

Congress of the United States
Washington, DC 20515

April 30, 2024

Dr. Kris Singh, Ph.D.
President and CEO
Holtec International
1 Holtec Boulevard
Camden, NJ 08104

Dear Dr. Singh,

Scientists, public health officials, elected leaders, and residents of the communities surrounding the Pilgrim Nuclear Power Station have raised concerns that Holtec's plan for dispositioning radioactive wastewater stored at the plant poses a threat to the health and safety of the public and the environment. That plan, which initially called for a discharge of wastewater into Cape Cod Bay, now apparently includes dispositioning through evaporation. In light of the harm that either form of wastewater release may have on public health, ecosystems, and the blue economy, we urge Holtec to heed those concerns and to develop a transparent, community-involved approach for dispositioning the wastewater, especially as legitimate public concerns over wastewater evaporation and airborne releases have heightened in recent months.

During the 2022 field hearing held by the U.S. Senate Environment and Public Works Subcommittee on Clean Air, Climate, and Nuclear Safety in Plymouth, Massachusetts, you committed Holtec to not discharging Pilgrim's wastewater into Cape Cod Bay without the consent of local, state, and federal stakeholders.¹ That commitment expanded on Holtec's earlier promises in the 2020 Pilgrim decommissioning settlement agreement with the Commonwealth of Massachusetts to (1) "comply with all applicable environmental and human-health based standards and regulations of the Commonwealth" and (2) to *not* assert that any commitment made under the settlement agreement "is invalid under federal law or the U.S. Constitution."²

We appreciate Holtec's efforts to fulfill those commitments, including by complying with the U.S. Environmental Protection Agency (EPA) directive that Holtec seek a new National Pollutant Discharge Elimination System (NPDES) permit for the proposed discharge into Cape Cod Bay. In July 2023, the Massachusetts Department of Environmental Protection issued a tentative denial of Holtec's NPDES permit application, explaining that the proposed discharge

¹ Issues Facing Communities with Decommissioning Nuclear Plants: Hearing before the Senate Subcommittee on Clean Air, Climate, and Nuclear Safety, 117th Cong. (May 6, 2022), <https://www.epw.senate.gov/public/index.cfm/2022/5/issues-facing-communities-with-decommissioning-nuclear-plants>.

² Settlement Agreement Between the Commonwealth of Massachusetts and Holtec Pilgrim, LLC, and Holtec Decommissioning international, LLC Regarding the Pilgrim Nuclear Power Station, Plymouth, Massachusetts, (Feb. 12, 2019), <https://holtecinternational.com/wp-content/uploads/2021/02/Settlement-Agreement-Commonwealth-of-MA-and-Holtec.pdf>.

would violate the Massachusetts Ocean Sanctuaries Act—one of the applicable environmental regulations to which Holtec committed to comply.³

With the final NPDES permit decision pending, Holtec has informed the Nuclear Decommissioning Citizens Advisory Panel (NDCAP) that Pilgrim’s wastewater is being heated in the winter months with submerged electric heaters to increase the plant’s ambient temperature to both promote worker comfort and expedite the drying of plant components.⁴ While those are both laudable goals, a consequence of the heating—confirmed by Holtec—is an increased rate of wastewater evaporation above the pace at which it occurs naturally. According to Holtec’s initial estimates, in 2021, Pilgrim had 1.1 million gallons of wastewater. Now, Holtec reports only 880,000 gallons remain.⁵ Despite this significant reduction, Holtec has yet to provide an estimate of the amount of wastewater evaporation associated with the heaters versus that which occurs naturally.

There is no question that evaporating wastewater from Pilgrim poses potential health and environmental risks. During the 2022 U.S. Senate field hearing, you identified evaporation with electric heaters as an alternative to discharging the wastewater into Cape Cod Bay.⁶ But you also acknowledged that evaporation would cause environmental damage.⁷ After all, evaporated wastewater released into the air will not permanently remain in the sky; eventually it will return to sensitive areas such as Plymouth’s residential neighborhoods and Cape Cod Bay. Public health organizations—including the Greater Boston Physicians for Social Responsibility and the Town of Plymouth’s Board of Health—scientists, local officials, and community members, have all raised concerns about the environmental risks of airborne releases of wastewater through evaporation and confirmed their potential risks to human health and marine ecosystems.⁸

³ Massachusetts Department of Environmental Protection, Tentative Determination to Deny Application to Modify a Massachusetts Permit to Discharge Pollutants to Surface Waters, MA Permit No. MA0003557 (July 24, 2023), <https://www.mass.gov/doc/tentative-determination-to-deny-holtecs-surface-water-discharge-permit-modification-request/download>.

⁴ Nuclear Decommissioning Citizens Advisory Panel (Mar. 25, 2024), https://youtu.be/n_BU5rjlgwY?si=pyod7zUIJHMGGRkX.

⁵ *Id.*

⁶ Issues Facing Communities with Decommissioning Nuclear Plants: Hearing before the Senate Subcommittee on Clean Air, Climate, and Nuclear Safety, 117th Cong. (May 6, 2022), <https://www.epw.senate.gov/public/index.cfm/2022/5/issues-facing-communities-with-decommissioning-nuclear-plants>.

⁷ *Id.*

⁸ Joe Hodgkin et al., *A warning about radioactive air pollution from Pilgrim – Evaporating wastewater raises health risks for neighbors*, Commonwealth Beacon (Feb. 24, 2024), <https://commonwealthbeacon.org/environment/a-warning-about-radioactive-air-pollution-from-pilgrim/>; Dr. Ken Buesseler, *Notes on a Radiation Control Report regarding Pilgrim Nuclear Power Station*, Woods Hole Oceanographic Institution (May 26, 2023), <https://cafethorium.whoi.edu/wp-content/uploads/sites/9/2023/06/Notes-on-Radiation-Control-Report-RE-PNPS-from-Ken-Buesseler.pdf>; Sarah Carlon, *Cape town leaders oppose radioactive water release in Cape Cod Bay, in letters filed at Hearing*, Cape Cod Times (Apr. 18, 2022), <https://www.capecodtimes.com/story/news/2022/04/18/cape-cod-leaders-oppose-radioactive-water-release/7330490001/>; Fred Thys, *Group seeks to stop Holtec from evaporating Pilgrim plant’s radioactive water into the air*, Plymouth Independent (Jan. 13, 2024), <https://www.plymouthindependent.org/group-seeks-to-stop-holtec-from-evaporating-pilgrim-plants-radioactive-water-into-the-air/>.

Given these public health concerns, the Massachusetts Medical Society has urged that proactive steps be taken to assess the safety of airborne releases. These include evaluating the health effects of radioactive releases; collecting biometric data; and putting in place radiation monitors before any releases.⁹ Holtec's response to repeated concerns about airborne releases has been to point to historical releases from Pilgrim as evidence the practice is safe. But the mere fact of a historical release does nothing to prove that such a release was safe or that future releases will be safe.

Holtec's lack of legal authorization to discharge the wastewater into Cape Cod Bay appears to be driving a shift to disposition the wastewater by evaporation with electric heaters. Whatever the reason for it, the facilitation of wastewater evaporation would constitute a breach of Holtec's commitment not to discharge the wastewater without stakeholder consent. We urge Holtec to halt any plans for dispositioning the radioactive wastewater through a water-based discharge into the Bay or by technologically facilitated evaporation, unless and until a disposition plan is developed in tandem with community stakeholders.

To help us and the public better understand the implications of Holtec's use of evaporation to disposition Pilgrim's wastewater, please respond to the following questions in writing by May 31, 2024:

1. Will Holtec commit to engaging with community stakeholders prior to any action on dispositioning wastewater, forgoing any current plans for discharge into Cape Cod Bay or intentional evaporation?
2. Beyond the stated benefits for heating the plant and drying components, is Holtec also heating and evaporating the water for the purpose of reducing the remaining water volumes?
3. What have the ambient indoor temperatures been inside the plant with and without the submersion heaters, including when the heaters were operational from February to June 2023 and November 2023 to March 2024?
4. What are the estimated rates at which the water is evaporating when the submersion heaters are operational and not operational?
 - a. How is Holtec measuring the evaporation rates, and what is the scientific basis of the measurement techniques?
 - b. Who conducts and receives those measurements?


⁹ News Release, *Massachusetts Medical Society physicians announce policies on migrant health, gun violence, nuclear power plants*, Massachusetts Medical Society (Dec. 13, 2023), <https://www.massmed.org/News/Press-Releases/Massachusetts-Medical-Society-physicians-announce-policies-on-migrant-health,-gun-violence,-nuclear-power-plants/>.

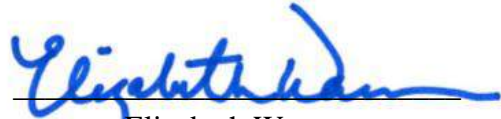
- c. Beyond the reduction in wastewater associated with the submersion heaters or natural evaporation, has Holtec disposed of any portion of the original 1.1 million gallons of wastewater to reduce the water to the remaining 880,000 gallons?
 - d. Does Holtec intend to turn on the submersion heaters again in the future? If so, when?
5. When the heaters are operational and causing increased rates of evaporation, are radionuclides and non-radiological pollutants filtered from the evaporated water before being released from the plant? If so, how and to what extent?
6. In the event of a water-based discharge into Cape Cod Bay, would radionuclides and non-radiological pollutants be filtered out of the wastewater before a airborne release? If so, how and to what extent?
7. How do the methods of pre-release filtration for evaporation and discharge compare?
8. Following filtration, does Holtec measure and monitor the presence of radionuclides and non-radiological pollutants before the evaporated water is released?
 - a. Who conducts those measurements and monitoring?
 - b. What are the results?
9. Before operationalizing the submersion electric heaters, did Holtec conduct a study or analysis to determine:
 - a. Potential environmental and public health risks for the community and Cape Cod Bay from increasing the rate of evaporation and associated discharge considering the specific radionuclides and non-radiological pollutants presents in the current water?
 - b. Where the evaporated water would migrate following the release?
 - c. The costs of heating the plant with the submersion heaters relative to the costs of alternative heating strategies and the estimated costs associated with the risks to the environment or public health due to evaporative discharges of the wastewater?If so, please share the results of that study or analysis. If no such study or analysis was completed, why not?
10. Please provide any recorded guidelines or methods that Holtec follows as it heats and evaporates the water.
11. What specific measures is Holtec taking to ensure the safety of plant workers exposed to the evaporated water, including through the use of safety equipment and monitoring?
12. What specific measures, if any, is Holtec taking to protect the surrounding neighborhoods and wider community from increased exposure to evaporated wastewater associated with the submersion heaters?

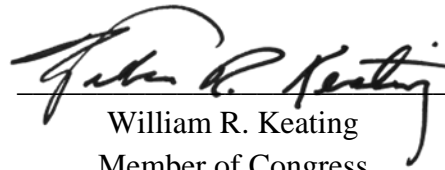
13. Are you actively taking or considering any steps (beyond the activation of electronic submersion heaters) that would hasten the evaporation rate? If so, please identify them.

Through the decommissioning process, Holtec routinely celebrates its transparency and community engagement efforts. With those values in mind, we urge Holtec to meaningfully engage with and center local stakeholders and experts to develop a community-driven approach for dispositioning Pilgrim's wastewater in a manner that respects input from residents, state and local officials, marine scientists, and public health experts, upholds prior commitments, and complies with the law.

Sincerely,


Edward J. Markey
United States Senator


Elizabeth Warren
United States Senator


William R. Keating
Member of Congress