

MAINE STATE LEGISLATURE

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Paul R. LePage, Governor

Ricker Hamilton, Commissioner

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March 7, 2018

MEMORANDUM

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

FROM: Ricker Hamilton, Commissioner
Department of Health and Human Services

A handwritten signature in black ink, appearing to read "Ricker Hamilton", is positioned to the right of the "FROM:" line.

SUBJECT: State Nuclear Safety Inspector's November and December 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 of 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.

RH/klv

Enclosure

cc: Michael Layton, 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
Nick Adolphsen, Acting Senior Health Policy Advisor
Dr. Bruce Bates, Director, Maine Center for Disease Control and Prevention
Paul Mercer, Commissioner, Department of Environmental Protection
Barry Hobbins, 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

December 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 and international 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 either locally, nationally or, at times, internationally during the month.

National:

- The Nuclear Regulatory Commission (NRC) published in the Federal Register its intent to hold a two-day meeting of the Licensing Support Network Advisory Review Panel in late January. The purpose of the meeting will be to discuss the possible options for reconstituting or replacing the Licensing Support Network (LSN), which holds nearly 3.7 million documents on Yucca Mountain, in preparation for resuming the Yucca Mountain Licensing proceedings. The LSN was decommissioned when the Yucca Mountain licensing proceedings were suspended in 2011. Four options were being explored such as traditional discovery, the NRC's Public Agency-wide Documents Access and Management System LSN Library, move all the documents to the Cloud, and rebuilding the original LSN. Implementation advantages, disadvantages, costs, risks and challenges will be discussed.
- Even though most of the spent fuel generated in the U.S. is east of the Mississippi River, the western states fully expect that a spent nuclear fuel disposal facility will be in the West. Consequently, there is an expectation that there will be disproportionate impacts from transporting spent fuel through western and corridor states. The High-Level Radioactive Waste Committee of the Western Interstate Energy Board has developed and agreed to five major policy positions on spent nuclear fuel transport. First, the DOE should develop a rail transportation safety program equivalent to the radioactive waste truck shipment program to the Waste Isolation Project in New Mexico. Second, that all DOE spent fuel shipments have NRC's physical security requirements. Next, the DOE should adopt a policy of shipping the oldest fuel first. Then, the U.S. Department of Transportation Federal Railroad Administration Rail Safety Program and revised Safety Compliance Oversight Plan should be fully implemented to ensure the safe transport of spent nuclear fuel. Finally, trains transporting spent nuclear fuel should be inspected by fully qualified inspectors employing the Commercial Vehicle Safety Alliance Level VI inspection protocol.
- The NRC forwarded its monthly status report to the Chair of the House Committee on Energy and Commerce on the staff's activities regarding the resumption of the Yucca Mountain licensing application. Of the \$16,743 total in expenditures for the month, \$15,761 was spent on an on-line webinar training session on the functionality and operations of the ADAMS LSN Library. The attendees were mostly from 20 government entities that are Advisory Review Panel members, participants in past Panel meetings, or parties to the adjudication of the Yucca Mountain licensing proceedings. The NRC reported that of the initial \$13,549,315 in unexpended Nuclear Waste Funds for the Yucca Mountain license process, \$574,339 remained.
- The U.S. Nuclear Waste Technical Review Board sent its "Management and Disposal of U.S. Department of Energy Spent Nuclear Fuel" to Congress and the Secretary of Energy. The Board's report represents a three-year effort to evaluate those management practices to ensure the integrity of the spent fuel when and where disposal becomes available. The report highlighted three areas that DOE should focus on future research such as a better understanding of aging management, packaging, and storage issues. Based on these issues the Board recommended that DOE:

- “Develop and fully implement programs to manage degradation of spent nuclear fuel, the materials that contain spent nuclear fuel, and spent nuclear fuel facilities for additional multiple decades of storage operations at all storage facilities.
- Include the capability for measuring and monitoring the conditions of the spent nuclear fuel in new DOE storage systems.
- Conduct research and development activities to confirm that reactions between DOE spent nuclear fuel and any water remaining in any multi-purpose canister do not cause cumulative conditions inside the canister to exceed either the design specifications or applicable regulatory operational requirements.
- Complete research, development, and licensing-related activities for the DOE standardized canister and any other canisters that may be used prior to completing Idaho’s spent nuclear fuel packaging facility’s preliminary design.
- Implement the existing Office of Civilian Radioactive Waste Management waste acceptance system requirements to increase the likelihood that spent nuclear fuel managed by DOE and that waste forms resulting from electro-chemical processing of sodium-bonded spent nuclear fuel will be acceptable for geologic disposal in a repository.
- Identify and prioritize its research efforts concerning spent nuclear fuel degradation related to disposing of spent nuclear fuel in each of the potential host-rock environments.”

International:

- Canada’s Nuclear Waste Management Organization (NWMO) notified the two communities of Blind River and Elliot Lake, Ontario and the First Nation natives that they were no longer considered suitable host communities for a deep geologic repository for used nuclear fuel. The technical studies found geological complexities, limited access and rugged terrain, and a low potential to develop the breadth of partnerships needed to implement the project. In recognition for their leadership the NWMO awarded the communities \$600,000 to support investments in community sustainability and well-being. That leaves the five communities of Ignace, Manitouwadge, Hornepayne, South Bruce, and Huron-Kinloss of the original 22 communities that expressed interest in hosting a geologic repository for spent nuclear fuel.
- Scientists at Queen’s University in Kingston, Ontario have developed state-of-the-art computer models from borehole samples for modeling how rock strengths and weaknesses behave over different distances and time periods. The rock’s behavior is important to understand to ensure that the natural barriers behave as assumed to maximize repository safety.