



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

July 28, 2022

Save Our Bay MA
via Cape Downwinders
Diane Turco, Director
P.O. Box 303
South Harwich, MA 02661

SUBJECT: RESPONSE LETTER TO SAVE OUR BAY MA COALITION REGARDING
POTENTIAL DISCHARGE OF LIQUID EFFLUENT FROM PILGRIM NUCLEAR
POWER STATION

Dear Diane Turco:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your May 26, 2022, letter to Chairman Hanson (Agencywide Documents Access and Management System (ADAMS) Accession No. [ML22147A081](#)). In that letter, you shared your concerns regarding potential discharge of liquid effluent from Pilgrim Nuclear Power Station (Pilgrim) by Holtec Decommissioning International (Holtec) into Cape Cod Bay. In addition, you requested that the NRC invoke regulatory text from Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1301(f)¹, "[Dose limits for individual members of the public](#)," by restricting the amount of radionuclide in the effluent to zero.

The release of effluent discharges at nuclear power plants is regulated by the U.S. Environmental Protection Agency (EPA) and the NRC. The NRC's regulations and licensing reviews for nuclear power plants, like Pilgrim, consider the controlled release of effluent discharges as part of the agency's safety and environmental assessments, to protect public health and safety and the environment. The same NRC limits that apply to effluent discharges at operating plants also apply during the decommissioning of those plants. Therefore, any liquid discharges from Pilgrim during operation and continuing through decommissioning are required to remain within the prescribed limits, be processed through filters, and sampled prior to being released. The NRC inspects the actions and the records of its licensees to ensure that compliance with environmental radiation standards is maintained. Further, licensees are required to have an environmental monitoring program that includes environmental sampling and to submit an annual report to the NRC. The annual reports are publicly available at the webpage: <https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-info.html>.

The NRC analyzed the environmental impacts of Pilgrim's continued operation during the environmental review of Pilgrim's application for a renewed operating license. As part of that environmental review, the NRC consulted with the National Marine Fisheries Service (NMFS)

¹ Although the letter states 10 CFR 20.1310(f) as the relevant regulation, the specific regulatory text quoted was from 10 CFR 20.1301(f).

per the Endangered Species Act Section 7(a)(2). As a result of that consultation, the NMFS determined that continued operation of Pilgrim under the terms of a renewed operating license is not likely to adversely affect any listed species under NMFS jurisdiction ([ML12145A072](#)). The NMFS also determined that continued operation would have no effect on the critical habitat of listed species.

More recently, Holtec assessed the potential impacts of its planned decommissioning activities on ecological resources in its post-shutdown decommissioning activities report (PSDAR) submitted to the NRC on November 16, 2018 ([ML18320A040](#)). The PSDAR determined that the impacts of planned decommissioning activities on aquatic ecology would be small and bounded by both the NRC's environmental impact statement that generically analyzes the environmental impact of decommissioning activities (the "Decommissioning Generic Environmental Impact Statement" ([ML023470304](#) and [ML023470323](#)), as well as by the supplemental environmental impact statement specifically analyzing the environmental impacts of Pilgrim's renewal application (NUREG-1437, Volume 1, Revision 1, "[Generic Environmental Impact Statement for License Renewal of Nuclear Plants](#).")) Holtec concluded in the PSDAR that decommissioning activities will not result in significant environmental impacts not previously reviewed. The NRC found that Holtec's PSDAR contained the information required by NRC regulation.

If, in the future, Holtec plans to perform decommissioning activities that were not previously addressed or bounded by prior environmental reviews, Holtec would have to comply with the NRC's regulations in this area. The Commission's regulations at 10 CFR 50.82(a)(6), "[Termination of License](#)," state that licensees in decommissioning, such as Holtec, shall not perform any decommissioning activities that, among other things, result in significant environmental impacts not previously reviewed in an environmental impact statement. If a licensee in decommissioning, such as Holtec, were to consider a proposed decommissioning activity that may result in significant environmental impacts not previously reviewed, then prior to undertaking that activity, the licensee could submit a request for a license amendment or an exemption request, decide not to perform the proposed activity, or modify the proposed activity so that the unreviewed significant environmental impact does not occur. If the licensee chose to submit a license amendment or exemption request, then the request would trigger NRC responsibilities under environmental statutes, including potential consultation requirements. In addition, prior to performing a decommissioning activity that is inconsistent with the PSDAR, a licensee must publicly notify the NRC in writing, with a copy to the affected States, in accordance with 10 CFR 50.82(a)(7).

In addition to the environmental reviews, the NRC's safety mission also establishes standards regarding acceptable doses to members of the public regarding effluent discharges of certain radioactive material. Specifically, the NRC's regulations provide for three layers of radiation dose protection for the public. The first layer, the "As Low As is Reasonably Achievable (ALARA)" design objectives, are documented in Appendix I to Part 50—*Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents*. The ALARA objectives provide licensees with a conservative annual dose standard. Under these objectives, nuclear power plants monitor the effluent doses so that, prior to exceeding this ALARA standard, the licensees are able to investigate the cause and course correct in time to ensure the plant remains below this annual target. Second, NRC's regulations in 10 CFR Part 20, "[Standards for Protection Against Radiation](#)," specifically, 20.1301(e), incorporates the requirements of EPA regulations in 40 CFR 190, "[Environmental Radiation Protection Standards for Nuclear Power Operations](#)," which provide for a radiation dose

standard of 25 mrem a year. Third, under 10 CFR 20.1301(a)(1), there is a dose limit of 100 mrem per year to individual members of the public. Effluent discharges from NRC-licensed facilities must be compliant with these requirements, and in conformance with the ALARA objectives. The NRC also performs routine inspections to ensure compliance with NRC regulations, the license, and approved manuals and procedures. This multi-layered system of radiation protection, which provides for a combination of regulatory dose limits coupled with the principle of keeping radiation exposures "as low as reasonably achievable" has proven effective. Should this multi-layered system of radiation protection not be enough in a given situation, the NRC has authority to impose additional restrictions, if necessary. (See 10 CFR 20.1301(f)). The NRC will continue to monitor and inspect the decommissioning activities at Pilgrim to ensure compliance with NRC's regulations.

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 Web site at <https://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

I appreciate your interest in the decommissioning of Pilgrim. If you have any additional questions or would like to schedule a meeting with my staff to discuss further, please contact Karl Sturzebecher, Project Manager, Reactor Decommissioning Branch, Division of Decommissioning, Uranium Recovery, and Waste Programs, Office of Nuclear Material Safety and Safeguards, at (301) 415-8534, or via email to Karl.Sturzebecher@nrc.gov.

Sincerely,



Signed by Roberts, Ashley
on 07/28/22

Ashley B. Roberts, Deputy Director
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

LTR-22-0153-1 - Response Letter to D. Turco, Cape Downwinders, from A. Roberts, NRC, regarding Holtec-Pilgrim Plans to Dump One Million Gallons of Radioactive Waste into Cape Cod Bay DATE July 28, 2022

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