



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

December 26, 2023

Jean A. Fleming
Vice President, Licensing,
Regulatory Affairs, and PSA
Holtec International, LLC
Krishna P. Singh Technology Campus
1 Holtec Boulevard
Camden, NJ 08104

SUBJECT: PALISADES NUCLEAR PLANT – EXEMPTION FROM THE REQUIREMENTS
OF 10 CFR 140.11(a)(4) CONCERNING OFFSITE PRIMARY AND
SECONDARY LIABILITY INSURANCE AND AMENDMENT NO. 14 TO
INDEMNITY AGREEMENT NO. B-40 (EPID L-2022-LLE-0031)

Dear Jean Fleming:

The U.S. Nuclear Regulatory Commission (NRC) has approved the enclosed exemption from the requirements of Section 140.11(a)(4), "Amounts of financial protection for certain reactors," of Title 10 of the *Code of Federal Regulations* (10 CFR) concerning offsite primary and secondary liability insurance for Holtec Decommissioning International, LLC (HDI), and Holtec Palisades, LLC (Holtec Palisades). This action is in response to the application dated October 26, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML22299A059](#)), requesting an exemption to reduce the required level of primary offsite liability insurance from \$450 million to \$100 million and to eliminate the requirement to carry secondary financial protection for Palisades Nuclear Plant (Palisades).

This exemption is effective as of December 22, 2023. These reductions are a standard action for decommissioning nuclear power reactors and reflect the reduced risk of radiological accidents and associated consequences once the facility has permanently ceased operation. More specifically, the risk of radiological accidents is sufficiently low 12 months after the Palisades reactor has been permanently shutdown, which is part of the basis for approval of the exemption.

Enclosure 1 to this letter contains a copy of the exemption. The exemption has been forwarded to the Office of the Federal Register for publication.

Enclosure 2 to this letter contains a digitally signed copy of Amendment No. 14 to Indemnity Agreement No. B-40 for signature by Holtec Palisades and HDI. We request that a representative of Holtec Palisades and a representative of HDI sign the amendment and keep one copy for your records. Please return one copy including all signatures to NRC's Document Control Desk as proof of acceptance of the amended indemnity agreement.

In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC website at <https://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning the above, please contact me at (301) 415-1387 or by e-mail to Tanya.Hood@nrc.gov.

Sincerely,



Signed by Hood, Tanya
on 12/26/23

Tanya E. Hood, Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No. 50-255
Renewed Facility Operating
License No. DPR-20

Enclosures:

1. Exemption
2. Amendment No. 14 to Indemnity Agreement No. B-40

cc w/enclosures: Palisades ListServ

SUBJECT: PALISADES NUCLEAR POWER STATION – EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 140.11(a)(4) CONCERNING OFFSITE PRIMARY AND SECONDARY LIABILITY INSURANCE AND AMENDMENT NO. 14 TO INDEMNITY AGREEMENT NO. B-40 (EPID L-2022-LLE-0031)

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ADAMS Accession Nos.:

Ltr ML23192A077; Exemption FRN ML23192A101 *via email

OFFICE	NMSS/REFS/FAB	NMSS/REFS/FAB	NMSS/DUWP/PM	NMSS/REFS/FAB/BC*
NAME	LPope	MHenderson	MDoell	FMiller
DATE	4/14/2023	04/13/2023	08/15/2023	08/15/2023
OFFICE	NRR/DSS/SCP/BC*	NMSS/DUWP/BC*	OGC	NMSS/DUWP
NAME	BWittick	SAnderson	ABell	JMarshall
DATE	09/01/2023	12/21/2023	12/01/2023	12/22/2023
OFFICE	NMSS/DUWP/PM			
NAME	THood			
DATE	12/26/2023			

OFFICIAL RECORD COPY

ENCLOSURE 1

EXEMPTION

HOLTEC DECOMMISSIONING INTERNATIONAL, LLC

HOLTEC PALISADES, LLC

PALISADES NUCLEAR PLANT

DOCKET NOS. 50-255 AND 72-007

NUCLEAR REGULATORY COMMISSION

Docket No. 50-255

Holtec Decommissioning International, LLC,

and Holtec Palisades, LLC

Palisades Nuclear Plant

Exemption

I. Background.

By letter dated October 19, 2017 (Agencywide Documents Access and Management System Accession No. ML17292A032), Entergy Nuclear Operations, Inc. (ENOI) certified to the U.S. Nuclear Regulatory Commission (NRC, or Commission) that it planned to permanently cease power operations at the Palisades Nuclear Plant (Palisades) no later than May 31, 2022. On May 20, 2022, ENOI permanently ceased power operations at Palisades, and by letter dated June 13, 2022 (ML22164A067), ENOI certified to the NRC that the fuel was permanently removed from the Palisades reactor vessel and placed in the spent fuel pool (SFP) on June 10, 2022. Accordingly, pursuant to Paragraphs 50.82(a)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR), the 10 CFR Part 50 renewed facility operating license for Palisades no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel. The facility is still authorized to possess, and store irradiated (i.e., spent) nuclear fuel. Palisades spent fuel is currently stored in the SFP and in dry cask storage at the independent spent fuel storage installation (ISFSI).

II. Request/Action.

By letter dated October 26, 2022 (ML22299A059), Holtec Decommissioning International, LLC (HDI), one of the licensees of Palisades and an indirect wholly owned subsidiary of Holtec International (Holtec), requested an exemption on behalf of Holtec Palisades, LLC, the other Palisades licensee, from 10 CFR 140.11(a)(4) concerning offsite

primary and secondary liability insurance. HDI and Holtec Palisades, LLC, are hereafter collectively referred to as the licensee. The exemption from 10 CFR 140.11(a)(4) would permit the licensee to reduce the required level of primary offsite liability insurance from \$450 million to \$100 million and to eliminate the requirement to carry secondary financial protection for Palisades.

The regulation at 10 CFR 140.11(a)(4) requires licensees to have and maintain primary financial protection in an amount of \$450 million. In addition, licensees are required to participate in an industry retrospective rating plan (secondary financial protection) that commits licensees to pay into an insurance pool to be used for damages that may exceed primary insurance coverage. Participation in the industry retrospective rating plan will subject the licensee to deferred premium charges up to a maximum total deferred premium of \$131,056,000 with respect to any nuclear incident at any operating nuclear power plant and up to a maximum annual deferred premium of \$20,496,000 per incident.

Many of the accident scenarios postulated in the updated safety analysis reports for operating power reactors involve failures or malfunctions of systems, which could affect the fuel in the reactor core and, in the most severe postulated accidents, would involve the release of large quantities of fission products. With the permanent cessation of power operations at Palisades and the permanent removal of the fuel from the reactor vessel, many accidents are no longer possible. Similarly, the associated risk of offsite liability damages that would require insurance or indemnification is commensurately lower for permanently shutdown and defueled plants. Therefore, the licensee requested an exemption from 10 CFR 140.11(a)(4) to permit a reduction in primary offsite liability insurance and to withdraw from participation in the industry retrospective rating plan.

III. Discussion.

Pursuant to 10 CFR 140.8, "Specific exemptions," the Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in 10 CFR Part 140 when the exemptions are authorized by law and are otherwise in the public interest. The NRC staff has reviewed the licensee's request for an exemption from 10 CFR 140.11(a)(4) and has concluded that the requested exemption is authorized by law and is otherwise in the public interest.

The Price Anderson Act of 1957 (PAA) requires that nuclear power reactor licensees have insurance to compensate the public for damages arising from a nuclear incident. Specifically, the PAA requires licensees of facilities with a "rated capacity of 100,000 electrical kilowatts or more" to maintain the maximum amount of primary offsite liability insurance commercially available (currently \$450 million) and a specified amount of secondary insurance coverage (currently up to \$131,056,000 per reactor). In the event of an accident causing offsite damages in excess of \$450 million, each licensee would be assessed a prorated share of the excess damages, up to \$131,056,000 per reactor, for a total of approximately \$13 billion per nuclear incident. The NRC's regulations at 10 CFR 140.11(a)(4) implement these PAA insurance requirements and set forth the amount of primary and secondary insurance each power reactor licensee must have.

As noted above, the PAA requirements with respect to primary and secondary insurance and the implementing regulations at 10 CFR 140.11(a)(4) apply to licensees of facilities with a "rated capacity of 100,000 electrical kilowatts or more." In accordance with 10 CFR 50.82(a)(2), the license for a power reactor no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel upon the docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel. Therefore, the reactor cannot be used to generate power.

Accordingly, a reactor that is undergoing decommissioning has no “rated capacity.” Therefore, the NRC may take the reactor licensee out of the category of reactor licensees that are required to maintain the maximum available insurance and to participate in the secondary retrospective insurance pool.

The financial protection limits of 10 CFR 140.11(a)(4) were established to require licensees to maintain sufficient insurance, as specified under the PAA, to satisfy liability claims by members of the public for personal injury, property damage, and the legal cost associated with lawsuits as the result of a nuclear accident at an operating reactor with a rated capacity of 100,000 kilowatts electric or greater. Therefore, the insurance levels established by this regulation, as required by the PAA, were associated with the risks and potential consequences of an accident at an operating reactor with a rated capacity of 100,000 kilowatts electric or greater.

The legal and associated technical basis for granting exemptions from 10 CFR Part 140 is set forth in SECY-93-127, “Financial Protection Required of Licensees of Large Nuclear Power Plants During Decommissioning,” dated May 10, 1993 (ML12257A628). The legal analysis underlying SECY-93-127 concluded that, upon a technical finding that lesser potential hazards exist after permanent cessation of power operations (and the reactor having no “rated capacity”), the Commission has the discretion under the PAA to reduce the amount of insurance required of a licensee undergoing decommissioning.

As a technical matter, the fact that a reactor has permanently ceased power operations is not itself determinative as to whether a licensee may cease providing the offsite liability coverage required by the PAA and 10 CFR 140.11(a)(4). In light of the presence of freshly discharged irradiated fuel in the SFP at a recently shutdown reactor, the potential for an offsite radiological release from a zirconium fire with consequences comparable in some respects to an operating reactor accident remains. That risk is very low at the time of reactor shutdown because of design provisions that prevent a significant reduction in coolant inventory in the SFP

under normal and accident conditions and becomes no longer credible once the continual reduction in decay heat provides ample time to restore coolant inventory and permits air cooling in a drained SFP.

After that time, the probability of a large offsite radiological release from a zirconium fire is negligible for permanently shutdown reactors, but the SFP is still operational and an inventory of radioactive materials still exists onsite. Therefore, an evaluation of the potential for offsite damage is necessary to determine the appropriate level of offsite insurance post shutdown in accordance with the Commission's discretionary authority under the PAA to establish an appropriate level of required financial protection for such permanently shutdown facilities.

The NRC staff has conducted an evaluation and concluded that, aside from the handling, storage, and transportation of spent fuel and radioactive materials for a permanently shutdown and defueled reactor, no reasonably conceivable potential accident exists that could cause significant offsite damage. During normal power reactor operations, the forced flow of water through the reactor coolant system (RCS) removes heat generated by the reactor. The RCS transfers this heat away from the reactor core by converting reactor feedwater to steam which then flows to the main turbine generator to produce electricity. Most of the accident scenarios postulated for operating power reactors involve failures or malfunctions of systems that could affect the fuel in the reactor core, which in the most severe postulated accidents, would involve the release of large quantities of fission products. With the permanent cessation of reactor operations at Palisades and the permanent removal of the fuel from the reactor core, such accidents are no longer possible. The reactor, RCS, and supporting systems no longer operate and have no function related to the storage of the irradiated fuel. Therefore, postulated accidents involving failure or malfunction of the reactor, RCS, or supporting systems are no longer applicable.

During reactor decommissioning, the principal radiological risks are associated with the storage of spent fuel onsite. On a case-by-case basis, licensees undergoing decommissioning

have been granted permission to reduce the required amount of primary offsite liability insurance coverage from \$450 million to \$100 million and to withdraw from the secondary insurance pool. One of the technical criteria for granting the exemption is that the possibility of a design-basis event that could cause significant offsite damage has been significantly reduced.

The NRC staff performed an evaluation of the design-basis accidents (DBAs) for Palisades being permanently defueled as part of SECY-23-0043, "Request by Holtec Decommissioning International, LLC for Exemptions from Certain Emergency Planning Requirements for Palisades Nuclear Plant," dated May 15, 2023 (ML23054A179). The licensee has stated, and the NRC staff agrees, that while spent fuel remains in the SFP, the only postulated DBAs that would remain applicable to Palisades in the permanently defueled condition that could contribute a significant dose is a fuel handling accident (FHA) in the Fuel Handling Building, where the SFP is located; a liquid waste incident; a waste gas incident and a postulated cask drop accident. For completeness, the NRC staff also evaluated the applicability of other DBAs documented in the Palisades Updated Final Safety Analysis Report (UFSAR) (ML21125A344) to ensure that these accidents would not have consequences that could potentially exceed the 10 CFR 50.67 dose limits and Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," dose acceptance criteria or approach the U.S. Environmental Protection Agency (EPA) early phase protective action guides (PAGs).

The NRC staff previously approved the revised DBA radiological consequence analyses in License Amendment No. 272, "Palisades Nuclear Plant – Issuance of Amendment No. 272 Re: Permanently Defueled Technical Specifications (EPID L-2021-LLA-0099)," dated May 13, 2022 (ML22039A198). As documented in the NRC's safety evaluation for License Amendment No. 272, the NRC staff determined that 17 days is the amount of time needed for decay to meet the EPA early phase PAG limit of 1 rem total effective dose equivalent (TEDE) at the exclusion area boundary (EAB). In using the same assumptions, except for decay time, the

licensee's dose analysis for an FHA with 60 days of decay in the SFP results in a dose of 0.014 rem TEDE at the EAB. This result meets the 6.3 rem acceptance criteria of RG 1.183 at the EAB and low population zone. In addition, it also meets the EPA early phase PAG criterion of 1 rem TEDE and below 10 percent EPA PAG threshold for declaration of a site area emergency.

The licensee has determined that after a decay time of at least 60 days after shutdown, the FHA doses would decrease to a level that would not warrant protective actions under the EPA early phase PAG framework, notwithstanding meeting the dose limit requirements under 10 CFR 50.67 and dose acceptance criteria under Regulatory Guide 1.183. The NRC staff notes that the doses from an FHA are dominated by the isotope Iodine-131. Palisades permanently ceased power operations on May 20, 2022. After over a year of decay, the thyroid dose from an FHA would be negligible. The only isotope remaining in significant amounts, among those postulated to be released in a design-basis FHA, would be Krypton-85. Since Krypton-85 primarily decays by beta emission, the calculated skin dose from an FHA release would make an insignificant contribution to the total effective dose equivalent, which is the parameter of interest in the determination of the EPA early phase PAGs for sheltering or evacuation. Therefore, the NRC staff concludes that the dose consequences from an FHA for the permanently shutdown Palisades facility would not approach the EPA early phase PAG criterion.

The NRC staff reviewed the consequences of an FHA, liquid waste incident, waste gas incident, and postulated cask drop accident in detail during the review of previously approved license amendment requests and exemptions from various emergency planning requirements for Palisades and found them to be acceptable. Since this technical information has not changed in relation to this exemption request, the NRC staff relied on these previous conclusions to conduct portions of the review for this exemption request. The NRC staff notes that while the licensee continues to rely on the information from previously approved licensing actions, the calculated doses would be expected to be lower when this exemption is

implemented due to additional decay time beyond the time assumed in the previously approved actions. Therefore, any offsite consequence from a design-basis radiological release is highly unlikely and, therefore, a significant amount of offsite liability insurance coverage is not required.

The only beyond design-basis event that has the potential to lead to a significant radiological release at a permanently shutdown and defueled reactor is a zirconium fire. The zirconium fire scenario is a postulated, but highly unlikely, accident scenario that involves the loss of water inventory from the SFP resulting in a significant heatup of the spent fuel and culminating in substantial zirconium cladding oxidation and fuel damage. The probability of a zirconium fire scenario is related to the decay heat of the irradiated fuel stored in the SFP. Therefore, the risks from a zirconium fire scenario continue to decrease as a function of the time that Palisades has been permanently shutdown.

The licensee performed an analysis demonstrating that 12 months after Palisades permanently shut down, the spent fuel stored in the SFP will have decayed to the extent that the requested exemption may be implemented at Palisades. Given Palisades' permanent shutdown date was May 20, 2022, and the fuel decay time of 12 months, May 31, 2023, terminates the period during which the spent fuel could heat-up to clad ignition temperature within 10 hours under adiabatic conditions. This analysis, "Holtec Spent Fuel Pool Calculation," dated July 8, 2022, [non-public], was submitted as Attachment 1 by the licensee in support of the letter dated July 11, 2022 (ML22192A134), in which the licensee requested exemptions from specific portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50 for the Palisades license. The analysis determined the decay time necessary to ensure a minimum of 10 hours is available before the fuel cladding temperature of the hottest fuel assembly in the SFP reaches 900°C. This 10-hour minimum threshold provides sufficient time for the licensee to take mitigative actions, and, if necessary, for offsite agencies to take appropriate action to protect the health and safety of the public if fuel and cladding oxidation occurs in air.

The NRC staff reviewed the licensee's calculation to verify that important physical properties of materials were within acceptable ranges and that the results were accurate. The NRC staff determined that the physical properties of materials were appropriate in the licensee's calculations related to SFP heatup considerations for Palisades. Therefore, the NRC staff found that 12 months after permanent cessation of power operations, more than 10 hours would be available before a significant offsite release could begin. The NRC staff concluded that the adiabatic heatup calculation provided an acceptable method for determining the minimum time available for deployment of mitigation equipment and, if necessary, implementing measures under a comprehensive general emergency plan. In this regard, one technical criterion for relieving decommissioning reactor licensees from the insurance obligations applicable to an operating reactor is a finding that the heat generated by the SFP has decayed to the point where the possibility of a zirconium fire is highly unlikely.

This was addressed in SECY-93-127, where the NRC staff concluded that there was a low likelihood and reduced short-term public health consequences of a zirconium fire once a decommissioning plant's spent fuel has sufficiently decayed. In its Staff Requirements Memorandum, "Financial Protection Required of Licensees of Large Nuclear Power Plants during Decommissioning," dated July 13, 1993 (ML003760936), the Commission approved a policy that authorized, through the exemption process, withdrawal from participation in the secondary insurance layer and a reduction in commercial liability insurance coverage to \$100 million when a licensee is able to demonstrate that the spent fuel could be air-cooled if the SFP was drained of water.

The NRC staff has used this technical criterion to grant similar exemptions to other decommissioning reactors (e.g., Pilgrim Nuclear Power Station, published in the *Federal Register* on January 14, 2020 (85 FR 1827); Three Mile Island Nuclear Station, Unit 1, published in the *Federal Register* on March 26, 2021 (86 FR 14472); and Duane Arnold Energy Center, published in the *Federal Register* on May 18, 2021 (86 FR 26961)). Additional

discussions of other decommissioning reactor licensees that have received exemptions to reduce their primary insurance level to \$100 million are provided in SECY-96-256, "Changes to the Financial Protection Requirements for Permanently Shutdown Nuclear Power Reactors, 10 CFR 50.54(w) and 10 CFR 140.11," dated December 17, 1996 (ML15062A483). These prior exemptions were based on the licensee demonstrating that the SFP could be air-cooled consistent with the technical criterion discussed above.

In the exemption request dated October 26, 2022, the licensee compared the Palisades fuel storage parameters with those used in NRC generic evaluations of fuel cooling included in NUREG/CR-6451, "A Safety and Regulatory Assessment of Generic BWR [Boiling-Water Reactor] and PWR [Pressurized-Water Reactor] Permanently Shutdown Nuclear Power Plants," dated August 1997 (ML082260098). The analysis described in NUREG/CR-6451 determined that natural air circulation would adequately cool fuel that has decayed for 17 months after operation in a typical PWR. The licensee compared the post-shutdown fuel storage conditions with those assumed for the analysis presented in NUREG/CR-6451.

The licensee found that the Palisades fuel storage configuration is smaller than the values modeled in NUREG/CR-6451. However, these differences are considered to be conservatively offset by the lower power density of the Palisades fuel assemblies, substantially larger downcomer areas for improved buoyancy driven air flow and natural circulation, and the fewer number of fuel assemblies that are stored in the fuel racks as compared to the NUREG/CR-6451 PWR model. Therefore, the cooling air flow should be comparable.

In SECY-00-0145, "Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning," dated June 28, 2000, and SECY-01-0100, "Policy Issues Related to Safeguards, Insurance, and Emergency Preparedness Regulations at Decommissioning Nuclear Power Plants Storing Fuel in Spent Fuel Pools," dated June 4, 2001 (ML003721626 and ML011450420, respectively), the NRC staff discussed additional information concerning SFP zirconium fire risks at decommissioning reactors and associated implications for offsite

insurance. Analyzing when the spent fuel stored in the SFP is capable of adequate air-cooling is one measure that demonstrates when the probability of a zirconium fire would be exceedingly low.

The NRC staff has determined that the licensee's proposed reduction in primary offsite liability coverage to a level of \$100 million and the licensee's proposed withdrawal from participation in the secondary insurance pool for offsite financial protection are consistent with the policy established in SECY-93-127 and subsequent insurance considerations resulting from zirconium fire risks, as discussed in SECY-00-0145 and SECY-01-0100. The NRC has previously determined in SECY-00-0145 that the minimum offsite financial protection requirement may be reduced to \$100 million and that secondary insurance is not required once it is determined that the spent fuel in the SFP is no longer thermal-hydraulically capable of sustaining a zirconium fire based on a plant-specific analysis. The NRC staff also notes that similar exemptions from these insurance requirements have been granted to other permanently shutdown and defueled power reactors upon satisfactory demonstration that zirconium fire risk from the irradiated fuel stored in the SFP is of negligible concern.

A. The Exemption is Authorized by Law

The PAA and its implementing regulations in 10 CFR 140.11(a)(4) require licensees of nuclear reactors that have a rated capacity of 100,000 kilowatts electric or more to have and maintain \$450 million in primary financial protection and to participate in a secondary retrospective insurance pool. In accordance with 10 CFR 140.8, the Commission may grant exemptions from the regulations in 10 CFR Part 140 as the Commission determines are authorized by law. The legal and associated technical basis for granting exemptions from 10 CFR Part 140 are set forth in SECY-93-127. The legal analysis underlying SECY-93-127 concluded that, upon a technical finding that lesser potential hazards exist after permanent

cessation of operations, the Commission has the discretion under the PAA to reduce the amount of insurance required of a licensee undergoing decommissioning.

Based on its review of the exemption request, the NRC staff concludes that the technical criteria for relieving Holtec Palisades and HDI from their existing primary and secondary insurance obligations have been met. As explained above, the NRC staff has concluded that no reasonably conceivable DBA exists that could cause an offsite release greater than the EPA PAGs and, therefore, that any offsite consequence from a design-basis radiological release is highly unlikely and the need for a significant amount of offsite liability insurance coverage is unwarranted. Additionally, the NRC staff determined that, after 12 months decay, the fuel stored in the Palisades SFP will be capable of being adequately cooled by air in the highly unlikely event of pool drainage. Moreover, in the highly unlikely beyond DBA scenario where the SFP water inventory is lost in such a manner that all methods of heat removal from the spent fuel are no longer available, the NRC staff has determined that at least 10 hours would be available and is sufficient time to support deployment of mitigation equipment, consistent with plant conditions, to prevent the zirconium cladding from reaching a point of rapid oxidation. Therefore, the NRC staff concludes that the fuel stored in the Palisades SFP will have decayed sufficiently by the requested effective date for the exemption of 12 months after permanent cessation of power operations to support a reduction in the required insurance consistent with SECY-00-0145.

The NRC staff has determined that granting the licensee's proposed exemption will not result in a violation of the Atomic Energy Act of 1954, Section 170, or other laws, as amended, which require licensees to maintain adequate financial protection. Accordingly, consistent with the legal standard presented in SECY-93-127, under which decommissioning reactor licensees may be relieved of the requirements to carry the maximum amount of insurance available and to participate in the secondary retrospective premium pool where there is sufficient technical justification, the NRC staff concludes that the requested exemption is authorized by law.

B. The Exemption is Otherwise in the Public Interest

The financial protection limits of 10 CFR 140.11 were established to require licensees to maintain sufficient offsite liability insurance to ensure adequate funding for offsite liability claims following an accident at an operating reactor. However, the regulation does not consider the reduced potential for and consequence of nuclear incidents at permanently shutdown and decommissioning reactors.

The basis provided in SECY-93-127, SECY-00-0145, and SECY-01-0100 allows licensees of decommissioning plants to reduce their primary offsite liability insurance and to withdraw from participation in the retrospective rating pool for deferred premium charges. As discussed in these documents, once the zirconium fire concern is determined to be negligible, possible accident scenario risks at permanently shutdown and defueled reactors are greatly reduced when compared to the risks at operating reactors and the associated potential for offsite financial liabilities from an accident are commensurately less. The licensee analyzed and the NRC staff confirmed that the risks of accidents that could result in an offsite radiological release are minimal, which justifies the proposed reductions in offsite primary liability insurance and withdrawal from participation in the secondary retrospective rating pool for deferred premium charges.

Additionally, participation in the secondary retrospective rating pool could potentially have adverse consequences on the safe and timely completion of decommissioning. If a nuclear incident sufficient to trigger the secondary insurance layer occurred at another nuclear power plant, the licensee could incur financial liability of up to \$131,056,000. However, because Palisades is permanently shutdown, it cannot produce revenue from electricity generation sales to cover such a liability. Therefore, such liability if subsequently incurred could significantly affect the ability of the facility to conduct and complete timely radiological decontamination and decommissioning activities. In addition, as SECY-93-127 concluded, the shared financial risk

exposure to the licensee is greatly disproportionate to the radiological risk posed by Palisades when compared to operating reactors. The reduced overall risk to the public at decommissioning power plants does not warrant that the licensee be required to carry full operating reactor insurance coverage after the requisite spent fuel cooling period has elapsed following final reactor shutdown.

The licensee's proposed financial protection limits will maintain a level of liability insurance coverage commensurate with the risk to the public. These changes are consistent with previous NRC policy as discussed in SECY-00-0145 and exemptions approved for other decommissioning reactors. Therefore, the underlying purpose of the regulations will not be adversely affected by the reductions in insurance coverage. Accordingly, an exemption from participation in the secondary insurance pool and a reduction in the primary insurance to \$100 million, a value more in line with the potential consequences of accidents, would be in the public interest in that this ensures that there will be adequate funds to address any of those consequences and helps to ensure the safe and timely decommissioning of the reactor.

Therefore, the NRC staff has concluded that an exemption from 10 CFR 140.11(a)(4), which would permit Holtec Palisades and HDI to lower the Palisades primary insurance levels and to withdraw from the secondary retrospective premium pool at the requested effective date of 12 months after permanent cessation of power operations, is in the public interest.

C. Environmental Considerations

The NRC's approval of an exemption from insurance or indemnity requirements belongs to a category of actions that the Commission, by rule or regulation, has declared to be a categorical exclusion after first finding that the category of actions does not individually or cumulatively have a significant effect on the human environment. Specifically, the exemption is

categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement in accordance with 10 CFR 51.22(c)(25).

Under 10 CFR 51.22(c)(25), granting of an exemption from the requirements of any regulation of Chapter I to 10 CFR is a categorical exclusion provided that: (i) there is no significant hazards consideration; (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (iii) there is no significant increase in individual or cumulative public or occupational radiation exposure; (iv) there is no significant construction impact; (v) there is no significant increase in the potential for or consequences from radiological accidents; and (vi) the requirements from which an exemption is sought involve surety, insurance, or indemnity requirements.

As the Director of the Division of Decommissioning, Uranium Recovery, and Waste Programs in the NRC's Office of Nuclear Material Safety and Safeguards, I have determined that approval of the exemption request involves no significant hazards consideration, as defined in 10 CFR 50.92, because reducing the licensee's offsite liability requirements at Palisades does not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The exempted financial protection regulation is unrelated to the operation of Palisades or site activities. Accordingly, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite and no significant increase in individual or cumulative public or occupational radiation exposure. The exempted regulation is not associated with construction so there is no significant construction impact. The exempted regulation does not concern the source term (i.e., potential amount of radiation in an accident) nor any activities conducted at the site. Therefore, there is no significant increase in the potential for, or consequences of, a radiological accident. In addition, there would be no significant impacts to biota, water resources, historic properties, cultural resources, or

socioeconomic conditions in the region resulting from issuance of the requested exemption. The requirement for offsite liability insurance involves surety, insurance, or indemnity matters only.

Therefore, pursuant to 10 CFR 51.22(b) and 51.22(c)(25), no environmental impact statement or environmental assessment need be prepared in connection with the approval of this exemption request.

IV. Conclusions.

Accordingly, the Commission has determined that, pursuant to 10 CFR 140.8, the exemption is authorized by law and is otherwise in the public interest. Therefore, the Commission hereby grants Holtec Palisades and HDI an exemption from the requirements of 10 CFR 140.11(a)(4) for Palisades. Palisades permanently ceased power operations on May 20, 2022. The exemption from 10 CFR 140.11(a)(4) permits Palisades to reduce the required level of primary financial protection from \$450 million to \$100 million and to withdraw from participation in the secondary layer of financial protection 12 months after permanent cessation of power operations, which was May 20, 2023. Because this period had already elapsed, the exemption is effective upon issuance.

Dated: this 22nd day of December 2023.

For the Nuclear Regulatory Commission.

/RA/

Jane Marshall, Director,
Division of Decommissioning, Uranium Recovery,
and Waste Programs,
Office of Nuclear Material Safety
and Safeguards.

ENCLOSURE 2

AMENDMENT NO. 14 TO INDEMNITY AGREEMENT NO. B-40

HOLTEC PALISADES, LLC

HOLTEC DECOMMISSIONING INTERNATIONAL, LLC

PALISADES NUCLEAR PLANT

DOCKET NOS. 50-255 AND 72-007