



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

December 15, 2023

Jean 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 – ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT RELATED TO REQUEST FOR
EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS
(EPID L-2022-LLE-0024)

Dear Jean Fleming:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemptions dated July 11, 2022 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22192A134).

The proposed exemptions would exempt Holtec Decommissioning International, LLC (HDI), one of the licensees of the Palisades Nuclear Plant (Palisades) and an indirect wholly owned subsidiary of Holtec International (Holtec), requested an exemption on behalf of Holtec Palisades, LLC, the other Palisades licensee (hereinafter collectively referred to as the licensee), from certain requirements set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.47, "Emergency plans," and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, based on the submission of certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel at Palisades.

The Environmental Assessment and Finding of No Significant Impact is being forwarded to the Office of the Federal Register for publication.

In accordance with 10 CFR 2.390 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 ADAMS. ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions regarding this action or the ongoing review of the related exemptions, please contact me at (301) 415-1387 or by e-mail at Tanya.Hood@nrc.gov.

Sincerely,



Signed by Hood, Tanya
on 12/15/23

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

Enclosure:
Environmental Assessment
and Finding of No Significant Impact

cc: Palisades Listserv

ENCLOSURE

ENVIRONMENTAL ASSESSMENT AND

FINDING OF NO SIGNIFICANT IMPACT

HOLTEC DECOMMISSIONING INTERNATIONAL, LLC

HOLTEC PALISADES, LLC

PALISADES NUCLEAR PLANT

DOCKET NOS. 50-255 AND 72-007

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-255; NRC-2023-0200]

Holtec Decommissioning International, LLC,

and Holtec Palisades, LLC

Palisades Nuclear Plant

AGENCY: Nuclear Regulatory Commission.

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

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of exemptions that would permit the licensee to reduce its emergency planning (EP) activities at the Palisades Nuclear Plant (Palisades). Specifically, 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 (hereinafter collectively referred to as the licensee) that would eliminate the requirements to maintain formal offsite radiological emergency plans, as well as reduce the scope of some of the onsite EP activities based on the reduced risks at Palisades, based on the submission of certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel at Palisades. However, requirements for an onsite radiological emergency plan and for certain onsite capabilities to communicate and coordinate with offsite response authorities would be retained. In addition, offsite EP provisions would still exist through State and local government use of a comprehensive emergency management plan process, in accordance with the Federal Emergency Management Agency's (FEMA's) Comprehensive Preparedness Guide (CPG) 101, "Developing and Maintaining Emergency Operations Plans." The NRC staff is issuing an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) associated with the proposed exemptions.

DATES: The EA and FONSI referenced in this document are available on **[INSERT DATE OF PUBLICATION IN *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID **NRC-2023-0200** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2023-0200**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the “For Further Information Contact” section of this document.

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

- **NRC’s PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Tanya E. Hood, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-1387; email: Tanya.Hood@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

By letters dated September 28, 2017, and October 19, 2017, in accordance with sections 50.4(b)(8) and 50.82(a)(1)(i) of title 10 of the *Code of Federal Regulations* (10 CFR) part 50, "Domestic Licensing of Production and Utilization Facilities," Entergy Nuclear Operations, Inc. (ENOI), which was the licensee at that time, notified the NRC that they had decided to permanently cease power operations at Palisades by May 31, 2022.

Pursuant to 10 CFR 50.82(a)(1)(ii), by letter dated June 13, 2022, ENOI certified to the NRC that the fuel had been permanently removed from the Palisades reactor vessel and placed in the spent fuel pool (SFP). Upon the docketing of these certifications, in accordance with 10 CFR 50.82(a)(2), the Palisades license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel. The spent fuel from Palisades is stored in the SFP and in dry cask storage at the onsite independent spent fuel storage installation (ISFSI), where it will remain until it is shipped offsite.

By Order dated December 13, 2021, the NRC approved a transfer of the Palisades license from ENOI and Entergy Nuclear Palisades, LLC, to Holtec and HDI. This transfer was executed on June 28, 2022, such that HDI and Holtec Palisades, LLC became the licensees for Palisades. To address the upcoming transition from an operating plant to a permanently defueled facility, by letter dated September 24, 2018, the NRC issued an amendment authorizing ENOI to adopt a Post-Shutdown Emergency Plan (PSEP) and approving changes to the Palisades emergency plan to support the planned permanent cessation of operations and permanent removal of fuel from the reactor vessel. Upon implementation of the PSEP on June 15, 2022, the Palisades emergency response organization on-shift and augmented staffing requirements were revised commensurate with the reduced spectrum of credible accidents for a permanently shutdown and defueled nuclear power reactor facility.

By letter dated July 11, 2022, the licensee requested exemptions from specific portions of 10 CFR 50.47, "Emergency plans," and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR part 50 for the Palisades license. More specifically, HDI requested exemptions from certain planning standards in 10 CFR 50.47(b) regarding onsite and offsite radiological emergency preparedness (REP) plans for nuclear power reactors; from certain requirements in 10 CFR 50.47(c)(2) for establishment of plume exposure pathway and ingestion pathway emergency planning zones (EPZs) for nuclear power reactors; and from certain requirements in 10 CFR part 50, appendix E, section IV, "Content of Emergency Plans."

HDI's requested exemptions would eliminate the NRC requirements to maintain formal offsite REP plans in accordance with 44 CFR, "Emergency Management and Assistance," part 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness," and would reduce the scope of the onsite EP activities at Palisades. HDI based its request on the reduced risks of an offsite radiological release at Palisades after permanent cessation of power operations and when all spent fuel has decayed for at least 12 months. The exemptions would maintain the requirements for an onsite radiological emergency plan and would continue to ensure the capability to communicate and coordinate with offsite response authorities. These exemptions will terminate if the status of the Palisades reactor changes such that the certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel are no longer applicable and the facility would be required to come into compliance with all applicable NRC regulations.

The EP requirements of 10 CFR 50.47 and appendix E to 10 CFR part 50 do not distinguish between operating reactors and those that have ceased operations and defueled. As such, a permanently shutdown and defueled reactor must continue to maintain the same EP requirements as an operating power reactor under the existing regulatory requirements. To establish a level of EP commensurate with the reduced risks of a permanently shutdown and

defueled reactor, the licensee must seek exemptions from certain EP regulatory requirements before it can change its emergency plans.

The NRC is therefore considering issuing to the licensee the proposed exemptions from portions of 10 CFR 50.47 and appendix E to 10 CFR part 50, which would eliminate the requirements for the licensee to maintain offsite radiological emergency plans and reduce some of the onsite EP activities based on the reduced radiological risks as Palisades has permanently ceased power operations and all spent fuel has decayed for more than 12 months.

Consistent with 10 CFR 51.21, "Criteria for and identification of licensing and regulatory actions requiring environmental assessments," the NRC has determined that an EA is the appropriate form of environmental review for the requested action. Based on the results of the EA, which is provided in Section II of this document, the NRC has determined not to prepare an environmental impact statement for the proposed action and is issuing a FONSI.

II. Environmental Assessment

Description of the Proposed Action

The proposed action would exempt the licensee from: (1) certain standards as set forth in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; (2) requirements in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway EPZs for nuclear power reactors; and (3) certain requirements in 10 CFR part 50, appendix E, section IV, which establishes the elements that make up the content of emergency plans. The proposed action of granting these exemptions would eliminate the NRC requirements for the licensee to maintain offsite radiological emergency plans in accordance with 44 CFR part 50 and reduce some of the onsite EP activities at Palisades. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities would be retained.

Additionally, if necessary, offsite protective actions could still be implemented using a comprehensive emergency management plan (CEMP) process. A CEMP in this context, also

referred to as an emergency operations plan, is addressed in FEMA's CPG 101. The CPG 101 is the foundation for State, territorial, Tribal, and local EP in the United States under the National Preparedness System. It promotes a common understanding of the fundamentals of risk-informed planning and decision making and assists planners at all levels of government in their efforts to develop and maintain viable, all-hazards, all-threats emergency plans. A CEMP is flexible enough for use in all emergencies. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available; and outlines how all actions will be coordinated. A CEMP is often referred to as a synonym for "all-hazards" planning. The proposed action is in accordance with the previously noted discussion in this notice and the licensee's exemption request dated July 11, 2022.

Need for the Proposed Action

The proposed action is needed for the licensee to revise the Palisades Post-Shutdown Emergency Plan. Since the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel have been docketed, pursuant to 10 CFR 50.82(a)(2), the Palisades license no longer authorizes use of the facility for power operation or emplacement or retention of fuel into the reactor vessel and, therefore, the occurrence of postulated accidents associated with Palisades reactor operation is no longer credible. As the EP requirements do not distinguish between operating reactors and a power reactor that has been permanently shutdown and defueled, the licensee requests an exemption from certain EP requirements commensurate with the radiological risks at the site.

In its exemption request, the licensee identified four possible design-basis accidents (DBAs) at Palisades in its permanently shutdown and defueled condition. These are: (1) a fuel handling accident in the reactor cavity; (2) an accidental release of waste gas; (3) an accidental release of waste liquid; and (4) a postulated cask drop accident. The licensee also considered the consequences of a beyond DBA involving a complete loss of SFP water inventory and no

accompanying heat loss (i.e., adiabatic heat up). The NRC staff evaluated these possible radiological accidents, as well as the associated analyses provided by the licensee, in the Commission Paper (SECY) -23-0043, "Request by Holtec Decommissioning International, LLC for Exemptions from Certain EP Requirements for Palisades Nuclear Plant," dated May 15, 2023.

In SECY-23-0043, the NRC staff verified that the licensee's analyses and calculations provided reasonable assurance that if the requested exemptions were granted, then: (1) for a DBA, an offsite radiological release will not exceed the U.S. Environmental Protection Agency's (EPA) early phase Protective Action Guides (PAGs) at the exclusion area boundary (EAB), as detailed in Table 1-1, "Summary Table for PAGs, Guidelines, and Planning Guidance for Radiological Incidents," to the EPA's "PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents," EPA-400/R-17/001, dated January 2017; (2) in the highly unlikely event of a beyond DBA resulting in a loss of all SFP cooling, there is sufficient time to initiate appropriate mitigating actions; and (3) in the event a radiological release has or is projected to occur, there would be sufficient time for offsite agencies to take protective actions using a CEMP to protect the health and safety of the public if offsite governmental officials determine that such action is warranted. The Commission approved the NRC staff's recommendation to grant the exemptions based on this evaluation in its Staff Requirements Memorandum to SECY-23-0043, dated December 7, 2023.

Based on the licensee's analyses related to the reduced radiological risks, the licensee states that complete application of the EP regulations to Palisades 12 months after permanent cessation of power operations would not serve the underlying purpose of the regulations and is not necessary to achieve the underlying purpose of the regulations. The licensee also states that it would incur undue costs in the application of operating plant EP requirements for the maintenance of an emergency response organization in excess of that actually needed to respond to the diminished scope of credible accidents for Palisades 12 months after its

permanent cessation of power operations.

Environmental Impacts of the Proposed Action

The NRC staff has completed its evaluation of the environmental impacts of the proposed action.

The proposed action consists mainly of changes related to the elimination of NRC requirements for the licensee to maintain offsite radiological emergency plans in accordance with 44 CFR part 350 and reduce some of the onsite EP activities at Palisades, based on the reduced risks once the reactor has been permanently shutdown for a period of 12 months. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities will be retained and offsite EP provisions to protect public health and safety will still exist through State and local government use of a CEMP.

With regard to potential nonradiological environmental impacts, the proposed action would have no direct impacts on land use or water resources, including terrestrial and aquatic biota, as it involves no new construction, land disturbance, or modification of plant operational systems. There would be no changes to the quality or quantity of nonradiological effluents and no changes to the plants' National Pollutant Discharge Elimination System permits would be needed. In addition, there would be no noticeable effect on socioeconomic conditions in the region, no environmental justice impacts, no air quality impacts, and no impacts to historic and cultural resources from the proposed action. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

With regard to potential radiological environmental impacts, the proposed action would not significantly increase the probability or consequences of radiological accidents. Additionally, the NRC staff has concluded that the proposed action would have no direct radiological environmental impacts. There would be no change to the types or amounts of radioactive effluents that may be released and, therefore, no change in occupational or public radiation exposure from the proposed action. Moreover, no changes would be made to plant buildings or

the site property from the proposed action. For these reasons, there are no significant radiological environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered the denial of the proposed action (i.e., the “no-action” alternative). The denial of the application would result in no change in current environmental impacts. Therefore, the environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

The proposed action does not involve the use of any different resources than those previously considered in the “Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Palisades Nuclear Plant - Final Report,” NUREG-1437, Supplement 27, dated October 2006.

Agencies or Persons Consulted

No additional agencies or persons were consulted regarding the environmental impact of the proposed action. On September 21, 2023, the State of Michigan representative was notified of this EA and FONSI.

III. Finding of No Significant Impact

The licensee has proposed exemptions from: (1) certain standards in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; (2) the requirements in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway EPZs for nuclear power reactors; and (3) certain requirements in 10 CFR part 50, appendix E, section IV, which establishes the elements that make up the content of emergency plans. The proposed action of granting these exemptions would eliminate the NRC requirements for the licensee to maintain offsite radiological emergency plans in accordance with 44 CFR part 350 and reduce some of the onsite EP activities at Palisades, based on the reduced risks once the reactor has been permanently shutdown for a period of 12 months. However, requirements for certain onsite

capabilities to communicate and coordinate with offsite response authorities will be retained and offsite EP provisions to protect public health and safety will still exist through State and local government use of a CEMP.

The NRC is considering issuing the exemptions. The proposed action would not significantly affect plant safety, would not have a significant adverse effect on the probability of an accident occurring, and would not have any significant radiological or nonradiological impacts. This FONSI is a final finding and incorporates by reference the EA in Section II of this document. Therefore, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

IV. Availability of Documents

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

| Document Description | ADAMS Accession No. / Weblink |
|---|---|
| Federal Emergency Management Agency, "Developing and Maintaining Emergency Operations Plans," Comprehensive Preparedness Guide (CPG) 101, Version 2.0, November 2010. | https://www.fema.gov/media-library-data/20130726-1828-25045-0014/cpg_101_comprehensive_preparedness_guide_developing_and_maintaining_emergency_operations_plans_2010.pdf |
| Letter from Entergy Nuclear Operations, Inc. to U.S. Nuclear Regulatory Commission, "Certification of Permanent Cessation of Power Operations, Palisades Nuclear Plant, Docket No. 50-255," dated September 28, 2017. | ML17271A233 |
| Letter from Entergy Nuclear Operations, Inc. to U.S. Nuclear Regulatory Commission, "Supplement to Certification of Permanent Cessation of Power Operations, Palisades Nuclear Plant, Docket No. 50-255," dated October 19, 2017. | ML17292A032 |
| Letter from Entergy Nuclear Operations, Inc. to U.S. Nuclear Regulatory Commission, "Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel," dated June 13, 2022. | ML22164A067 |
| Letter from U.S. Nuclear Regulatory Commission to Entergy Nuclear Operations, Inc., "Palisades Nuclear Plant and Big Rock Point Plant – Order | ML21292A155 (Package) |

| Document Description | ADAMS Accession No. / Weblink |
|--|-------------------------------|
| Approving Transfer of Licenses and Draft Conforming Administrative License Amendments (EPID L-2020-LLM-0003),” dated December 13, 2021. | |
| Email from Entergy Nuclear Operations, Inc. to U.S. Nuclear Regulatory Commission, “Notification of Palisades and Big Rock Point License Transfer (EPIDs L-2022-LLM-0002 and L-2020-LLM-0003),” dated June 28, 2022. | ML22179A075 |
| Letter from U.S. Nuclear Regulatory Commission to Entergy Nuclear Operations, Inc., “Palisades Nuclear Plant – Issuance of Amendment Re: Changes to the Emergency Plan for Permanently Defueled Condition (CAC No. MG0198; EPID L-2017-LLA-0305),” dated September 24, 2018. | ML18170A219 |
| Letter from Holtec Decommissioning International, LLC, to U.S. Nuclear Regulatory Commission, “Request for Exemptions from Certain Emergency Planning Requirements of 10 CFR 50.47 And 10 CFR Part 50, Appendix E,” dated July 11, 2022. | ML22192A134 |
| SECY 23-0043, “Request by Holtec Decommissioning International, LLC for Exemptions from Certain EP Requirements for Palisades Nuclear Plant,” dated May 15, 2023. | ML23054A179 (Package) |
| U.S. Environmental Protection Agency (EPA), EPA-400/R-17/001, “PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents,” January 2017. | ML17044A073 |
| Staff Requirements Memorandum to SECY 23-0043, “Request by Holtec Decommissioning International, LLC for Exemptions from Certain EP Requirements for Palisades Nuclear Plant,” dated December 7, 2023. | ML23341A181 |

NUREG-1437, Supplement 27, "Generic
Environmental Impact Statement for License
Renewal of Nuclear Plants: Regarding Palisades
Nuclear Plant - Final Report," dated October 2006.

ML062710300

SUBJECT: PALISADES NUCLEAR PLANT – ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO REQUEST FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING REQUIREMENTS (EPID L-2022-LLE-0024)

Date: December 15, 2023

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D. Hills, RIII

V. Meyers, RIII

GFlanders, RIII

ADAMS Accession No.: EA/FONSI PKG: ML23264A144

EA ISSUANCE LTR: ML23264A145

EA/FONSI FRN: ML23341A166

*concur via e-Concurrence

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| OFFICE | NMSS/DUWP/RDB/PM | NSIR/DPR/RLB/BC | NMSS/REFS/ELRB/BC |
| NAME | THood* | NDifrancesco (Acting)* | TSmith* |
| DATE | 09/22/2023 | 10/10/2023 | 09/28/2023 |
| OFFICE | OGC – NLO | NMSS/DUWP/RDB/BC | NMSS/DUWP/RDB/PM |
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