From:	Mary Richmond
Sent:	Friday, November 1, 2024 3:03 PM
To:	Jean Fleming; James Miksa
Cc:	Daniel Barnhurst; Laura Willingham; Johann Britting; PalisadesRestart-EnvDocsPUBLICem Resource
Subject:	Palisades Reauthorization of Power Operations Environmental Review-Request for Confirmatory Information 2

Holtec Decommissioning International, LLC (HDI), submitted a series of licensing and regulatory requests necessary to reauthorize power operations at the Palisades Nuclear Plant (Palisades) through March 24, 2031, the end of the current operating license term under Palisades' Renewed Facility Operating License (RFOL) No. DPR-20. Collectively, these requests define the proposed U.S. Nuclear Regulatory Commission (NRC) Federal actions. In a letter dated, June 18, 2024, the NRC stated it had accepted the last submittal for review (ADAMS Accession No. ML24169A434).

On June 27, 2024, the NRC provided HDI a notice of the upcoming environmental regulatory audit along with the environmental regulatory audit plan and a list of draft Requests for Additional Information (RAI) (ADAMS Accession No. ML24248A056). During the environmental audit, the NRC reviewed documents that were made available on the applicant's electronic information portal in response to the NRC draft RAIs. The NRC also participated in site visits and breakout sessions for each resource area with applicant personnel to gather information that will likely be used in the Environmental Assessment (EA). As described in the June 27, 2024, correspondence, this information assisted the NRC staff in identifying either subsequent Requests for Confirmatory Information (RCI), issued while the audit remained open or, finalizing draft RAIs (ML24248A056) and any newly identified RAIs that might be needed to allow the staff to conduct a complete review and to prepare the EA. As such, a number of the draft RAIs were either (1) closed, primarily due to clarification from the audit or availability of public information, (2) addressed in an RCI (ML24248A261), or (3) became a final RAI (ML24263A171). Responses to the RCIs (ML24260A354) and RAIs (ML24278A027) have been received by the NRC.

Upon review of the response to the RCIs and RAIs, along with stakeholder outreach, the NRC has identified three additional RCIs listed below. The NRC is requesting a response no later than November 11, 2024.

In the interim, please contact me with any questions or comments.

<u>RCI-HCR-7a</u>

Provide copies of existing historic and cultural resource procedures (e.g., environmental review, Archaeological, Cultural & Historic Resources procedures, excavation and trenching control procedures, inadvertent discovery, stop work and notification procedures) for the Palisades site. Enclosure 2, "Environmental New and Significant Review Proposed Resumption of Power Operations Palisades Nuclear Plant," did not provide reference to, or copies of, cultural resource procedures for operations of Palisades. As identified in the 2006 License Renewal EIS Supplement, cultural resources procedures were in place at the site (see Section 4.4.5). These procedures were required by the Michigan State Historic Preservation Office as part of license renewal (see ML061920480). See also, 36 CFR 800.13. Further confirm that:

1. HDI is adopting and revising the former Entergy cultural resource procedures that existed for Palisades;

2. HDI submitted their cultural resource procedures to the Michigan State Historic Preservation Office (SHPO) for review on August 13, 2024;

3. The Michigan SHPO provided recommendations and comments back to HDI on their cultural resource procedures by letter dated October 23, 2024, and;

4. HDI has submitted the Michigan SHPO procedure recommendations into its corrective action process and are currently revising the procedures in accordance with SHPO recommendations. These revisions are expected to be completed and finalized by the end of the calendar year, 2024.

RCI-AE-4a

Enclosure 2, "Environmental New and Significant Review Proposed Resumption of Power Operations Palisades Nuclear Plant," did not provide a description of any monitoring plans to assess the numbers of fish or other aquatic organisms found on the intake or traveling screens and impacts were provided for license renewal (the license renewal impact determinations assumed a baseline of continued operations). Based on the response to RAI-AE-4, further confirm that:

Based on information in the May 16, 2024 Final Dive Report, which summarized the findings of Spring Cleaning, Intake Crib inspection, and Lake Buoy Installation which Ballard Marine Construction divers performed at Palisades starting April 8th, 2024, the NRC understands the following.

(1) The spring 2024 intake crib inspection and cleaning reported 100% coverage of the bars along the sides of the intake crib by zebra mussels roughly 1.5” thick. Divers also found and cleaned out debris, including zebra mussels, just west of the traveling screens.

(2) The inspection showed that sand, zebra mussels, and other debris had infiltrated the intake system (intake crib, mixing bay, etc.) but there was no visible damage to the mixing bay, trash racks, or traveling screens.

(3) The intake areas would need to be cleaned of sand and debris and some repairs made to the intake crib prior to restart.

(4) Holtec has not found any State-listed species in the intake or discharge systems during annual monitoring.

RCI-GW-2a

Further confirm the following information as provided in the HDI’s “Updated Hydrogeologic Investigation Report: Palisades Nuclear Power Plant Covert, Michigan”, dated September 14, 2023.

- Field studies conducted at the site report groundwater elevations range from 10 – 45 ft bgs. Groundwater velocity ranges from 816 – 1,274 ft/year in the upper Dune Sand and from 9 – 99 ft per year in the deeper, silty sand unit above the clay.
- Between April and September 2018, the P-8D Auxiliary Feed Water Pump was installed. This area is a known area of previous inadvertent radiological releases. Seven hundred gamma isotopic analyses were performed. Nineteen samples contained detectable Co-60 and Cs-137. This material was disposed of as radioactive waste.
- Between January 2009 – June 2024, Palisades reported experiencing 10 instances of elevated tritium detected in onsite groundwater (see Table 1 below for details).

Table 1: Summary of Elevated Tritium in Groundwater Events at Palisades Nuclear Power Plant, January 2009 – June 2024

Date	Description of Release	Corrective Actions and Outcome
2009 – 2013	• Fluctuating tritium concentrations in well MW-3 (north of T-90 and T-91 tanks). Levels reported to be "less than the U.S. Environmental Protection Agency (EPA) drinking water maximum contaminant level (MCL) of 20,000 pCi/L • Investigations determined the source to be underground piping from the Auxiliary Building Addition	• 18 temporary wells installed in 2009 to further identify the source of the tritium • Investigative and pipe repair/replacement activities
February 26, 2015	• Elevated tritium concentration in TW-7 • Source identified to be the Turbine Building drain tank line	• Piping replaced • Elevated tritium levels reduced by March 11, 2015
March 2015	• Elevated tritium concentrations detected in MW-2 and MW-11 • Source determined to be associated with the February 2015 leak from the Turbine Building drain tank line	• Elevated tritium levels reduced by September 2015 (MW-11) and February 2018 (MW-2) • Turbine Building drain system replaced a cautionary measure
November 2, 2016 – December 27, 2016	• Elevated tritium concentrations detected at MW-11 • Source identified to be originating from the T-91 Utility Water Storage tanks	• T-91 Utility Water Storage tank and associated piping replaced • Tritium concentrations decreased, remaining below EPA MCL
2019	• Tritium detected in MW-11 at a concentration of 46,268 pCi/L in November 2019 • In 2020, tritium concentrations measured above the EPA MCL at MW-2, MW-3, MW-11, TW-4, TW-6, TW-7, TW-10, TW-14, TW-17 and were elevated (e.g., at or just below EPA MCL) in MW-13 and TW-5 • Source determined to be previously discharged effluents that migrated to a storm drain near to MW-11 that normally discharges to the mixing basin	• No action taken as no new significant dose pathway and release previously reported under a batch release process
October 2019 – January 2020	• Increasing tritium concentrations observed in 7 monitoring wells	• Station preformed work to line the interior of the M-8 (plant heating boiler) and M-61 (evaporator heating boiler) boiler room sump and associated drain lines
September 5, 2020	• The T-2 (Condensate	• Leaking pipe replaced

	Storage Tank) level lowered unexpectedly • Failure/leak identified in a buried condensate return pipe to the T-2 • Tritium concentrations were measured at 19,588 and 36,869 pCi/L at nearest monitoring well (MW-11) to T-2 on September 9, 2020 and October 8, 2020, respectively	with aboveground and indoor piping • Isolated and drained the T-2 tank • Tritium concentrations at MW-11 decreased below 700 pCi/L by November 2020. • Additional pipe repair planned as part of restart activities
2021	• Tritium detected above EPA MCL in 6 wells at a maximum concentration of 49,197 pCi/L in TW-3	• Station performed work to line the interior of the section of buried piping between the M-950 (service building boiler) room and the M-8/M-61 boiler room sump
February 2022	• Tritium detected above its MCL in two onsite wells, with a maximum detection of 32,254 pCi/L at MW-2	• No action described • 2023 levels not detected above minimum detectable activity
May 2022	• Elevated tritium detected in a water sample collected from the 1C switchgear sump within the protected area at a maximum concentration of 645,255 pCi/L • Tritium was detected at 10,370 pCi/L in May 2022 at the nearest GPI monitoring location to the 1C switchgear sump (TW-6) • Source determined to be a leak from a buried pipe, either the T-91 recirculation line or the T-87 to T-91 transfer line	• Leaking section flushed, drained, and taken out of service • Tritium levels in the sump decreased to levels <15,000 pCi/L • A work request was generated to perform repairs to the system before it is put back in service. This involves capping the underground piping, installing aboveground piping, and rerouting radwaste through the aboveground pipes • Pipe repair planned as part of restart activities

Mary C Richmond

Environmental Project Manager

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