



Paul R. LePage, Governor

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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

SUBJECT: State Nuclear Safety Inspector's September 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: 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
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

September 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 on-going 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, nationally and, at times, internationally during the month.

National:

- The House Subcommittee on the Interior, Energy, and Environment held a hearing on “Examining’s America’s Nuclear Waste Management and Storage.” The purpose of the hearing was to examine the management of the nation’s nuclear waste and to highlight the challenges communities face when dealing with nuclear waste. In their testimony, the National Association of Regulatory Utility Commissioners (NARUC) accentuated the federal government’s failure to act and aptly noted that municipalities have the federal’s government waste and the federal government has their money. The Energy Communities Alliance (ECA) highlighted the challenges their localities face with the hundred to millions of gallons of underground storage tanks of liquid high-level radioactive waste at Hanford, Washington, Idaho National Laboratory, and the Savannah River Site in North Carolina. The ECA recommended that Congress redefine nuclear waste based on its radioactive properties as opposed to where it comes from. The reclassification would allow 2,300 waste canisters from the Savannah River Site to be disposed of immediately instead of waiting decades for a repository to open. The Chair of the San Onofre Community Panel emphasized the importance of moving the spent fuel out of local communities at decommissioned sites. All three supported the resumption of the Yucca Mountain licensing process and for interim consolidated storage. The Union of Concern Scientists promoted storage at reactor sites in dry casks and for Congress to support scientific research to establish a technical basis for safe and secure geologic repository. The Heritage Foundation advocated for the responsibility of nuclear waste management be shifted from the government to nuclear power operators and cited Finland as an example of a successful disposal program. Senator Heller from Nevada highlighted his state’s efforts to strongly oppose any attempts to restart the Yucca Mountain licensing proceedings.
- The North America’s Building Trades Unions (NABTU) sent a letter to all the members of the House of Representatives urging their support for the Illinois Representative Shimkus’ bill, H.R. 3053, the “Nuclear Waste Policy Amendments Act of 2017.” The President of the Trades Unions stated that the bipartisan legislation would address many of the failures of the nation’s nuclear waste policy and put its affiliated unions and members back to work. He noted that:
 1. “Each nuclear facility employs 400-700 workers per 1,000 megawatts of power.
 2. The new reactors being built in Georgia employ over 4,000 NABTU members every day.
 3. There are 79,000 million tons of used nuclear waste stored at 121 small sites in 39 states across the country.
 4. The National Academy of Sciences found that the government and taxpayers would have to pay \$170 billion to subsidize the 186,000 wind turbines necessary to equal the output of 100 nuclear reactors.”
- The Nuclear Regulatory Commission (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. The activities included further work on knowledge management reports on technical topics that include climate and hydrology in pre- and post-closure assessments. It also included some preliminary work in anticipation of the training necessary to the Licensing Support Network Advisory Review Panel members. Of the \$114,137 spent, the knowledge reports accounted for nearly 97% of the expenditures (\$110,641).

- The Department of Energy (DOE) revised its fifth “Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites.” The report included revised spent nuclear fuel data and discharge estimates from DOE’s database, updating Google Earth imagery, revisions to transportation Certificates of Compliance and added the Fort Calhoun shutdown reactor site in Nebraska to the 13-other shutdown nuclear sites across the country. Time sequences of activities and durations for removing used nuclear fuel were developed for Maine Yankee and eight other sites (Yankee Rowe in Massachusetts, Connecticut Yankee, Humboldt Bay in California, Big Rock Point in Michigan, Rancho Seco in California, Trojan in Oregon, La Crosse in Wisconsin, and Zion in Illinois). The remaining five sites (Crystal River in New Jersey, Kewaunee in Wisconsin, San Onofre in California, Vermont Yankee, and Fort Calhoun) were not included as they were at the beginning stages of their decommissioning. The report described each facility’s spent fuel inventory, site conditions, near-site transportation infrastructure and experience, and gaps in information. The Maine Yankee information included the types of spent fuel assemblies stored, their discharge history based on calendar years, the number of assemblies by their burn-up or power output, the types of transportation infrastructure available at the site such as heavy-haul trucks, railcars, and by barges. The principal unknown for the Maine Yankee site is whether the Central Maine and Quebec Railway could accept and move the spent nuclear fuel railcars. The Federal Railroad Administration’s safety engineers and Central Maine and Quebec Railway’s maintenance crew would have to assess the rail conditions. If not, then barging would most likely be the other option. However, a marine assessment would be necessary to ensure the condition of the channel, the restoration of navigation aids, and any dredging that may be required.
- The Energy Communities Alliance (ECA) published a report, entitled “Waste Disposition: A New Approach to DOE’s Waste Management Must Be Pursued.” The report provided a roadmap for Congress and the DOE on how to move forward on defense-related wastes. The report listed five recommendations on near term actions that could help the DOE’s Environmental Program reduce the number, size and duration of storage facilities needed before a High-Level Radioactive Waste (HLW) repository is available; hasten tank retrievals and closures; and realize \$40 billion in savings from the current life-cycle cost of \$257 billion. Two recommendations specifically addressed the HLW component by Congress clarifying the definition of some reprocessed spent nuclear fuel wastes to be treated more appropriately as transuranic wastes that could be disposed of at the DOE’s Waste Isolation Pilot Project (WIPP) facility in New Mexico. The ECA is the only non-profit, membership organization of local governments adjacent to or impacted by DOE activities.

International:

- Japan and Russia recently signed a memorandum on the exchange of information on the changing of certain radioactive elements (actinides) heavier than Uranium found in radioactive waste into shorter-lived radioactive elements. The transmutation or changing of the chemical forms of such long-lived radioactive elements as Americium, Curium, and Neptunium would be accomplished either through burning these elements in the reactor core of fast reactors or by bombarding them with sub atomic particles such as neutrons in accelerators. The change would enable a significant reduction in the volume and radioactive toxicity of the nuclear waste, effectively reducing the design of a geologic repository from a million years down to a few hundred years.