

MAINE STATE LEGISLATURE

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April 5, 2017

MEMORANDUM

TO: Senator Michael Thibodeau, President of the Senate, and Representative Sara Gideon, Speaker of the House

FROM: Mary C. Mayhew, Commissioner
Department of Health and Human Services 

SUBJECT: State Nuclear Safety Inspector's February 2017 Monthly Report to the Legislature on the Interim Spent Fuel Storage Facility in Wiscasset, Maine

Legislation enacted in the spring of 2008 requires the State Nuclear Safety Inspector to provide monthly reports to the President of the Senate, Speaker of the House, the U.S. Nuclear Regulatory Commission, and Maine Yankee. The report emphasizes local and national highlights on the storing and disposing the used nuclear fuel.

The enclosed report provides the information required under Title 22 of the Maine Revised Statutes Annotated §666, as enacted under Public Law, Chapter 539, in the second regular session of the 123rd Legislature.

Should you have questions about its content, please feel free to contact Mr. Patrick J. Dostie, State Nuclear Safety Inspector, at 287-6721.

MCM/klv

Enclosure

cc: Mark Lombard, U.S. Nuclear Regulatory Commission
Monica Ford, U.S. Nuclear Regulatory Commission, Region I
J Stanley Brown, Independent Spent Fuel Storage Installation Manager, Maine Yankee
David Sorenson, Senior Health Policy Advisor
Sheryl Peavey, Chief Operating Officer, Maine Center for Disease Control and Prevention
Paul Mercer, Commissioner, Department of Environmental Protection
Timothy Schneider, Maine Public Advocate
Lieutenant Scott Ireland, Special Services Unit, Maine State Police
Nancy Beardsley, Director, Division of Environmental Health
Jay Hyland, PE, Manager, Radiation Control Program

State Nuclear Safety Inspector Office
Maine CDC – DHHS

February 2017 Monthly Report to the Legislature

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, including the State's ongoing environmental radiation surveillance and provides updates on the national effort to license and construct a consolidated interim storage facility and/or a permanent geologic repository for the disposal of spent nuclear fuel. Maine's goal is to move the ISFSI waste stored at Maine Yankee to one of these facilities. The report highlights the significant activities that took place locally and nationally during the month and at times internationally.

Local:

- Maine Yankee submitted to the Nuclear Regulatory Commission an updated version of its Post Shutdown Decommissioning Activities Report and its License Termination Plan to reflect its new Decommissioning Cost Estimate and schedule from 2016 through 2036. The new ISFSI decommissioning cost estimate now stands at \$28.1 million, based on 2016 dollars, with \$22.1 million for radiological removal and \$6 million for non-radioactive removal.

National:

- A U.S. District Court Judge ruled that the U.S. Department of Energy (DOE) did not “act arbitrarily or capriciously or made an error in judgment” when it decided that the shipping of highly-enriched uranium targets from Chalk River, Ontario, Canada to its Savannah River reprocessing facility in Aiken, South Carolina met DOE's past environmental impact statements. The 1,100 mile shipping campaign was part of a “U.S. effort to repatriate its nuclear material.” The shipments were expected to last four years and involve up to 150 truckloads with each truck carrying a single cask containing up to four stainless-steel containers with each container holding 15 gallons of the highly-enriched uranium liquid. The highly-enriched uranium targets were employed in the production of a key radioactive substance (Technetium-99m) used in the medical diagnosis and treatment of cancer.
- The Nuclear Waste Technical Review Board issued an informational paper on “Chloride-Induced Stress Corrosion Cracking (CISCC) Potential in Dry-Storage Canisters for Spent Nuclear Fuel.” The paper indicated that steel spent nuclear fuel canisters with welded lids in open-air environments are susceptible to atmospheric CISCC. Ninety percent of all the spent fuel in dry storage in the U.S. is housed in steel canisters with welded lids. The paper noted that three conditions that must exist for CISCC to develop on the outside surface of the canister – stainless steel that is susceptible, residual stresses near welds, and the presence of chloride salts with favorable environmental conditions such as temperatures less than 176 degrees F and relative humidity above 30%. The paper further described the implications of CISCC, research and development efforts, and methods for preventing and mitigating CISCC.