or indirectly under Holtec's control, and all of the directors and executive committee members as identified in Attachment C to the LTA are U.S. citizens. The LTA provided that, although Holtec performs work in foreign countries, the contractual arrangements to provide products and services do not result in any FOCD of the Holtec organization or its subsidiaries or contracts; the activities conducted in foreign countries are ultimately controlled by U.S. citizens.

Further, the LTA provided that, as the licensed entity with possession of and responsibility for direct oversight, control, and decommissioning of Palisades and Big Rock Point, HDI will act for itself and on behalf of Holtec Palisades, as its agent. Neither Holtec Palisades nor HDI are acting as the agent or representative of any other entity in the proposed license transfer. The LTA also provided that CDI is jointly owned by HDI and SNC-Lavalin. HDI, as the majority owner of CDI, controls CDI. SNC-Lavalin, a company based in Montreal, Quebec, Canada, is a publicly-traded company on the Toronto Stock Exchange. CDI's role is defined as the decommissioning general contractor under a contract between HDI and CDI. CDI will not be the licensed owner or operator of the Palisades or Big Rock Point licenses and will not have direct access to the Palisades DTF. CDI will perform decommissioning activities pursuant to its contract with HDI, subject to HDI's direct oversight and control. The LTA provided that there is no prohibition against a company with foreign minority ownership performing licensed activities at U.S. nuclear reactors; therefore, notwithstanding CDI's foreign minority ownership and engagement as the decommissioning operations contractor, Holtec and the licensee entities proposed for Palisades and Big Rock Point will not be owned, controlled, or dominated by any foreign person.

Based on this information, the NRC staff finds that the transfer of the licenses to Holtec Palisades and HDI, as proposed, does not raise any issues related to FOCD within the meaning of the AEA and the NRC's regulations. In light of the above, and pursuant to Section 103d of the AEA and 10 CFR 50.38, the NRC staff concludes that it does not know or have reason to believe that any of the transferees or their respective owners will be owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government as a result of the license transfer.

7.0 NUCLEAR INSURANCE AND INDEMNITY

Pursuant to the requirements of the Price-Anderson Act (Section 170 of the AEA) and the NRC's implementing regulations in 10 CFR Part 140, the current indemnity agreement must be modified to reflect that, after the proposed transfer transaction, Holtec Palisades (licensed owner) and HDI (licensed operator for decommissioning) will be the sole licensees for the Big Rock Point and Palisades licenses. Consistent with NRC practice, the NRC staff will require Holtec Palisades and HDI to provide evidence that they have obtained the appropriate amount of insurance pursuant to 10 CFR 140.11(a)(4) and 10 CFR 50.54(w), and that the insurance is effective concurrent with the date of the license transfer and amended indemnity agreement. Therefore, the order approving the transfer will be conditioned as follows:

At least 2 business days before the planned closing date of the purchase and sale transaction, HDI shall provide the Directors of NMSS and NRR satisfactory documentary evidence that the appropriate amount of insurance required of a licensee under 10 CFR 140.11(a)(4) and 10 CFR 50.54(w) has been obtained.

Based on the above, the NRC staff concludes that the proposed license transfer, as conditioned, satisfies the nuclear insurance and indemnity requirements of 10 CFR Part 140 and 10 CFR Part 50.

8.0 TECHNICAL EVALUATION

8.1 Management and Technical Support Organization

The Applicants provided two figures of simplified organization charts in the LTA. The first figure shows the current chain of ownership of the licenses. The second figure shows the proposed post-transfer ownership structure.

Holtec International

On top of the post-transfer organization chart is Holtec, the parent company that will provide the leadership to transition Palisades to active decommissioning and subsequent long-term dry storage of spent fuel, while continuing to manage the long-term dry storage of spent fuel at Big Rock Point. As stated by the Applicants, Holtec has specialized in spent fuel management technologies with resources and experience in nuclear decommissioning, spent fuel handling equipment, and spent fuel storage systems and components.

Holtec Decommissioning International, LLC

HDI, an indirect, wholly-owned subsidiary of Holtec, will become the Palisades and Big Rock Point licensed operator for decommissioning after the proposed transfer transaction.

As stated by the Applicants, HDI is structured to serve as a fully resourced organization to directly oversee and manage licensed decommissioning operations and the dismantlement of Palisades and the Palisades and Big Rock Point ISFSIs. The Applicants stated that the specific responsibilities of HDI are as follows:

- Assume responsibilities for the duties and obligations of the decommissioning operator licensee following cessation of operations and certification of defueling of Palisades, including development of and continuing compliance with the dry storage system Certificate(s) of Compliance and the licensing bases including the Technical Specifications, regulatory requirements, and regulatory commitments.
- Possess and dispose of radioactive material.
- Maintain the Sites in a safe condition, including the storage, control, and protection of the spent fuel in the Palisades SFP and on the Palisades and Big Rock Point ISFSIs until the ISFSIs are decommissioned.
- Establish and implement governance processes to ensure compliance with the licenses and NRC regulations, and retain decision-making authority for any issues related to compliance with the licenses (including whether to seek amendments thereto) and NRC regulations.
- Oversee the development and submittal of periodic licensing and regulatory actions (e.g., exemption requests and license amendment requests) required to support ongoing decommissioning activities.
- Assume authority and responsibility for modifications to the emergency preparedness and security plans and responses to NRC orders regarding security.
- Assume authority and responsibility for the functions necessary to fulfill the quality assurance (QA) requirements of the Sites' Technical Specifications and as specified in the Quality Assurance Program Manuals in place at the time of license transfer.
- Ensure that the Sites' safety procedures are consistent with Holtec's corporate safety plan.
- Ensure that only legitimate expenditures are made from, and ensure prudent investment management of, the Palisades DTF.
- Serve as the interface with Holtec's counterparties, government organizations, and other stakeholders.
- Provide oversight of CDI, including oversight of schedule and cost control, QA, regulatory compliance, safety, security, and human resource management pursuant to the Decommissioning General Contractor Agreement.
- Oversee the development of tools, fixtures, and robots to improve the duration and as low as reasonably achievable goals of the decommissioning operations

The Applicants stated that HDI is managed by Holtec senior staff to provide the requisite managerial capabilities and decision-making authority within the licensed organization. The Applicants provided in the LTA, Figure A-1, "Palisades/Big Rock Point Combined Org Chart Depiction," a combined organizational chart that shows the relationships between Holtec, HDI,

and the CDI senior management team for both corporate and technical groups. Table A-1, "Roles and Responsibilities of HDI Senior Management," which describes in detail the specific position, role, and that position's responsibilities, was also provided. The resumés for the senior management team (both HDI and CDI) are included in Attachment D of the LTA.

Comprehensive Decommissioning International

The Applicants stated that CDI is a company jointly owned by HDI and SNC-Lavalin Group's subsidiary, Kentz USA, Inc.; however, CDI is majority owned by HDI. CDI will perform the day-to-day activities at Palisades and Big Rock Point, including the decommissioning activities pursuant to the Decommissioning General Contractor Agreement between HDI and CDI, and will be subject to HDI's direct oversight and control as the licensed operator.

CDI has stated that it plans to subcontract with nuclear industry vendors with decommissioning experience to complete various decommissioning activities. The Applicants stated that the subcontractor and vendor selection will be made consistent with customary industry vendor evaluation and selection processes. The key criteria for the subcontractor evaluation and vetting processes are listed in Section 5.E, "Strategic Partner Experience and Expertise," of Enclosure 1 of the LTA. Furthermore, HDI is the current licensed operator for Oyster Creek, Pilgrim, and the IPEC, while CDI is HDI's Decommissioning General Contractor for these sites.

The Applicants stated that CDI has an experienced nuclear management team and its staff has extensive, in-depth experience in decommissioning a wide variety of nuclear power plants, research reactors, and other facilities in technical areas including as low as reasonably achievable, nuclear security, waste management, dismantlement, project management, regulatory compliance, and environmental protection. Additionally, CDI will be staffed with a combination of Holtec and SNC-Lavalin personnel and it will have the ability to draw resources from them, as well. CDI has also transitioned experienced nuclear power plant personnel from Oyster Creek and Pilgrim. The Applicants stated that CDI will establish an integrated decommissioning organization from the ENOI Palisades decommissioning organization site personnel who will then be integrated into the CDI decommissioning organization. Those personnel will be placed in a manner consistent with their expertise and previous positions in the ENOI Palisades decommissioning organization. This personnel retention is intended to form a seamless organization operation under a common set of processes and procedures to minimize the interruption in technical support for operations.

As stated in the LTA, the integrated site decommissioning organization will provide the following:

- A single CDI site Decommissioning General Manager who reports to the HDI Site Vice President and is accountable to HDI for overall management, leadership, performance, nuclear safety, QA, and employee safety.
- Several key managers who report to the CDI Decommissioning General Manager who have responsibilities for radiological safety, spent fuel management, industrial health and safety, project administration and financial services, training, labor relations, fuel storage, regulatory affairs, QA, licensing, environmental, decontamination and decommissioning, engineering, operations, waste operations, and project controls. This organization provides an experienced nuclear management team with control over activities to maintain

the Sites within the requirements of the licenses and perform decommissioning operations under HDI's direct oversight and control.

- Implementation of industry high standards, best practices, effective program and processes, and management controls.
- Effective and integrated oversight and technical support functions.

Furthermore, the Applicants stated that Holtec Palisades will maintain the assets that will be needed to maintain the Sites in accordance with NRC requirements and the licenses; specifically, the necessary books, records, safety and maintenance manuals, and engineering construction documents, in addition to the structures and equipment.

Conclusion

The Applicants have provided the organizational charts of the corporate-level and technical support organizations and the roles and responsibilities for the senior management teams. They have described the changes that will be made as a result of the proposed transfer transaction and listed the provisions that will be made for uninterrupted technical support for decommissioning operations. The Applicants have provided a basis for assurance that there will be sufficient resources and support from the parent company to conduct licensed activities at multiple sites. Based on the review of the LTA, the NRC staff finds the Applicants' management and technical organization, HDI, to be acceptable with the technical qualifications to support the transfer of the licenses to Holtec Palisades, and ENOI's operating authority to HDI. Therefore, the NRC staff concludes that the Applicants have provided reasonable assurance that the license transfer will meet the relevant technical requirements of 10 CFR 50.80 and 10 CFR 50.34.

8.2 Operating Organization

The Applicants stated that prior to the proposed transfer transaction closing, ENOI and HDI will develop and implement a transition plan to facilitate a smooth transfer of licensed and decommissioning responsibilities at the Sites. HDI management, along with HDI and CDI department leads, will verify completion of the transition plan.

The Applicants stated that the HDI decommissioning fleet corporate organization is based on a Governance, Oversight, Support, and Performance (GOSP) management model, which will be applied to the Sites. The Applicants stated that the GOSP model provides for efficiency by establishing standard processes, procedures, and approaches at the corporate level and at the decommissioning sites. The GOSP model is similar to the model used by many operating plant fleets and is used in Holtec's current decommissioning plant fleet, which includes Oyster Creek, Pilgrim, and the IPEC. Section 5.F of the LTA, "HDI's Ability to Conduct Licensed Activities at Multiple Sites," discusses the GOSP model principles in detail.

Regarding staffing levels, the Applicants stated that staffing levels at the time of the proposed transfer transaction will be fully compliant with the requirements of the Sites' licenses and NRC regulations. HDI has stated that it will fill the vacated positions due to attrition that were previously filled by incumbent employees with qualified personnel, subject to a determination of need for that position. This will be accomplished by finding other qualified employees, hiring from a community of retired Palisades and Big Rock Point employees, assigning qualified personnel from the HDI and CDI parent companies, and seeking qualified personnel from

industry staff augmentation firms. All the individuals will be qualified to the Sites' programs and procedures, as applicable.

The Applicants stated that ENOI policies, programs, procedures, and work instructions applicable to the Sites as of the proposed transfer transaction will be adopted in their current state, with minimal or no revisions or substitutions, and that HDI and CDI will continue to work in accordance with those documents, consistent with the Governance plans. As decommissioning progresses at the Sites, HDI stated that it intends to make changes to the site governance documents in accordance with NRC regulations, with the overall goal of standardizing site governance documents across the HDI decommissioning plant fleet as much as practicable. Furthermore, the existing Palisades and Big Rock Point programs and procedures at the time of the proposed transfer transaction, including the emergency plan, security plans, fire protection program, radiological protection program, certified fuel handler training, and QA program will also be implemented post-transfer. Should there be a need to make changes to these procedures, HDI will make that determination and make those changes in accordance with NRC regulations.

Additionally, the Applicants provided in Attachments A and B to the LTA the conforming administrative amendments to the licenses that reflect the proposed transfer of the licenses to HDI and Holtec Palisades.

Conclusion

The Applicants have provided a detailed discussion of HDI, the proposed Palisades and Big Rock Point licensed operator organization. The Applicants discussed HDI's technical qualifications, staffing level, and qualification requirements for the proposed staff. Based on the review of the LTA, the NRC staff concludes that HDI will be an acceptable licensed operator organization and has adequate resources to provide technical support for the operation and maintenance of the Sites under both normal and off-normal conditions. Therefore, the NRC staff concludes that the Applicants have provided reasonable assurance that the license transfer will meet the relevant technical requirements of 10 CFR 50.80 and 10 CFR 50.34.

8.3 Technical Evaluation Conclusion

The NRC staff has reviewed the Applicants' request to transfer the Sites' licenses to Holtec Palisades and the Sites' operating authority to HDI. The Applicants have described the management and technical support organization, as well as the operating organization that will be responsible for the maintenance and decommissioning of the Sites after the proposed transfer transaction. Based on its evaluation as described above, the NRC staff determined that: (1) HDI will have an acceptable management organization, (2) HDI will retain onsite organizations capable of safely conducting decommissioning activities, and (3) HDI will have the technically qualified resources and experience to support the safe maintenance and decommissioning of the Sites after the proposed transfer transaction. The staff also determined that the Applicants have provided reasonable assurance that the transferees have met the relevant technical requirements of 10 CFR 50.80 and 10 CFR 50.34 to engage in the proposed activities. Accordingly, in light of the foregoing evaluation, the NRC staff concludes that Holtec Palisades and HDI are technically qualified to hold the Sites' licenses, as proposed.

9.0 LICENSE TRANSFER EVALUATION SUMMARY

Based on its review of the information provided in the LTA, as supplemented, its independent analysis, and the conditions described herein, the NRC staff finds that Holtec Palisades, with respect to being the licensed owner of the Big Rock Point and Palisades licenses, and HDI, with respect to being the licensed operator of the Big Rock Point and Palisades licenses, have satisfied the NRC's financial qualifications; antitrust; foreign ownership, control, or domination; nuclear insurance and indemnity; and technical qualifications requirements. Therefore, the NRC staff concludes that: (1) the proposed transferees are qualified to be the holders of the licenses and (2) the transfer of the licenses is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.

10.0 CONFORMING LICENSE AMENDMENTS

10.1 Conforming Amendments

The Applicants requested conforming amendments to FOL No. DPR-6 for Big Rock Point and RFOL No. DPR-20 for Palisades. The proposed conforming amendments reflect the proposed license transfer action. The proposed conforming amendments do not involve any change in the design or licensing basis, plant configuration, the status of the Sites, or the requirements of the licenses.

The NRC staff reviewed the proposed changes to the licenses and determined that they involve no safety questions, are administrative in nature, and are necessary to reflect the approved license transfer. Accordingly, the staff concludes that the proposed conforming amendments are acceptable. The amendments shall be issued and made effective at the time of the completion of the proposed transfer transaction.

10.2 No Significant Hazards Consideration

As provided in 10 CFR 2.1315, unless otherwise determined by the Commission with regard to a specific application, the Commission has determined that any amendment to the license of a utilization facility, which does no more than conform the license to reflect the transfer action, involves no significant hazards consideration. No contrary determination has been made by the Commission with regard to this specific application.

10.3 Conforming License Amendments Conclusion

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

11.0 HEARING REQUESTS AND PUBLIC COMMENTS

The NRC staff's notice of consideration of approval of the LTA and of conforming amendments to the licenses to reflect the proposed transfer was published in the *Federal Register* on February 4, 2021 (86 FR 8225). This notice provided an opportunity to request a hearing within 20 days and an opportunity to comment within 30 days.

In response, separate hearing requests were filed by: (1) the State of Michigan (ADAMS Accession No. ML21055A888); (2) the Environmental Law and Policy Center (ADAMS Accession No. ML21055A914); (3) Beyond Nuclear, Michigan Safe Energy Future, and Don't Waste Michigan (ADAMS Accession No. ML21055A953); and (4) Mark Muhich (ADAMS Accession No. ML21083A134). These hearing requests are pending before the Commission. Because hearing requests are pending on the LTA, the order approving the transfer will be conditioned as follows:

The NRC staff's approval of this license transfer is subject to the Commission's authority to rescind, modify, or condition the approved transfer based on the outcome of any post-effectiveness hearing on the license transfer application.

The NRC also received 76 written comments from the public in response to the FR notice. These comments are publicly available in ADAMS under Accession Nos. ML21083A134, ML21064A170, ML21069A272, ML21069A273, ML21069A275, ML21060B568, ML21069A285, ML21069A334, ML21060B567, ML21069A280, ML21069A284, ML21062A256, ML21069A268, ML21069A277, ML21069A278, ML21069A281, ML21069A282, ML21069A283, ML21069A286, ML21069A270, ML21063A492, ML21063A432, ML21069A274, ML21104A158, ML21064A278, ML21069A279, ML21064A171, ML21070A279, ML21070A288, ML21070A289, ML21070A290, ML21069A271, ML21070A257, ML21070A264, ML21070A273, ML21070A261, ML21067A658, ML21070A269, ML21070A270, ML21067A655, ML21070A272, ML21070A286, ML21070A265, ML21070A266, ML21070A267, ML21070A268, ML21068A306, ML21070A271, ML21070A274, ML21070A275, ML21070A276, ML21070A277, ML21070A278, ML21067A656, ML21068A305, ML21070A280, ML21070A281, ML21070A282, ML21068A308, ML21070A283, ML21070A284, ML21068A307, ML21070A285, ML21067A657, ML21070A287, ML21068A310, ML21068A311, ML21070A258, ML21070A259, ML21070A260, ML21070A262, ML21070A263, ML21068A309, ML21134A140, and ML21134A141.

Generally, the topics discussed in the comment submissions received were:

- (1) Concerns about the responsibility for any decommissioning funding shortfalls and the financial integrity or technical qualifications and experience of Holtec and its partners and subsidiaries;
- (2) Concerns about the business ethics of Holtec and its partners and subsidiaries;
- (3) Concerns about site restoration and environmental degradation during site decontamination, demolition, and cleanup, including concerns about the use of the site after decommissioning;
- (4) Concerns about continued storage of spent fuel after decommissioning, transportation of spent fuel and radioactive waste, and where spent fuel will go once removed from the site;
- (5) Concerns about Holtec dry cask canister design and spent fuel handling operations;
- (6) Concerns about the sufficiency of the HDI PSDAR;
- (7) Concerns about Holtec's previous legal issues regarding alleged bribery charges and falsification of tax credit applications;

- (8) Concerns about reductions in staffing and ensuring that the necessary personnel are hired to ensure continued safety and security at the Sites, including in the areas of emergency planning;
- (9) Concerns referencing charges against SNC-Lavalin for corruption, fraud, and bribery relating to business operations;
- (10) Concerns that a public meeting should be held before the NRC staff approves the license transfer;
- (11) Concerns about unknown radiation ground contamination;
- (12) Concerns about NRC regulatory oversight, responsibilities, and communications regarding the license transfer review process;
- (13) Concerns about Holtec's use and management of the Palisades DTF, its demonstration of financial assurance, and the effects on ratepayers; and Holtec's limited liability corporate structure and decommissioning business model, including the need for transparency of its financial terms for the proposed license transfer;
- (14) Concerns about the permanent closure of Palisades, including global climate change and power production;
- (15) Concerns about the proposed license transfer and decommissioning activities during the COVID-19 public health emergency; and
- (16) Concerns that the Commission should fully adjudicate all pending hearing requests before issuing a determination on the LTA.

The NRC staff reviewed the hearing requests, the written comment submissions received during the open comment period, and the additional written comment submissions received outside of the comment period and considered them as part of its evaluation of the LTA. This safety evaluation of the license transfer request addresses the themes of the hearing requests and comment submissions that were within the scope of the NRC's review, such as concerns about decommissioning fund shortfalls and the financial integrity and the financial and technical qualifications of Holtec and its partners.

12.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed license transfer and issuance of draft conforming amendments on November 5, 2021. The State official responded on November 18, 2021 (ADAMS Accession No. ML21328A006), stating:

Our staff have reviewed the "Petition of the Michigan Attorney General for Leave to Intervene and for a Hearing" and related documentation concerning the

application to transfer licenses for Palisades and Big Rock Point, including their associated Independent Spent Fuel Storage Installations (ML21055A888).

We have no questions or comments relating to NRC's evaluation of the submission.

As discussed above, the NRC staff reviewed this statement, as well as the State of Michigan hearing request and all of the other comments and hearing requests received, and considered it as part of the staff review of the LTA.

13.0 ENVIRONMENTAL CONSIDERATION

The subject application is for approval of a transfer of licenses issued by the NRC and for approval of associated amendments of the licenses required to reflect the approval of the transfer. Accordingly, the actions involved meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(21). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the approval of the transfer application and conforming license amendments.

14.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) the proposed transferees are qualified to be the holders of the licenses and (2) transfer of the licenses is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: December 13, 2021

SAFETY EVALUATION ATTACHMENT

Attachment A: Palisades Nuclear Plant, Closing Balance Calculations in Support of Holtec Decommissioning International, LLC's Post-Shutdown Decommissioning Activities Report

ATTACHMENT A: Palisades Nuclear Plant
Closing Balance Calculations in Support of Holtec Decommissioning International,
LLC's Post-Shutdown Decommissioning Activities Report
(thousands of 2020 Dollars)

Year	Opening DTF Balance	License Termination Costs ^d	Spent Fuel Management Costs	Site Restoration Costs	Interest Earned ^e	Closing Balance ^f
2022 ^a	\$552,049	\$36,786	\$767		\$10,290	\$524,786
2023	\$524,786	\$44,539	\$26,831		\$9,068	\$462,484
2024	\$462,484	\$29,102	\$33,374		\$8,000	\$408,008
2025	\$408,008	\$26,559	\$32,597		\$6,977	\$355,829
2026	\$355,829	\$4,427	\$2,176		\$6,985	\$356,211
2027	\$356,211	\$4,584	\$1,712		\$6,998	\$356,913
2028	\$356,913	\$4,584	\$1,712		\$7,012	\$357,630
2029	\$357,630	\$4,584	\$1,712		\$7,027	\$358,360
2030 ^b	\$358,360	\$4,922	\$7,466		\$6,919	\$352,892
2031	\$352,892	\$4,391	\$6,513		\$6,840	\$348,827
2032	\$348,827	\$4,391	\$6,513		\$6,758	\$344,682
2033	\$344,682	\$4,391	\$6,513		\$6,676	\$340,454
2034	\$340,454	\$4,391	\$6,513		\$6,591	\$336,141
2035	\$336,141	\$7,041	\$6,193	\$202	\$6,454	\$329,159
2036	\$329,159	\$31,460	\$5,617	\$1,943	\$5,803	\$295,941
2037	\$295,941	\$39,920	\$5,301	\$5,412	\$4,906	\$250,215
2038	\$250,215	\$89,538	\$4,837	\$7,725	\$2,962	\$151,077
2039	\$151,077	\$56,475	\$4,820	\$7,438	\$1,647	\$83,991
2040 ^c	\$83,991	\$32,912	\$4,954	\$6,146	\$800	\$40,778
2041	\$40,778	\$8,221	\$0	\$5,812	\$535	\$27,280
Total		\$443,218	\$166,121	\$34,678		

a – Reflects the estimated value of the DTF following the consummation of the transfer transaction in 2022, including deductions for costs incurred prior to consummation.

b – Anticipated year in which the Department of Energy initiates taking possession of spent fuel from the ISFSI.

c – Anticipated year in which the Department of Energy completes taking possession of spent fuel from the ISFSI.

d – Includes funding for ISFSI decommissioning.

e – Based on a 2% real rate of return consistent with 10 CFR 50.75(e)(1)(i) and 10 CFR 50.82(a)(8)(vi), which considers growth of DTF net of taxes.

f – NRC staff uses mid-year convention with respect to expenditures in cash-flow analyses.