

April 20, 2011

Ms. Phyllis Merriam
72 Mechanic Street
Rockland, ME 04841-3514

SUBJECT: CLOSED NUCLEAR PLANT IN WISCASSET, MAINE, AND EVENTS IN JAPAN

Dear Ms. Merriam:

The U.S. Nuclear Regulatory Commission (NRC) received your letter dated March 21, 2011, in which you posed several questions directly related to the Maine Yankee Nuclear Power Plant and recent events in Japan. Specifically, you inquired about security measures and pre-staged responses designed to protect Maine residents. You also inquired about containment issues due to the age of the Maine Yankee plant and the meltdowns at the Japanese nuclear plants.

The Maine Yankee nuclear plant ceased to generate power in 1996 and was subsequently decommissioned. After the plant was decommissioned, the only license in effect for the Wiscasset, Maine site is one to store irradiated nuclear fuel and other reactor-related nuclear waste in dry cask storage in an independent spent fuel storage facility. Responses to your questions are enclosed in this letter. I am additionally enclosing a brochure provided by Maine Yankee that provides further detailed information on the operation, decommissioning, and interim storage of the spent nuclear fuel.

The NRC is firmly committed to ensuring the safe storage of nuclear material at facilities like that in Wiscasset. Therefore, as a result of the events in Japan, the NRC has initiated a review of its processes and regulations in order to determine whether changes are necessary to our regulatory structure. The NRC values your feedback regarding spent nuclear fuel storage issues. Therefore, if you have any further questions, do not hesitate to contact Mr. William Allen, of my staff at William.Allen@nrc.gov.

Sincerely,

/RA/

Doug Weaver, Deputy Director
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Docket Nos.: 50-309, 72-30

Enclosures: As stated

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LETTER TO MS. PHYLLIS MERRIAM

QUESTIONS AND ANSWERS REGARDING

CLOSED NUCLEAR PLANT IN WISCASSET, MAINE, AND EVENTS IN JAPAN

- Are there security measures in place to protect Maine residents from natural or man-made disasters?

The Maine Yankee facility is required to have security measures in place to prevent sabotage or theft of the spent fuel from the storage area. The dry cask storage system employed at Maine Yankee is designed to prevent the release of the radioactive material in the fuel during natural disasters.

- Are there any pre-staged responses in place to protect Maine residents?

The Maine Yankee facility is required to have emergency response plans in place. However, offsite actions are not required as part of the emergency response plan due to the long cooling time of the spent fuel. This is because the accidents that have the potential for the greatest offsite impact are those that involve spent fuel that has recently been moved from the reactor to the spent fuel pool. Since the Maine Yankee fuel has been sufficiently cooled to be removed from the spent fuel pool, the accidents which have the greatest potential for offsite impact are not physically possible; therefore offsite emergency response plans are not required.

- What are the containment issues at such an old plant such as Maine Yankee in view of the meltdowns at Japanese nuclear plants?

The containment issues at Maine Yankee are significantly different from those associated with the Japanese plants. First, the heat generated by the fuel at Maine Yankee is significantly lower than that at the Japanese plants because, as you mentioned in your letter, Maine Yankee has not generated electricity since 1996. Second, as of April 29, 2003, all fuel had been removed from both the reactor and the spent fuel pool and placed into a dry storage system. The dry storage system at Maine Yankee uses steel containers which are stored above ground in a vertical orientation inside concrete. The containers used to store the Maine Yankee fuel were fabricated to high standards of quality. The containers were welded shut after the fuel was placed inside, and the canisters were filled with an inert gas to ensure the fuel rods, which provide an additional layer of containment, retain both their shape and strength during storage. The dry storage system at Maine Yankee was evaluated as a whole to ensure it could withstand a variety of disasters, such as earthquakes, floods, projectiles originating from a tornado, temperature extremes, and lightning strikes.