



10 CFR 50.82

10 CFR 50.75

March 29, 2024

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219 and 72-15

Pilgrim Nuclear Power Station
Renewed Facility License No. DPR-35
NRC Docket Nos. 50-293 and 72-1044

Indian Point Nuclear Generating Stations 1, 2, and 3
Provisional Operating License No. DPR-5
Renewed Facility Operating License Nos. DPR-26 and DPR-64
NRC Docket Nos. 50-003, 50-247, 50-286, and 72-051

Palisades Nuclear Plant
Renewed Facility Operating License No. DPR-20
NRC Docket No. 50-255 and 72-007

Big Rock Point
NRC License No. DPR-6
NRC Docket No. 50-155 and 72-043

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

In accordance with the requirements of Title 10 of the Code of Federal Regulations (CFR), Part 50 Section 82, *Termination of License*, (10 CFR 50.82), Holtec Decommissioning International, LLC (HDI), on behalf of Oyster Creek Nuclear Generating Station (Oyster Creek), Pilgrim Nuclear Power Station (Pilgrim), Indian Point Nuclear Generating Station Units 1, 2, and 3 (IPEC), Palisades Nuclear Plant (PNP), and Big Rock Point (BRP), hereby submits the annual report on the status of decommissioning funding, the financial assurance report, and the status of funding for managing irradiated fuel for the period ending December 31, 2023.

The reports provided in Enclosures 1 through 5, for the licensed facilities addressed by this filing, provide the annual decommissioning funding, financial assurance report, and

irradiated fuel management status for Oyster Creek, Pilgrim, IPEC, PNP, and BRP respectively.

Enclosure 6 to this letter provides the methodology used to calculate the formula cost amount per 10 CFR 50.75(c). Enclosure 7 to this letter provides the decommissioning milestone summary.

The estimates provided in Enclosures 1 through 5, using the December 31, 2023 trust fund balances, indicate that Oyster Creek, Pilgrim, IPEC, PNP, and BRP have met the NRC's funding requirements. Accordingly, HDI concludes that no further action is required to demonstrate adequate funding assurance for decommissioning the plants included in this submittal.

PNP remains in a decommissioning status, will continue to adhere to the PSDAR, and will file annual decommissioning financial assurance reports until HDI reinstates the power operations licensing basis, which is planned for 2025. In anticipation of restart, HDI expects to file a 50.82(a)(7) notice indicating the decision to defer removal of all fuel to the ISFSI pad. This schedule change is reflected in the forward-looking projections in Enclosure 4. Given the PNP dormancy period, there are no other current impacts to the decommissioning schedule as a result of the restart project.

In Reference 1, HDI submitted the report on the status of decommissioning funding for reactors and independent spent fuel storage installations (ISFSI) for Oyster Creek, Pilgrim, IPEC, PNP, and BRP for the period ending December 31, 2022.

There are no regulatory commitments contained within this letter. Should you have any questions or require any further information, please contact me at (856) 797-0900 x 3578.

Sincerely,

Jean A. Fleming
Vice President, Licensing and Regulatory Affairs
Holtec International

References:

- 1) Letter, Holtec Decommissioning International, LLC (HDI) to US Nuclear Regulatory Commission (US NRC), "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI)," March 31, 2023 (ML23090A140)

Enclosures:

- 1) Oyster Creek Nuclear Generating Station Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report
- 2) Pilgrim Nuclear Power Station Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report
- 3) Indian Point Nuclear Generating Station Units 1, 2, and 3 Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report
- 4) Palisades Nuclear Plant Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report
- 5) Big Rock Point Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report
- 6) Methodology Used to Calculate the Formula Cost Amount per 10 CFR 50.75(c)
- 7) Milestone Summary Annual Decommissioning Funding and Spent Fuel Management Status and Financial Assurance Report

cc:

USNRC Regional Administrator, Region 1
USNRC Regional Administrator, Region 3
USNRC Senior Project Manager, NMSS - Oyster Creek
USNRC Senior Project Manager, NMSS – Pilgrim Nuclear Power Station
USNRC Senior Project Manager, NMSS – Indian Point Units 1, 2 & 3
USNRC Senior Project Manager, NMSS – Palisades Nuclear Plant and BRP
USNRC Senior Project Manager, NRR – Palisades Nuclear Plant
NRC Region 1 Lead Decommissioning Inspector – Oyster Creek
NRC Region 1 Lead Decommissioning Inspector – Pilgrim Nuclear Power Station
NRC Region 1 Lead Decommissioning Inspector, Indian Point Units 1, 2 & 3
NRC Region 3 Chief, Operations Branch - Palisades Nuclear Plant
NRC Region 3 Lead Decommissioning Inspector – Palisades Nuclear Plant and BRP
New York State Department of Public Service
New York State Liaison Officer Designee, NYSERDA
New Jersey DEP - Assistant Commissioner, Air Quality, Energy and Sustainability
New Jersey Bureau of Nuclear Engineering, Assistant Director Radiation Protection Element
Commonwealth of Massachusetts, Executive Office of Environmental Affairs
Commonwealth of Massachusetts, Department of Public Health
Commonwealth of Massachusetts, Department of Environmental Protection
Commonwealth of Massachusetts, Director, Massachusetts Emergency Management Agency



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Enclosure 1

Holtec Decommissioning International, LLC

**Oyster Creek Nuclear Generating Station
Annual Decommissioning Funding and Spent Fuel Management
Status and Financial Assurance Report
As of December 31, 2023**

As required by 10 CFR 50.82(a)(7), and 50.82(a)(8), Holtec Decommissioning International, LLC (HDI) reports the following information for Oyster Creek Nuclear Generating Station (Oyster Creek):

A. Decommissioning Cost Estimate [10 CFR 50.82(a)(8)(v)(B), 50.82(a)(8)(vii)(B)]

The required minimum funding assurance amount for Oyster Creek as of December 31, 2023 is based on the site-specific Decommissioning Cost Estimate (DCE) developed in accordance with 10 CFR 50.82(a) and included in the HDI revised Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 1) and amended in the annual report for the status of decommissioning funding for reactors and independent spent fuel storage installations (ISFSI) submitted for 2022 (Reference 2).

Table 1 of this Enclosure provides reporting requirements and includes the HDI revised total estimate required by 10 CFR 50.82 based on the DECON method of decommissioning.

B. Decommissioning Fund Balance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(vii)(A)]

The Oyster Creek Nuclear Decommissioning Trust (NDT) fund balance as of December 31, 2023 was \$406.8M. This amount represents the market value of the NDT fund as of December 31, 2023 net any material current income tax liability on realized gains, interest, dividends, and other income of the trust. The trust fund amount is the total available for decommissioning including costs of license termination, spent fuel management, and site restoration activities. The total is provided because HDI received an exemption from 10 CFR 50.82(a)(8)(i)(A) to allow the Oyster Creek trust fund to be used for site irradiated fuel management and site restoration costs (Reference 3).

C. Assumptions Used Regarding Rates of Escalation for Decommissioning Costs, Earnings on Funds, and Other Factors Used in Funding Projections [10 CFR 50.82(a)(8)(v)(B)]

In accordance with 10 CFR 50.75(e)(1)(i), HDI has assumed a 2% real rate of return.

The estimates in the 2018 HDI Oyster Creek Revised PSDAR and DCE (Reference 1) were provided in 2018 dollars. The estimates provided in Table 1 of this Enclosure have been inflated to 2023 dollars. The Bureau of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Decommissioning costs are inflated using a weighted average of BLS indices for labor, energy, consumer price index, materials, and equipment. HDI utilized NUREG-1307, Revision 19, issued February 2023, for the burial inflation factor. HDI has used a factor of 1.02 to calculate the inflation to 2023 dollars.

D. ISFSI Decommissioning Cost [10 CFR 50.82(a)(8)(v)(ii)(B)]

The current detailed site-specific ISFSI decommissioning cost estimate is \$4.5M (2023 dollars). The ISFSI estimated costs are based on the estimated costs provided in the HDI revised PSDAR and DCE (Reference 1) and amended in the report on the status of decommissioning funding for ISFSI (Reference 4) which were inflated using published inflation indices as discussed in Item (C).

E. Decommissioning Financial Assurance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(v)(D)]

Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1) as approved by the NRC in the license transfer to Oyster Creek

Enclosure 1

Environmental Protection (OCEP) and HDI. There have been no changes to the method of providing financial assurance since the last submitted report (Reference 2).

F. Material Changes to the Decommissioning Trust Agreement [10 CFR 50.82(a)(8)(v)(D)]

There have been no changes to the Oyster Creek Master Decommissioning Trust Agreement.

G. Material Changes to the Decommissioning Milestone Schedules or Project Cost [10 CFR 50.82(a)(7)]

There have been no material changes to the Oyster Creek decommissioning milestone schedule or project cost.

Enclosure 7 provides the decommissioning milestone summary with updated completion dates. HDI has confirmed that the changes to the schedule remain bounded by the environmental evaluation included in the Oyster Creek Revised PSDAR (Reference 1).

Tables 1 and 2 of this Enclosure provide required reporting data. Table 1 provides a summary of information as of December 31, 2023 in accordance with the requirements of 10 CFR 50.82(a)(8)(v)-(vii). Table 2 provides a cash flow analysis using the revised DCE developed by HDI.

The information provided in this enclosure demonstrates that the Oyster Creek decommissioning trust fund is sufficiently funded to cover costs as estimated for the license termination, spent fuel management and site restoration activities necessary to complete safe and compliant decommissioning of the site.

References:

- 1) Letter, Holtec Decommissioning International, LLC (HDI) to US NRC, "Notification of Revised Post-Shutdown Decommissioning Activities Report and Revised Site-Specific Decommissioning Cost Estimate for Oyster Creek Nuclear Generating Station," September 28, 2018 (ML18275A116)
- 2) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI)," March 31, 2023 (ML23090A140)
- 3) Letter, US NRC to Exelon Generation Company, LLC, "Oyster Creek Nuclear Power Station—Issuance of Exemptions from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv)" dated June 20, 2019 (ML19113A204)
- 4) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding Independent Spent Fuel Storage Installations," December 17, 2021 (ML21350A264)

Table 1

Holtec Decommissioning International, LLC

**Oyster Creek Nuclear Generating Station
Annual Decommissioning Financial Assurance and
Spent Fuel Management Report**

Enclosure 1

ENCLOSURE 1

Table 1

Holtec Decommissioning International, LLC
Oyster Creek Nuclear Generating Station

Summary Information as of December 31, 2023

Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$406.8M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures Since License Transfer - 10 CFR 50.82(a)(8)(v)(A)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2019	\$54M	\$8M	\$0M	\$62M	2019 Costs in as-Spent Dollars
2020	\$105M	\$79M	\$8M	\$192M	2020 Costs in as-Spent Dollars
2021	\$115M	\$125M	\$3M	\$242M	2021 Costs in as-Spent Dollars
2022	\$63M	\$31M	\$1M	\$95M	2022 Costs in as-Spent Dollars
2023	\$40M	\$18M	\$0M	\$58M	2023 Costs in as-Spent Dollars
Total to Date	\$376M	\$261M	\$12M	\$649M ²	As-Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimated	\$26M	\$13M	\$5M	\$44M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$40M	\$18M	\$0M	\$58M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost - 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$172M	\$128M	\$32M	\$331M	Estimated in 2023 Dollars (Table 2)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 1					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding.

² \$83M of incurred cost have not been reimbursed as of 12/31/23.

Table 2

Holtec Decommissioning International, LLC
Oyster Creek Nuclear Generating Station
Annual Decommissioning Cash Flow Analysis

ENCLOSURE 1

Table 2

Oyster Creek Nuclear Generating Station - DECON Method
Annual Cash Flow in Millions (2023 Dollars)

Year	License Termination Cost	Spent Fuel Management Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	30.7	7.2	6.2	44.0	406.8	-44.0	7.3	370.1
2025	7.9	12.0	.0	19.9	370.1	-19.9	7.0	357.2
2026	7.2	11.7	.0	18.9	357.2	-18.9	6.8	345.0
2027	24.4	6.0	5.3	35.8	345.0	-35.8	6.2	315.4
2028	38.7	5.7	9.2	53.6	315.4	-53.6	5.2	267.1
2029	49.7	5.6	10.4	65.8	267.1	-65.8	4.0	205.4
2030	.0	13.8	.0	13.8	205.4	-13.8	3.8	195.4
2031	.0	13.8	.0	13.8	195.4	-13.8	3.6	185.2
2032	.0	13.8	.0	13.8	185.2	-13.8	3.4	174.8
2033	9.9	13.8	.0	23.7	174.8	-23.7	3.0	154.2
2034	1.9	13.8	.0	15.7	154.2	-57.3	1.9	98.8
2035	1.6	10.2	.8	12.6	98.8	-54.2	.9	45.6
Total⁴	172.0	127.5	31.9	331.4		-414.5	53.2	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$83M for the reimbursement of HDI expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.



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Enclosure 2

Holtec Decommissioning International, LLC

**Pilgrim Nuclear Power Station
Annual Decommissioning Funding and Spent Fuel Management
Status and Financial Assurance Report
As of December 31, 2023**

As required by 10 CFR 50.82(a)(7) and 50.82(a)(8), Holtec Decommissioning International, LLC (HDI) reports the following information for Pilgrim Nuclear Power Station (Pilgrim):

A. Decommissioning Cost Estimate [10 CFR 50.82(a)(8)(v)(B), 50.82(a)(8)(vii)(B)]

The required minimum funding assurance amount for Pilgrim as of December 31, 2023 is based on the site-specific Decommissioning Cost Estimate (DCE) developed in accordance with 10 CFR 50.82(a) and included in the HDI Revised Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 1) and amended in the annual report for the status of decommissioning funding for reactors and independent spent fuel storage installations (ISFSI) submitted for 2022 (Reference 2).

Table 1 of this Enclosure provides reporting requirements and includes the HDI revised total estimate required by 10 CFR 50.82 based on the DECON method of decommissioning.

B. Decommissioning Fund Balance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(vii)(A)]

The Pilgrim Nuclear Decommissioning Trust (NDT) fund balance as of December 31, 2023 was \$542.8M. This amount represents the market value of the NDT fund as of December 31, 2023 net any material current income tax liability on realized gains, interest, dividends, and other income of the trust. The trust fund amount is the total available for decommissioning including costs of license termination, spent fuel management, and site restoration activities. The total is provided because HDI received an exemption from 10 CFR 50.82(a)(8)(i)(A) to allow the Pilgrim trust fund to be used for site irradiated fuel management and site restoration costs (Reference 3).

C. Assumptions Regarding Rates of Escalation for Decommissioning Costs, Rates of Earnings on Funds, and Other Factors Used in Funding Projections [10 CFR 50.82(a)(8)(v)(B)]

In accordance with 10 CFR 50.75(e)(1)(i), HDI has assumed a 2% real rate of return.

The estimates in the 2018 HDI Pilgrim Revised PSDAR and DCE (Reference 1) were provided in 2018 dollars. The estimates provided in Table 1 of this Enclosure have been inflated to 2023 dollars. The Bureau of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Decommissioning costs are inflated using a weighted average of BLS indices for labor, energy, consumer price index, materials, and equipment. HDI utilized NUREG-1307, Revision 19, issued February 2023, for the burial inflation factor. HDI has used a factor of 1.03 to calculate the inflation to 2023 dollars.

D. ISFSI Decommissioning Cost [10 CFR 50.82(a)(8)(v)(ii)(B)]

The current detailed site-specific ISFSI decommissioning cost estimate is \$4.6M (2023 dollars). The ISFSI estimated costs are based on the estimated costs provided in the HDI revised PSDAR and DCE (Reference 1) and amended in the report on the status of decommissioning funding for ISFSI (Reference 4) which were inflated using published inflation indices as discussed in Item (C).

E. Decommissioning Financial Assurance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(v)(D)]

Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1) as approved by the NRC in the license transfer to Holtec Pilgrim, LLC and HDI. There have been no changes to the method of providing financial assurance since the last submitted report (Reference 2).

- F. Material Changes to the Decommissioning Trust Agreement** [10 CFR 50.82(a)(8)(v)(D)] Pursuant to 10 CFR 50.75(h)(iii), by letter dated November 13, 2023 (Reference 5), HDI notified the NRC of anticipated changes to the Nuclear Decommissioning Master Trust Agreements for the Indian Point Nuclear Generating Stations 1 & 2, Indian Point Nuclear Generating Station Unit 3, Pilgrim Nuclear Power Station, and Palisades Nuclear Plant, as well as the Non-Qualified Trust for Big Rock Point.

The changes to the Holtec Pilgrim, LLC Nuclear Master Decommissioning Trust Agreement took effect on January 2, 2024.

- G. Material Changes to the Decommissioning Milestone Schedules or Project Cost** [10 CFR 50.82(a)(7)] Pursuant to 10 CFR 50.82(a)(7), by letter dated November 2, 2023 (Reference 6), HDI notified the NRC of schedule changes from those described in the Revised Site-Specific Decommissioning Cost Estimate for Pilgrim Nuclear Power Station (Reference 1).

Enclosure 7 provides the decommissioning milestone summary with updated completion dates. HDI has confirmed that changes to the schedule remain bounded by the environmental evaluation included in the HDI Revised PSDAR (Reference 1).

Tables 1 and 2 of this Enclosure provide required reporting data. Table 1 provides a summary of information as of December 31, 2023 in accordance with the requirements of 10 CFR 50.82(a)(8)(v)-(vii). Table 2 provides a cash flow analysis using the revised DCE developed by HDI.

The information provided in this enclosure demonstrates that the Pilgrim decommissioning trust fund is sufficiently funded to cover costs as estimated for the license termination, spent fuel management and site restoration activities necessary to complete safe and compliant decommissioning of the site.

References:

- 1) Letter, Holtec Decommissioning International, LLC (HDI) to US NRC, "Notification of Revised Post-Shutdown Decommissioning Activities Report and Revised Site-Specific Decommissioning Cost Estimate for Pilgrim Nuclear Power Station," November 16, 2018 (ML18320A040)
- 2) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI)," March 31, 2023 (ML23090A140)
- 3) Letter, US NRC to Entergy Nuclear Operations, Inc., "Pilgrim Nuclear Power Station— Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) for Holtec Decommissioning International, LLC" August 22, 2019 (ML19192A083)
- 4) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding Independent Spent Fuel Storage Installations," December 17, 2021 (ML21350A264)
- 5) Letter, HDI to US NRC, "Master Decommissioning Trust Agreement changes for Indian Point Nuclear Generating Units 1, 2 and 3, Pilgrim Nuclear Power Station, Palisades Nuclear Plant and the Non-Qualified Trust for Big Rock Point" November 13, 2023 (ML23317A177)
- 6) Letter, HDI to US NRC, "Notification of Changes in schedule accordance with 10 CFR 50.82(a)(7)" November 2, 2023 (ML23306A099)

Table 1

Holtec Decommissioning International, LLC

**Pilgrim Nuclear Power Station
Annual Decommissioning Financial Assurance and
Spent Fuel Management Report**

Enclosure 2

ENCLOSURE 2

Table 1

Holtec Decommissioning International, LLC
Pilgrim Nuclear Power Station

Summary Information as of December 31, 2023

Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$542.8M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures Since License Transfer - 10 CFR 50.82(a)(8)(v)(A)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2019	\$45M	\$56M	\$0M	\$101M	2019 Costs in as-Spent Dollars
2020	\$106M	\$67M	\$3M	\$175M	2020 Costs in as-Spent Dollars
2021	\$105M	\$113M	\$2M	\$221M	2021 Costs in as-Spent Dollars
2022	\$64M	\$28M	\$7M	\$99M	2022 Costs in as-Spent Dollars
2023	\$53M	\$29M	\$4M	\$86M	2023 Costs in as-Spent Dollars
Total Spent to Date	\$373M	\$294M	\$16M	\$683M ¹	As Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimated	\$44M	\$13M	\$5M	\$63M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$53M	\$29M	\$4M	\$86M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost – 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$235M	\$339M	\$18M	\$592M	Estimated in 2023 Dollars (Table 2)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 2					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding

² \$95.8M of incurred costs have not been reimbursed as of 12/31/23.

Table 2

Holtec Decommissioning International, LLC

**Pilgrim Nuclear Power Station
Annual Decommissioning Cash Flow Analysis**

ENCLOSURE 2

Table 2

Pilgrim Nuclear Power Station - DECON Method
Annual Cash Flow in Millions (2023 Dollars)

Year	License Termination Cost	Spent Fuel Management Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	44.3	12.5	6.3	63.0	542.8	-63.0	9.6	489.4
2025	7.1	9.4	.0	16.5	489.4	-16.5	9.5	482.3
2026	7.1	9.4	.0	16.5	482.3	-16.5	9.3	475.1
2027	7.1	9.4	.0	16.5	475.1	-16.5	9.2	467.8
2028	7.1	9.4	.0	16.5	467.8	-16.5	9.0	460.3
2029	7.1	9.4	.0	16.5	460.3	-16.5	8.9	452.6
2030	6.9	11.0	.0	17.9	452.6	-17.9	8.7	443.4
2031	6.9	11.0	.0	17.9	443.4	-17.9	8.5	434.0
2032	26.4	9.3	2.9	38.6	434.0	-38.6	7.9	403.3
2033	35.3	8.9	3.3	47.5	403.3	-47.5	7.1	362.9
2034	33.7	9.0	2.4	45.1	362.9	-45.1	6.4	324.2
2035	30.3	9.1	2.0	41.4	324.2	-41.4	5.7	288.5
2036	.0	8.1	.0	8.1	288.5	-8.1	5.6	285.9
2037	.0	8.1	.0	8.1	285.9	-8.1	5.6	283.4
2038	.0	8.1	.0	8.1	283.4	-8.1	5.5	280.8
2039	.0	8.1	.0	8.1	280.8	-8.1	5.5	278.2
2040	.0	8.1	.0	8.1	278.2	-8.1	5.4	275.5
2041	.0	8.1	.0	8.1	275.5	-8.1	5.3	272.8
2042	.0	8.1	.0	8.1	272.8	-8.1	5.3	270.0
2043	.0	8.1	.0	8.1	270.0	-8.1	5.2	267.1
2044	.0	8.1	.0	8.1	267.1	-8.1	5.2	264.2
2045	.0	8.1	.0	8.1	264.2	-8.1	5.1	261.2
2046	.0	8.1	.0	8.1	261.2	-8.1	5.1	258.2
2047	.0	8.1	.0	8.1	258.2	-8.1	5.0	255.1
2048	.0	8.1	.0	8.1	255.1	-8.1	4.9	251.9
2049	.0	8.1	.0	8.1	251.9	-8.1	4.9	248.7
2050	.0	8.1	.0	8.1	248.7	-8.1	4.8	245.5
2051	.0	8.1	.0	8.1	245.5	-8.1	4.7	242.1
2052	.0	8.1	.0	8.1	242.1	-8.1	4.7	238.7
2053	.0	8.1	.0	8.1	238.7	-8.1	4.6	235.2
2054	.0	8.1	.0	8.1	235.2	-8.1	4.5	231.7
2055	.0	8.1	.0	8.1	231.7	-8.1	4.5	228.1
2056	.0	8.1	.0	8.1	228.1	-8.1	4.4	224.4
2057	.0	8.1	.0	8.1	224.4	-8.1	4.3	220.6
2058	.0	8.1	.0	8.1	220.6	-8.1	4.2	216.7
2059	.0	8.1	.0	8.1	216.7	-8.1	4.2	212.8
2060	4.8	8.1	.0	12.9	212.8	-12.9	4.0	203.9
2061	4.9	8.1	.0	13.0	203.9	-60.9	2.9	145.9
2062	4.9	8.1	.0	13.0	145.9	-60.9	1.7	86.7
2063	1.0	2.7	.8	4.5	86.7	-4.5	1.6	83.8
Total⁴	235.0	339.0	17.7	591.7		-687.5	228.5	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$95.8 for the reimbursement of HDI expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.



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Enclosure 3

Holtec Decommissioning International, LLC

**Indian Point Units 1, 2, and 3
Annual Decommissioning Funding and Spent Fuel Management
Status and Financial Assurance Report
As of December 31, 2023**

As required by 10 CFR 50.82(a)(7) and 50.82(a)(8), Holtec Decommissioning International, LLC (HDI) reports the following information for Indian Points Units 1, 2 and 3 (IP1, IP2, and IP3), collectively referred to as Indian Point Energy Center (IPEC):

A. Decommissioning Cost Estimate [10 CFR 50.82(a)(8)(v)(B), 50.82(a)(8)(vii)(B)]

The required minimum funding assurance amounts for IPEC as of December 31, 2023, is based on the site-specific Decommissioning Cost Estimate (DCE) developed in accordance with 10 CFR 50.82(a) and included in the HDI Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 1) and amended in the annual report for the status of decommissioning funding for reactors and independent spent fuel storage installations (ISFSI) submitted for 2022 (Reference 2).

Tables 1A through 1C of this Enclosure provide reporting requirements and includes the HDI revised total estimate required by 10 CFR 50.82 based on the DECON method of decommissioning.

B. Decommissioning Fund Balance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(vii)(A)]

The IPEC Nuclear Decommissioning Trust (NDT) fund balances as of December 31, 2023 are listed in the table below:

Unit	NDT Fund Balance	Comment
IP1	\$611.8M	NDT Fund balance as of 12/31/2023
IP2	\$564.7M	
IP3	\$648.8M	

These amounts represent the market value of the NDT fund as of December 31, 2023, net any material current income tax liability on realized gains, interest, dividends, and other income of the trust. The trust fund amount is the total available for decommissioning including costs of license termination, spent fuel management, and site restoration activities. The total is provided because HDI received an exemption from 10 CFR 50.82(a)(8)(i)(A) to allow each of the respective Indian Point Trust funds to be used for site irradiated fuel management and site restoration costs (Reference 3).

C. Assumptions Used Regarding Rates of Escalation for Decommissioning Costs, Earnings on Funds, and Other Factors Used in Funding Projections [10 CFR 50.82(a)(8)(v)(B)]

In accordance with 10 CFR 50.75(e)(1)(i), HDI has assumed a 2% real rate of return.

The estimates in the HDI IPEC PSDAR and DCE (Reference 1) were provided in 2019 dollars. The estimates provided in Table 1A-1C of this Enclosure have been inflated to 2023 dollars. The Bureau of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Decommissioning costs are inflated using a weighted average of BLS indices for labor, energy, consumer price index, materials, and equipment. HDI utilized NUREG-1307, Revision 19, issued February 2023, for the burial inflation factor. HDI has used a factor of 1.04 for IP1, IP2, and IP3 to calculate the inflation to 2023 dollars.

D. ISFSI Decommissioning Cost [10 CFR 50.82(a)(8)(v)(ii)(B)]

The current detailed site-specific ISFSI decommissioning cost estimate is \$8.1M (2023

dollars). The ISFSI estimated costs are based on the estimated costs provided in the HDI revised PSDAR and DCE (Reference 1) and amended in the report on the status of decommissioning funding for ISFSI (Reference 4) which were inflated using published inflation indices as discussed in Item (C).

E. Decommissioning Financial Assurance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(v)(D)]

Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1) as approved by the NRC in the license transfer to Holtec Indian Point and HDI. There have been no changes to the method of providing financial assurance since the last submitted report (Reference 2).

F. Material Changes to the Decommissioning Trust Agreement [10 CFR 50.82(a)(8)(v)(D)]

Pursuant to 10 CFR 50.75(h)(iii), by letter dated November 13, 2023 (Reference 5), HDI notified the NRC of anticipated changes to the Nuclear Decommissioning Master Trust Agreements for the Indian Point Nuclear Generating Stations 1 & 2, Indian Point Nuclear Generating Station Unit 3, Pilgrim Nuclear Power Station, and Palisades Nuclear Plant, as well as the Non-Qualified Trust for Big Rock Point.

The changes to the Holtec Indian Point Unit 1 & 2 and 3 Nuclear Master Decommissioning Trust Agreement took effect on January 2, 2024.

G. Material Changes to the Decommissioning Milestone Schedules or Project Cost [10 CFR 50.82(a)(7)]

Pursuant to 10 CFR 50.82(a)(7), by letter dated November 2, 2023 (Reference 6), HDI notified the NRC of schedule changes from those described in the HDI IPEC PSDAR (Reference 1).

The to-go costs in Tables 1A, 1B, and 1C and Tables 2A, 2B, and 2C reflect the expected cost impacts of these previously noticed schedule changes. Note that the revised estimated total project costs, including actual and to-go costs, for Indian Point Unit 2 is now more than 20 percent greater than the total project costs estimated in the site-specific cost estimate enclosed with the 2019 PSDAR (Reference 1). These cost differences are not attributable to any single change to the Indian Point Unit 2 schedule or decommissioning plan, but rather reflect the cumulative effect of several incremental cost drivers, including project costs reflected in previous years' decommissioning reports. The primary cost drivers include previously notified changes to major schedule milestones (Reference 6); increases in spent fuel management costs, including costs to accelerate movement of all fuel to the ISFSI; and higher-than-projected staffing levels prior to achieving the Fuel on Pad milestone. Resultingly, HDI is providing this 50.82(a)(7) notice to NRC and the State pursuant to Reg. Guide 1.185.

HDI will continue to annually report total project costs each year, and to the extent a future estimate of total project costs on Indian Point Unit 2 exceed the materiality thresholds in Reg Guide 1.185 relative to this year's report, HDI will provide a subsequent 50.82(a)(7) notice.

Enclosure 7 provides the decommissioning milestone summary with updated completion dates. HDI has confirmed that the changes to the schedule remain bounded by the environmental evaluation included in the HDI IPEC PSDAR(Reference 1).

Tables 1A through 1C and 2A through 2C of this Enclosure provide required reporting data for IP1, IP2 and IP3. Table 1A through 1C provides a summary of information as of December 31, 2023 in

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accordance with the requirements of 10 CFR 50.82(a)(8)(v)-(vii). Tables 2A through 2C provide a cash flow analysis using the revised decommissioning cost estimates developed by HDI.

The information provided in this enclosure demonstrates that the IPEC decommissioning trust fund is sufficiently funded to cover costs as estimated for the license termination, spent fuel management and site restoration activities necessary to complete safe and compliant decommissioning of the site.

References:

- 1) Letter, Holtec Decommissioning International, LLC (HDI) to US NRC, "Post Shutdown Decommissioning Activities Report including Site-Specific Decommissioning Cost Estimate for Indian Point Nuclear Generating Units 1, 2, and 3," December 19, 2019 (ML19354A698)
- 2) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI)," March 31, 2023 (ML23090A140)
- 3) Letter, US NRC to HDI, "Indian Point Nuclear Generating Station, Unit Nos. 1, 2 and 3 —Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) for Holtec Decommissioning International, LLC," November 23, 2020 (ML20309A577)
- 4) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding Independent Spent Fuel Storage Installations," December 17, 2021 (ML21350A264)
- 5) Letter, HDI to NRC, "Master Decommissioning Trust Agreement changes for Indian Point Nuclear Generating Units 1, 2 and 3, Pilgrim Nuclear Power Station, Palisades Nuclear Plant and the Non-Qualified Trust for Big Rock Point" November 13, 2023 (ML23317A177)
- 6) Letter, HDI to NRC, "Notification of Changes in schedule accordance with 10 CFR 50.82(a)(7)" November 2, 2023 (ML23306A099)

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Table 1A, 1B, and 1C

Holtec Decommissioning International, LLC

**Indian Point Units 1, 2 & 3
Annual Decommissioning Financial Assurance and
Spent Fuel Management Report**

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ENCLOSURE 3					
Table 1A					
Holtec Decommissioning International, LLC					
Indian Point Unit 1					
Summary Information as of December 31, 2023					
Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$611.8M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.75(f)(1) and 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures Since License Transfer - 10 CFR 50.82(a)(8)(v)(A)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2021	\$18M	\$2M	\$0M	\$20M	2021 Costs in as-Spent Dollars
2022	\$32M	\$-1M*	\$1M	\$32M	2022 Costs in as-Spent Dollars *2021 IP1 spent fuel management accrual reallocated to IP2 and IP3
2023	\$34M	\$2M	\$0M	\$37M	2023 Costs in as-Spent Dollars
Total to Date	\$85M	\$3M	\$1M	\$89M ²	As-Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimated	\$29M	\$3M	\$4M	\$36M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$34M	\$2M	\$0M	\$37M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost - 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$478M	\$105M	\$85M	\$668M	Estimated in 2023 Dollars (Table 2A)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 3					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding.

² \$35.6M of incurred costs have not been reimbursed as of 12/31/23.

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ENCLOSURE 3					
Table 1B					
Holtec Decommissioning International, LLC					
Indian Point Unit 2					
Summary Information as of December 31, 2023					
Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$564.7M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures Since License Transfer - 10 CFR 50.82(a)(8)(v)(A)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2021	\$33M	\$20M	\$0M	\$53M	2021 Costs in as-Spent Dollars
2022	\$76M	\$73M	\$1M	\$150M	2022 Costs in as-Spent Dollars
2023	\$80M	\$87M	\$1M	\$167M	2023 Costs in as-Spent Dollars
Total to Date	\$189M	\$180M	\$2M	\$370M ²	As-Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimated	\$65M	\$33M	\$3M	\$100M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$80M	\$87M	\$1M	\$167M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost - 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$380M	\$194M	\$54M	\$627M	Estimated in 2023 Dollars (Table 2B)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 3					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding.

² \$128.6M of incurred costs have not been reimbursed as of 12/31/23.

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ENCLOSURE 3 Table 1C Holtec Decommissioning International, LLC Indian Point Unit 3 Summary Information as of December 31, 2023					
Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$648.8M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures Since License Transfer - 10 CFR 50.82(a)(8)(v)(A)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2021	\$38M	\$63M	\$0M	\$101M	2021 Costs in as-Spent Dollars
2022	\$103M	\$44M	\$1M	\$148M	2022 Costs in as-Spent Dollars
2023	\$69M	\$203M	\$1M	\$273M	2023 Costs in as-Spent Dollars
Total to Date	\$210M	\$309M	\$2M	\$521M ²	As-Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimated	\$78M	\$102M	\$4M	\$184M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$69M	\$203M	\$1M	\$273M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost - 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$427M	\$199M	\$62M	\$688M	Estimated in 2023 Dollars (Table 2C)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 3					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding.

² \$207.1M of incurred costs have not been reimbursed as of 12/31/23.

Enclosure 3

Table 2A, 2B, 2C

Holtec Decommissioning International, LLC

**Indian Point Units 1, 2 & 3
Annual Decommissioning Cash Flow Analysis**

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ENCLOSURE 3								
Table 2A								
Indian Point Nuclear Generating Station Unit 1 - DECON Method								
Annual Cash Flow in Millions (2023 Dollars)								
Year	License Termination Cost	Spent Fuel Management Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	34.1	2.4	2.3	38.8	611.8	-38.8	11.5	584.5
2025	23.3	1.2	1.0	25.4	584.5	-25.4	11.2	570.3
2026	22.3	1.5	1.4	25.2	570.3	-25.2	10.9	556.0
2027	22.2	1.5	1.4	25.2	556.0	-25.2	10.6	541.4
2028	8.8	1.9	.8	11.4	541.4	-11.4	10.6	540.6
2029	8.8	1.9	.8	11.5	540.6	-11.5	10.6	539.7
2030	8.8	1.9	.7	11.4	539.7	-11.4	10.6	538.9
2031	8.8	1.9	.7	11.4	538.9	-11.4	10.5	538.0
2032	24.6	1.5	2.9	29.0	538.0	-29.0	10.2	519.1
2033	32.4	1.4	5.5	39.3	519.1	-39.3	9.6	489.4
2034	38.1	1.4	4.0	43.5	489.4	-43.5	8.9	454.8
2035	42.2	1.4	3.9	47.6	454.8	-47.6	8.1	415.4
2036	34.7	1.4	7.7	43.7	415.4	-43.7	7.4	379.1
2037	43.1	1.4	5.5	50.0	379.1	-50.0	6.6	335.7
2038	35.5	1.4	12.0	48.9	335.7	-48.9	5.7	292.6
2039	34.7	1.4	12.0	48.2	292.6	-48.2	4.9	249.3
2040	39.8	1.4	14.1	55.3	249.3	-55.3	3.9	197.9
2041	6.4	1.6	8.4	16.3	197.9	-16.3	3.6	185.2
2042	.0	3.3	.0	3.3	185.2	-3.3	3.6	185.4
2043	.0	3.3	.0	3.3	185.4	-3.3	3.6	185.7
2044	.0	3.3	.0	3.3	185.7	-3.3	3.6	186.0
2045	.0	3.3	.0	3.3	186.0	-3.3	3.7	186.4
2046	.0	6.0	.0	6.0	186.4	-6.0	3.6	183.9
2047	.2	5.8	.0	6.0	183.9	-6.0	3.6	181.5
2048	.5	3.6	.0	4.1	181.5	-4.1	3.5	181.0
2049	.5	3.6	.0	4.1	181.0	-4.1	3.5	180.4
2050	.5	3.6	.0	4.1	180.4	-4.1	3.5	179.9
2051	.5	3.6	.0	4.1	179.9	-4.1	3.5	179.3
2052	.5	3.6	.0	4.1	179.3	-4.1	3.5	178.7
2053	.5	3.6	.0	4.1	178.7	-4.1	3.5	178.1
2054	.5	3.6	.0	4.1	178.1	-4.1	3.5	177.5
2055	.8	3.6	.0	4.5	177.5	-4.5	3.5	176.5
2056	.8	3.6	.0	4.5	176.5	-4.5	3.4	175.4
2057	.8	3.6	.0	4.5	175.4	-4.5	3.4	174.4
2058	.8	3.6	.0	4.5	174.4	-4.5	3.4	173.3
2059	.8	3.6	.0	4.5	173.3	-4.5	3.4	172.2
2060	.8	3.6	.0	4.5	172.2	-4.5	3.4	171.1
2061	.8	3.6	.0	4.5	171.1	-4.5	3.3	170.0
2062	.3	.0	.1	.4	170.0	-36.0	2.7	136.7
2063	.0	.0	.0	.0	136.7	.0	.0	136.7
Total⁴	478.1	104.5	85.2	667.8		-703.4	228.3	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$35.6M for the reimbursement of HDI expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.

Enclosure 3

ENCLOSURE 3								
Table 2B								
Indian Point Nuclear Generating Station Unit 2 - DECON Method								
Annual Cash Flow in Millions (2023 Dollars)								
Year	License Termination Cost	Spent Fuel Management Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	46.4	18.9	.4	65.7	564.7	-65.7	10.0	508.9
2025	16.0	3.0	.6	19.6	508.9	-19.6	9.8	499.1
2026	12.0	3.5	.7	16.3	499.1	-16.3	9.7	492.5
2027	12.0	3.5	.7	16.2	492.5	-16.2	9.5	485.8
2028	11.9	3.5	.7	16.2	485.8	-16.2	9.4	479.0
2029	12.0	3.5	.7	16.2	479.0	-16.2	9.3	472.1
2030	11.1	7.0	.7	18.8	472.1	-18.8	9.1	462.4
2031	9.6	7.0	2.1	18.8	462.4	-18.8	8.9	452.5
2032	9.2	6.7	2.1	17.9	452.5	-17.9	8.7	443.2
2033	18.9	5.9	3.1	28.0	443.2	-28.0	8.3	423.6
2034	19.8	5.9	3.1	28.8	423.6	-28.8	7.9	402.6
2035	19.9	5.9	3.1	28.9	402.6	-28.9	7.5	381.2
2036	22.7	5.7	3.0	31.4	381.2	-31.4	7.0	356.9
2037	22.8	5.7	3.0	31.5	356.9	-31.5	6.5	331.9
2038	29.4	5.5	7.0	41.9	331.9	-41.9	5.8	295.8
2039	26.2	5.5	7.0	38.8	295.8	-38.8	5.1	262.1
2040	25.7	5.5	7.0	38.1	262.1	-38.1	4.5	228.5
2041	22.9	5.5	7.4	35.8	228.5	-35.8	3.9	196.5
2042	.0	6.9	.0	6.9	196.5	-6.9	3.8	193.4
2043	.0	6.9	.0	6.9	193.4	-6.9	3.7	190.2
2044	.0	6.9	.0	6.9	190.2	-6.9	3.7	186.9
2045	.0	6.9	.0	6.9	186.9	-6.9	3.6	183.6
2046	.0	3.6	.0	3.6	183.6	-3.6	3.6	183.5
2047	.2	3.9	.0	4.0	183.5	-4.0	3.6	183.1
2048	.4	3.6	.0	4.1	183.1	-4.1	3.6	182.6
2049	.4	3.6	.0	4.1	182.6	-4.1	3.6	182.1
2050	.4	3.6	.0	4.1	182.1	-4.1	3.6	181.6
2051	.4	3.6	.0	4.1	181.6	-4.1	3.6	181.1
2052	.4	3.6	.0	4.1	181.1	-4.1	3.5	180.6
2053	.4	3.6	.0	4.1	180.6	-4.1	3.5	180.1
2054	.4	3.6	.0	4.1	180.1	-4.1	3.5	179.5
2055	3.8	3.6	.0	7.4	179.5	-7.4	3.4	175.6
2056	3.8	3.6	.0	7.4	175.6	-7.4	3.4	171.5
2057	3.8	3.6	.0	7.4	171.5	-7.4	3.3	167.4
2058	3.8	3.6	.0	7.4	167.4	-7.4	3.2	163.2
2059	3.8	3.6	.0	7.4	163.2	-7.4	3.1	158.9
2060	3.8	3.6	.0	7.4	158.9	-7.4	3.0	154.5
2061	3.8	3.6	.0	7.4	154.5	-7.4	1.7	84.4
2062	1.3	.0	1.3	2.6	84.4	-66.9	.3	17.8
2063	.0	.0	.0	.0	17.8	.0	.0	17.8
Total⁴	379.8	193.7	53.6	627.1		-755.8	208.9	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$128.6M for the reimbursement of HDI decommissioning expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.

Enclosure 3

ENCLOSURE 3								
Table 2C								
Indian Point Nuclear Generating Station Unit 3 - DECON Method								
Annual Cash Flow in Millions (2023 Dollars)								
Year	License Termination Cost	Spent Fuel Management Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	38.5	25.7	4.1	68.3	648.8	-68.3	11.6	592.1
2025	13.6	3.0	2.2	18.8	592.1	-18.8	11.5	584.7
2026	12.0	3.2	2.1	17.2	584.7	-17.2	11.4	578.9
2027	11.9	3.2	2.1	17.2	578.9	-17.2	11.2	572.9
2028	11.9	3.2	2.1	17.1	572.9	-17.1	11.1	566.9
2029	11.9	3.2	2.0	17.1	566.9	-17.1	11.0	560.8
2030	11.9	3.2	2.0	17.1	560.8	-17.1	10.9	554.6
2031	15.7	3.0	1.9	20.6	554.6	-20.6	10.7	544.7
2032	14.6	2.8	1.9	19.3	544.7	-19.3	10.5	536.0
2033	22.3	2.6	.9	25.8	536.0	-25.8	10.2	520.4
2034	23.8	2.6	1.2	27.6	520.4	-27.6	9.9	502.6
2035	34.6	2.5	3.4	40.5	502.6	-40.5	9.2	471.4
2036	29.0	2.5	4.6	36.0	471.4	-36.0	8.7	444.1
2037	31.2	2.5	3.4	37.1	444.1	-37.1	8.1	415.2
2038	29.6	2.5	5.0	37.1	415.2	-37.1	7.6	385.6
2039	29.5	2.5	6.6	38.5	385.6	-38.5	6.9	354.1
2040	28.5	2.5	6.6	37.6	354.1	-37.6	6.3	322.8
2041	28.8	2.5	8.1	39.3	322.8	-39.3	5.7	289.2
2042	.0	4.3	.0	4.3	289.2	-4.3	5.7	290.5
2043	.0	4.3	.0	4.3	290.5	-4.3	5.7	291.9
2044	.0	4.3	.0	4.3	291.9	-4.3	5.8	293.3
2045	.0	4.3	.0	4.3	293.3	-4.3	5.8	294.8
2046	.0	5.3	.0	5.3	294.8	-5.3	5.8	295.2
2047	.0	5.1	.0	5.1	295.2	-5.1	5.8	296.0
2048	.0	6.8	.0	6.8	296.0	-6.8	5.8	294.9
2049	.0	6.8	.0	6.8	294.9	-6.8	5.8	293.8
2050	.0	6.8	.0	6.8	293.8	-6.8	5.7	292.7
2051	.0	6.8	.0	6.8	292.7	-6.8	5.7	291.6
2052	.0	6.8	.0	6.8	291.6	-6.8	5.7	290.5
2053	.0	6.8	.0	6.8	290.5	-6.8	5.7	289.3
2054	.0	6.8	.0	6.8	289.3	-6.8	5.6	288.1
2055	3.5	6.8	.0	10.3	288.1	-10.3	5.6	283.4
2056	3.5	6.8	.0	10.3	283.4	-10.3	5.5	278.6
2057	3.5	6.8	.0	10.3	278.6	-10.3	5.4	273.6
2058	3.5	6.8	.0	10.3	273.6	-10.3	5.3	268.6
2059	3.5	6.8	.0	10.3	268.6	-10.3	5.2	263.4
2060	3.5	6.8	.0	10.3	263.4	-10.3	5.1	258.1
2061	3.5	6.8	.0	10.3	258.1	-113.9	2.9	147.1
2062	3.7	3.0	1.2	7.8	147.1	-111.4	.7	36.5
2063	.0	.0	.0	.0	36.5	.0	.0	36.5
Total⁴	427.1	199.1	61.5	687.7		-894.8	282.5	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$207.1M for the reimbursement of HDI decommissioning expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.



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Enclosure 4

Holtec Decommissioning International, LLC

**Palisades Nuclear Power Station
Annual Decommissioning Funding and Spent Fuel Management
Status and Financial Assurance Report
As of December 31, 2023**

As required by 10 CFR 50.82(a)(7) and 50.82(a)(8), Holtec Decommissioning International, LLC (HDI) reports the following information for Palisades Nuclear Plant (PNP):

A. Decommissioning Cost Estimate [10 CFR 50.82(a)(8)(v)(B), 50.82(a)(8)(vii)(B)]

The required minimum funding assurance amount for PNP as of December 31, 2023 is based on the site-specific Decommissioning Cost Estimate (DCE) developed in accordance with 10 CFR 50.82(a) and included in the HDI Post-Shutdown Decommissioning Activities Report (PSDAR) (Reference 1) and amended in the annual report for the status of decommissioning funding for reactors and independent spent fuel storage installations (ISFSI) submitted for 2022 (Reference 2).

Table 1 of this Enclosure provides reporting requirements and includes the HDI revised total estimate required by 10 CFR 50.82 based on the DECON method of decommissioning.

B. Decommissioning Fund Balance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(vii)(A)]

The Palisades Nuclear Decommissioning Trust (NDT) fund balance as of December 31, 2023 was \$591.9M. This amount represents the market value of the NDT fund as of December 31, 2023 net any material current income tax liability on realized gains, interest, dividends, and other income of the trust. The trust fund amount is the total available for decommissioning including costs of license termination, spent fuel management, and site restoration activities. The total is provided because HDI received an exemption from 10 CFR 50.82(a)(8)(i)(A) to allow the Palisades trust fund to be used for site irradiated fuel management and site restoration costs (Reference 3).

C. Assumptions Used Regarding Rates of Escalation for Decommissioning Costs, Earningson Funds, and Other Factors Used in Funding Projections [10 CFR 50.82(a)(8)(v)(B)]

In accordance with 10 CFR 50.75(e)(1)(i), HDI has assumed a 2% real rate of return.

The estimates in the HDI Palisades PSDAR and DCE (Reference 1) were provided in 2020 dollars. The estimates provided in Table 1 of this Enclosure have been inflated to 2023 dollars. The Bureau of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Decommissioning costs are inflated using a weighted average of BLS indices for labor, energy, consumer price index, materials, and equipment. HDI utilized NUREG-1307, Revision 19, issued February 2023, for the burial inflation factor. HDI has used a factor of 1.04 to calculate the inflation to 2023 dollars.

D. ISFSI Decommissioning Cost [10 CFR 50.82(a)(8)(v)(ii)(B)]

The current detailed site-specific ISFSI decommissioning cost estimate is \$10.5M (2023 dollars). The ISFSI estimated costs are based on the estimated costs provided in the Entergy ISFSI Decommissioning Funding Plans (Reference 4) which have been inflated using published inflation indices as discussed in Item (C).

E. Decommissioning Financial Assurance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(v)(D)]

Financial assurance for decommissioning is provided by the prepayment method, coupled with an external trust fund, in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1) as approved by the NRC in the license transfer to Holtec Palisades, LLC and HDI. There have been no changes to the method of providing financial assurance since the last submitted report (Reference 2).

- F. Material Changes to the Decommissioning Trust Agreement** [10 CFR 50.82(a)(8)(v)(D)] Pursuant to 10 CFR 50.75(h)(iii), by letter dated November 13, 2023 (Reference 5), HDI notified the NRC of anticipated changes to the Nuclear Decommissioning Master Trust Agreements for the Indian Point Nuclear Generating Stations 1 & 2, Indian Point Nuclear Generating Station Unit 3, Pilgrim Nuclear Power Station, and Palisades Nuclear Plant, as well as the Non-Qualified Trust for Big Rock Point.

The changes to the Holtec Palisades, LLC Nuclear Master Decommissioning Trust Agreement took effect on January 2, 2024.

- G. Material Changes to the Decommissioning Milestone Schedules or Project Cost** [10 CFR 50.82(a)(7)]

PNP remains in a decommissioning status, will continue to adhere to the PSDAR (Reference 1), and will file annual decommissioning financial assurance reports until HDI reinstates the power operations licensing basis, which is planned for 2025. In anticipation of restart, HDI expects to file a 50.82(a)(7) notice indicating the decision to defer removal of all fuel to the ISFSI pad. This schedule change is reflected in the forward-looking projections in Enclosure 4. Given the PNP dormancy period, there are no other current impacts to the decommissioning schedule as a result of the restart project.

Enclosure 7 provides the decommissioning milestone summary with updated completion dates. HDI has confirmed that the changes to the schedule remain bounded by the environmental evaluation included in the HDI Palisades PSDAR (Reference 1).

Tables 1 and 2 of this Enclosure contain required reporting data. Table 1 provides a summary of information as of December 31, 2023 in accordance with the requirements of 10 CFR 50.82(a)(8)(v)-(vii). Table 2 provides a cash flow analysis using the revised decommissioning cost estimates developed by HDI.

The information provided in this enclosure demonstrates that the Palisades decommissioning trust fund is sufficiently funded to cover costs as estimated for the license termination, spent fuel management and site restoration activities necessary to complete safe and compliant decommissioning of the site.

References:

- 1) Letter, Holtec Decommissioning International, LLC (HDI) to US NRC, "Post Shutdown Decommissioning Activities Report including Site-Specific Decommissioning Cost Estimate for Palisade Nuclear Plant," December 23, 2020 (ML20358A232)
- 2) Letter, HDI to US NRC, "Report on Status of Decommissioning Funding for Reactors and Independent Spent Fuel Storage Installations – Holtec Decommissioning International, LLC (HDI)," March 31, 2023 (ML23090A140)
- 3) Letter, US NRC to HDI, "Palisades Nuclear Plant — Request for Exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) for Holtec Decommissioning International, LLC" December 13, 2021 (ML21286A294)
- 4) Letter, Entergy Nuclear Operations, Inc (Entergy) to US NRC, "ISFSI Decommissioning Funding Plans (10 CFR 72.30)" December 15, 2021 (ML21349A374)
- 5) Letter, HDI to NRC, "Master Decommissioning Trust Agreement changes for Indian Point Nuclear Generating Units 1, 2 and 3, Pilgrim Nuclear Power Station, Palisades Nuclear Plant and the Non-Qualified Trust for Big Rock Point" November 13, 2023 (ML23317A177)

Table 1

Holtec Decommissioning International, LLC

**Palisades Nuclear Station
Annual Decommissioning Financial Assurance and
Spent Fuel Management Report**

Enclosure 4

ENCLOSURE 4

Table 1

Holtec Decommissioning International, LLC
Palisades Nuclear Power Station

Summary Information as of December 31, 2023

Decommissioning Trust Fund Balance - 10 CFR 50.82(a)(8)(v)(A), 10 CFR 50.82(a)(8)(vii)(A)					
Year	Type of Trust	Fund Balance			Comments
2023	Decommissioning Trust	\$591.9M			As of 12/31/2023; net of tax liabilities
Other Financial Assurance Methods Being Relied Upon - 10 CFR 50.82(a)(8)(v)(B)					
NONE					
HDI Decommissioning Expenditures - 10 CFR 50.82(a)(8)(v)(A) Since License Transfer					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2022	\$38M	\$6M	\$0M	\$44M	2022 Costs in as-Spent Dollars
2023	\$43M	\$56M	\$0M	\$99M	2023 Costs in as-Spent Dollars
Total Spent to Date	\$81M	\$62M	\$0M	\$143M ²	As-Spent Dollars
Prior Year Expenditures Variance to Total HDI Estimated Cost - 10 CFR 50.82(a)(8)(v)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2023 Estimates	\$64M	\$23M	\$3M	\$89M	Estimate in 2022 Dollars (Reference 2)
2023 Actuals	\$43M	\$56M	\$0M	\$99M	2023 Costs in as-Spent Dollars
Remaining Decommissioning Estimated Cost - 10 CFR 50.82(a)(8)(v)(B); 50.82(a)(8)(vii)(B)					
Year	License Termination	Spent Fuel Mgmt	Site Restoration	Total ¹	Comments
2024	\$416M	\$141M	\$38M	\$595M	Estimated in 2023 Dollars (Table 2)
Decommissioning Criteria Upon Which the Estimate is Based - 10 CFR 50.82(a)(8)(v)(B)					
DECON					
Any Modification to Method of Providing Financial Assurance - 10 CFR 50.82(a)(8)(v)(A) and 50.82(a)(8)(v)(C)					
NONE					
Any Material Changes to Trust Agreement Since Previous Report - 10 CFR 50.82(a)(8)(v)(D)					
See item (F) in Enclosure 4					
Need for Additional Financial Assurance - 10 CFR 50.82(a)(8)(v)(C) and 50.82(a)(8)(vii)(C)					
NONE					

¹ Columns may not add due to rounding.

² \$120M of incurred costs have not been reimbursed as of 12/31/23.

Table 2

Holtec Decommissioning International, LLC

**Palisades Nuclear Power Station
Annual Decommissioning Cash Flow Analysis**

ENCLOSURE 4								
Table 2								
Palisades Nuclear Generating Station - DECON Method								
Annual Cash Flow in Millions (2023 Dollars)								
Year	License Termination Cost	Spent Fuel Cost	Site Restoration Cost	Total Costs	Beginning of Year NDT Balance ¹	Withdrawals ³	NDT Earnings ²	Year Ending NDT Balance
2024	42.0	41.5	.0	83.5	591.9	-83.5	10.2	518.5
2025	14.5	15.8	.0	30.3	518.5	-30.3	9.8	498.0
2026	2.7	4.2	.0	6.9	498.0	-6.9	9.8	500.9
2027	5.3	1.9	.0	7.3	500.9	-7.3	9.9	503.5
2028	5.4	1.9	.0	7.3	503.5	-7.3	9.9	506.1
2029	5.2	1.9	.0	7.1	506.1	-7.1	10.0	509.0
2030	5.6	8.4	.0	14.0	509.0	-14.0	9.9	504.9
2031	5.0	7.4	.0	12.3	504.9	-12.3	9.9	502.4
2032	5.0	7.4	.0	12.3	502.4	-12.3	9.8	499.9
2033	5.0	7.4	.0	12.3	499.9	-12.3	9.8	497.3
2034	5.0	7.4	.0	12.3	497.3	-12.3	9.7	494.6
2035	12.5	7.0	.2	19.7	494.6	-19.7	9.5	484.5
2036	46.9	6.4	1.9	55.2	484.5	-55.2	8.6	437.9
2037	46.0	6.0	5.1	57.2	437.9	-57.2	7.6	388.3
2038	99.0	5.5	8.3	112.8	388.3	-112.8	5.5	281.0
2039	64.1	4.9	8.2	77.2	281.0	-77.2	4.1	207.9
2040	37.3	5.6	6.9	49.8	207.9	-109.8	2.0	100.1
2041	9.3	.0	7.6	16.9	100.1	-76.9	.5	23.6
Total⁴	415.5	140.6	38.3	594.5		-714.5	146.2	

¹ Beginning NDT fund value is based on the 12/31/23 market value of trust investments, net of realized tax liabilities.

² NDT earnings reflect an assumed 2% Real Rate of Return (RRR).

³ The NDT Withdrawal Amount includes \$120M for the reimbursement of HDI expenses not reimbursed in 2023.

⁴ Columns may not add due to rounding. Totals do not include 2023 actuals.



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Enclosure 5

Holtec Decommissioning International, LLC

**Big Rock Point
Annual Decommissioning Funding and Spent Fuel
Management Status and Financial Assurance Report
As of December 31, 2023**

As required by 10 CFR 50.82(a)(8), Holtec Decommissioning International, LLC (HDI) reports the following information for Big Rock Point (BRP):

Big Rock Point ISFSI Funding Overview:

BRP has been decommissioned and all portions of the site, other than the ISFSI and certain adjacent, non-impacted property, have been released. A cost estimate for the decommissioning of the BRP ISFSI and supporting information was provided in the Application for Order Consenting to Transfers of Control of Licenses and Approving Conforming License Amendments for Palisades and BRP (Reference 1 and 2). That cost estimate was based on Entergy Nuclear Operations, Inc.'s (ENOI) then-current 10 CFR 72.30(c) ISFSI decommissioning funding report, escalated to 2020 dollars. In December 2021, after submission of the Application but before transfer of the BRP license, ENOI filed an updated cost estimate of approximately \$2.8 million (2021 dollars) in the triennial update to its 10 CFR 72.30(c) report (Reference 3). HDI will file the next BRP triennial update in 2024. For purposes of this annual 50.82(a)(8)(v) report, HDI has escalated the 2021 ENOI estimate to 2023 dollars.

Financial assurance for ISFSI decommissioning is provided by an external trust fund in accordance with 10 CFR 50.75(e)(1)(i) and 10 CFR 72.30(e)(1), as approved by NRC in the license transfer to Holtec Palisades, LLC and HDI. Additionally, in accordance with the conditions of the license transfer, Holtec has funded the BRP spent fuel management costs from a dedicated fund that continually contains one year's worth of estimated operating costs and a parent support agreement to continually maintain that fund (Reference 4).

The financial assurance requirements for the BRP ISFSI are satisfied through two mechanisms: the external trust fund and the BRP spend fuel management fund backed by a parent support agreement.

Radiological Decommissioning [10 CFR 50.82(a)(8)(v)]

A. Amount spent on ISFSI decommissioning. [10 CFR 50.82(a)(8)(v)(A)]

HDI has not spent any amounts for BRP ISFSI decommissioning. The BRP reactor and most of the formerly licensed site were decommissioned and released for unrestricted use in 2007. The only remaining decommissioning activities are associated with decommissioning the ISFSI, which is expected to occur after DOE removes all irradiated fuel, which is assumed to occur in 2043.

B. Decommissioning Cost Estimate [10 CFR 50.82(a)(8)(v)(B)]

The estimated cost to complete decommissioning is \$3.0M. This estimate is based on ENOI's 2021 10 CFR 72.30(c) report (Reference 4), escalated to 2023 dollars.

C. Decommissioning Fund Balance [10 CFR 50.82(a)(8)(v)(A)]

The BRP Nuclear Decommissioning Trust (NDT) fund balance as of December 31, 2023 was \$3.3M. This amount represents the market value of the NDT fund as of December 31, 2023 net any material current income tax liability on realized gains, interest, dividends, and other income of the trust.

D. Assumptions Used Regarding Rates of Escalation for Decommissioning Costs, Earnings on Funds, and Other Factors Used in Funding Projections [10 CFR 50.82(a)(8)(v)(B)]

In accordance with 10 CFR 50.82(a)(8)(vi), HDI has assumed a 2% real rate of return.

The estimates provided in Reference 4 have been inflated to 2023 dollars using the same methodology used to escalate HDI's reactor decommissioning cost estimates. The Bureau

of Labor Statistics (BLS) data provided the basis for the decommissioning cost estimate inflation rate forecast. Reactor decommissioning costs are inflated using a weighted average of BLS indices for labor, energy, consumer price index, materials, and equipment. HDI has used a factor of 1.04 to calculate the inflation to 2023 dollars.

E. Decommissioning Financial Assurance [10 CFR 50.82(a)(8)(v)(A), 50.82(a)(8)(v)(D)]

Financial assurance for ISFSI decommissioning is provided by the funds held in the BRP decommissioning trust fund. In Reference 4, ENOI assumed BRP decommissioning would be completed in 2044, one year after DOE removal of fuel, which ENOI assumed to occur in 2043. With 2% real growth of the current trust fund balance relative to cost escalation, BRP's trust fund balance will exceed decommissioning costs by 2044.

ISFSI operations at Big Rock Point are in response to the DOE's failure to remove spent nuclear fuel from the site in a timely manner. The costs for management of the spent fuel are costs for which the DOE is responsible, according to the Standard Contract. It is therefore expected that, once the ISFSI is no longer needed, the cost to decommission the ISFSI would be a DOE-reimbursable expense. Notwithstanding the expectation of DOE recoveries, HDI will fund decommissioning costs from the Decommissioning Trust Fund to terminate the ISFSI license and release the facility for unrestricted use.

F. Material Changes to the Decommissioning Trust Agreement [10 CFR 50.82(a)(8)(v)(D)]

By letter dated November 13, 2023 (Reference 5), HDI notified the NRC of anticipated changes to the Nuclear Decommissioning Master Trust Agreements for the Indian Point Nuclear Generating Stations 1 & 2, Indian Point Nuclear Generating Station Unit 3, Pilgrim Nuclear Power Station, and Palisades Nuclear Plant, as well as the Non-Qualified Trust for Big Rock Point.

The proposed changes to the Big Rock Point Nuclear Master Decommissioning Trust Agreement took effect on January 2, 2024.

G. Material Changes to the Decommissioning Milestone Schedules or Project Cost [10 CFR 50.82(a)(7)]

None.

Irradiated Fuel Management [10 CFR 50.82(a)(8)(vii)]

A. Funds Accumulated to Cover the Cost of Managing Irradiated Fuel

In accordance with the conditions of the license transfer (Reference 2 and 4), on June 16, 2022 Holtec International funded the Big Rock Point spent fuel management costs by establishing and funding a dedicated fund that will continually contain one year's worth of estimated operating costs (\$3.7M, in 2023) and a parent support agreement to continually maintain that fund.

B. Projected Cost of Managing Irradiated Fuel Until Title to the Fuel and Possession of the Fuel is Transferred to the Secretary of Energy

Total ISFSI operating costs in 2023 were approximately \$3.6M. Based on the assumption that DOE will complete removal of BRP fuel in 2043, total irradiated fuel management costs expected to be incurred during that period are approximately \$74M in 2023 dollars.

Pursuant to the Parent Support Agreement, Holtec International will continually supplement the operating fund to ensure that the operating account maintains the requisite funding amount.

C. Additional Funding Plan If Accumulated Funds do Not Cover Projected Cost

The Parent Support Agreement provides a continual source of funds to backstop BRP irradiated fuel management until DOE takes title to all fuel. While HDI does not rely on DOE recoveries to support its funding demonstration, in light of the fact that BRP's ongoing operational costs and eventual decommissioning costs are all a result of DOE's failure to fulfill its obligations under the Standard Contract, HDI expects to recover these costs from DOE.

Enclosure 7 provides the decommissioning milestone summary with updated completion dates for BRP. The information provided in this enclosure demonstrates that decommissioning funding assurance at BRP is sufficient to cover costs as estimated for the ISFSI decommissioning and irradiated fuel management activities necessary to complete safe and compliant decommissioning of the site.

References:

- 1) Letter, Entergy Nuclear Operations, Inc (Entergy) to US NRC, "Application for Order Consenting to Transfers of Control of Licenses and Approving Conforming License Amendments" December 23, 2020 (ML20358A075)
- 2) Letter, US NRC to Entergy, "Palisades Nuclear Plant and Big Rock Point Plant - Order Approving Transfer of Licenses and Draft Conforming Administrative License Amendment (EPID L-2020-LLM-0003)" December 13, 2021 (ML21292A145)
- 3) Letter, Entergy to US NRC, "ISFSI Decommissioning Funding Plans (10 CFR 72.30)" December 15, 2021 (ML21350A155)
- 4) Letter, HDI to US NRC, "Holtec Decommissioning International, LLC (HDI) satisfactory documentary evidence required before the planned closing date of the purchase and sale transaction of Palisades Nuclear Plant and Big Rock Point Plant" June 24, 2022 (ML22178A077)
- 5) Letter, HDI to NRC, "Master Decommissioning Trust Agreement changes for Indian Point Nuclear Generating Units 1, 2 and 3, Pilgrim Nuclear Power Station, Palisades Nuclear Plant and the Non-Qualified Trust for Big Rock Point" November 13, 2023 (ML23317A177)



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Enclosure 6

Holtec Decommissioning International, LLC

**Methodology Used to Calculate the Formula Cost
Amounts per 10 CFR 50.75(c)
Annual Decommissioning Funding and Spent Fuel Management Status
and Financial Assurance Report
As of December 31, 2023**

This Enclosure provides the methodology used to calculate the formula cost per 10 CFR 50.75(c). HDI does not use this calculation for any decommissioning cost estimates or evaluations.

The labor, energy and burial indexes used are consistent with those described in NUREG-1307, Revision 19, issued February 2023. The current labor cost indexes used are obtained from the Employment Cost Index published by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). Specifically, HDI used the Employment Cost Index for total compensation for private industry workers in the Northeast and Midwest regions. The labor adjustment factors were calculated according to Section 3.2 of NUREG-1307, Revision 19 using fourth quarter 2023 data. Table 1 shows the data used for this calculation.

Table 1: Labor Adjustment Factors

Applicable Site	Series ID	4Q2023 Index Number	Labor Adjustment Factor (L _x)
Oyster Creek	CIU2010000000210I	163.0	3.521
Pilgrim	CIU2010000000210I	163.0	3.521
IPEC	CIU2010000000210I	163.0	3.521
Palisades	CIU2010000000230I	158.5	3.297
Big Rock Point	CIU2010000000230I	158.5	3.297

The current energy cost indexes used are obtained from Producer Price Indexes (PPI) – Commodities, published by the U.S. Department of Labor, BLS. Specifically, HDI used the PPI for industrial electric power (WPU0543) and light fuel oils (WPU0573). The energy adjustment factors were calculated according to Section 3.3 of NUREG-1307, Revision 19, using December 2023 data. Table 2 shows the data used for this calculation.

Table 2: Energy Adjustment Factor

WPU0543 – January 1986 (base value)	114.2
WPU0573 – January 1986 (base value)	82.0
WPU0543 – December 2023	300.423
WPU0573 – December 2023	320.292
Industrial Electric Power Adjustment Factor – (P _x)	2.631
Light Fuel oil Adjustment Factor – (F _x)	3.906
Energy Adjustment Factor – (BWR)	3.217
Energy Adjustment Factor – (PWR)	3.166

The waste burial adjustment factors are taken from Table 2-1 of NUREG-1307, Revision 19. The adjustment factors HDI used assume non-compact waste disposal facilities. Although Oyster Creek is located in New Jersey, which is a member of the Atlantic Compact, HDI has selected and is under contract to use the WCS Texas facility. HDI has not forecasted waste disposal to the Atlantic Compact since 2021. Table 3 shows the data used for this calculation.

Table 3: Waste Burial Adjustment Factor

LLW Burial Site	Reactor Type	Decommissioning Site	Combination of Compact-Affiliated and Non-Compact Disposal Facilities Waste Adjustment Factor – (BX)	Generators Located in Unaffiliated States – (BX)
Generic LLW	BWR	Oyster Creek	N/A	12.296
Generic LLW	BWR	Pilgrim	N/A	12.296
Generic LLW	PWR	IPEC	N/A	13.711
Generic LLW	PWR	Palisades	N/A	13.711
Generic LLW	BWR	Big Rock Point	N/A	12.296

The calculation methodology used for all adjustment factors and displayed in Table 4 is consistent with NUREG-1307, Revision 19.

Table 4: Escalation Factors and Calculated Adjustments for HDI Sites

Site	Escalation Factors - (Lx), (Ex), (Bx)		Escalation Factor Formula 10 CFR 50.75(c)(2)	Escalation Factor	1986 Base Year \$ Escalated
Oyster Creek	(Lx)	3.521	0.65(L)+0.13(E)+0.22(B)	5.412	\$656,841,348
	(Ex)	3.217			
	(Bx)	12.296			
Pilgrim	(Lx)	3.521	0.65(L)+0.13(E)+0.22(B)	5.412	\$661,614,637
	(Ex)	3.217			
	(Bx)	12.296			
IPEC	(Lx)	3.521	0.65(L)+0.13(E)+0.22(B)	5.717	Unit 1 - \$489,108,911
	(Ex)	3.166			Unit 2 - \$590,525,267
	(Bx)	13.711			Unit 3 - \$590,525,267
Palisades	(Lx)	3.297	0.65(L)+0.13(E)+0.22(B)	5.571	\$543,569,752
	(Ex)	3.166			
	(Bx)	13.711			
Big Rock Point	(Lx)	3.297	0.65(L)+0.13(E)+0.22(B)	5.266	\$398,447,663
	(Ex)	3.217			
	(Bx)	12.296			



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Enclosure 7

Holtec Decommissioning International, LLC

**Milestone Summary
Annual Decommissioning Funding and Spent Fuel Management
Status and Financial Assurance Report
As of December 31, 2023**

Project / Milestone	PSDAR/DCE/LTA (per project below)	DCE Annual Update (2023)	Notes
Oyster Creek (PSDAR/DCE/LTA issued on 09/28/2018)			
License Transfer	07/01/2019	07/01/2019	Complete
Zirc Fire Elimination	09/17/2019	06/29/2019	Complete
Fuel on Pad	06/23/2023	05/23/2021	Complete
Segmentation Reactor Vessel Internals (RVI):	02/03/2022	01/27/2023	Complete
Segmentation Reactor Pressure Vessel (RPV):	09/19/2022	08/19/2028	
Partial Site Release	10/24/2025	11/03/2029	
Fuel Shipment Begins	01/03/2025	01/03/2030	
Fuel Shipment Ends	03/28/2035	03/28/2035	
License Termination	12/01/2035	12/03/2035	

Pilgrim (PSDAR/DCE/LTA issued on 11/16/2018)			
License Transfer	07/31/2019	08/26/2019	Complete
Zirc Fire Elimination	03/30/2020	03/31/2020	Complete
Fuel on Pad	11/26/2021	12/13/2021	Complete
Segmentation RVI	10/12/2020	05/30/2024	2024 Schedule update
Segmentation RPV	09/18/2022	12/31/2032	See Enclosure 2.G
Partial Site Release	01/28/2025 [09/24/2027] *	09/24/2035	*2021 Schedule change noticed in 2019 Annual Decommissioning Funding and Spent Fuel Management Report (ML20091M858) See Enclosure 2.G
Fuel Shipment Begins	01/02/2030	01/02/2030	
Fuel Shipment Ends	12/31/2062	12/31/2062	
License Termination	09/07/2063	09/07/2063	

Project / Milestone	PSDAR/DCE/LTA (per project below)	DCE Annual Update (2023)	Notes
Indian Point (PSDAR/DCE/LTA issued on 12/19/2019)			
License Transfer	05/31/2021	05/28/2021	Complete
Zirc Fire Elimination (IP3)	09/15/2022	08/01/2022	Complete
Fuel on Pad:			
IP1	12/11/2008	12/11/2008	Complete
IP2	03/31/2023	02/01/2023	Complete
IP3	04/04/2024	10/16/2023	Complete
Segmentation RVI:			
IP1*	-	-	*RVI and RPV segmentation performed together
IP2	12/21/2022	08/13/2026	2024 Schedule update
IP3	12/21/2021	03/25/2025	2024 Schedule update
Segmentation RPV:			
IP1	04/13/2024	11/20/2031	See Enclosure 3.G
IP2	06/30/2023	04/29/2034	See Enclosure 3.G
IP3	06/30/2022	12/17/2032	See Enclosure 3.G
Partial Site Release	07/09/2033	07/09/2041	See Enclosure 3.G
Fuel Shipment Begins:			
IP1	05/29/2046	05/29/2046	
IP2	01/02/2030	01/02/2030	
IP3	08/26/2047	08/26/2047	
Fuel Shipment Ends:			
IP1	08/23/2047	08/23/2047	
IP2	05/25/2046	05/25/2046	
IP3	12/30/2061	12/30/2061	
License Termination	09/06/2062	09/06/2062	

Project / Milestone	PSDAR/DCE/LTA (per project below)	DCE Annual Updates (2023)	Notes
Palisades (PSDAR/DCE/LTA issued on 12/23/2021)			
License Transfer	06/28/2022	06/28/2022	Complete
Zirc Fire Elimination	09/20/2023	09/20/2023	Complete
Fuel on Pad	07/02/2025	07/02/2025	See Enclosure 4.G
Dormancy Period (10 Years)	11/30/2035	11/30/2035	
Segmentation RVI	12/31/2037	12/31/2037	
Segmentation RPV	12/31/2038	12/31/2038	
Fuel Shipment Begins	01/01/2030	01/01/2030	
Fuel Shipment Ends	12/30/2040	12/30/2040	
Partial Site Release & License Termination	12/31/2041	12/31/2041	

Big Rock Point (PSDAR/DCE/LTA issued on 12/23/2021)			
Fuel Shipment Begins	01/01/2030	01/01/2030	
Fuel Shipment Ends	12/31/2043	12/31/2043	
License Termination	12/31/2044	12/31/2044	