

MAINE STATE LEGISLATURE

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Paul R. LePage, Governor Ricker Hamilton, Acting Commissioner

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June 14, 2017

MEMORANDUM

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

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

SUBJECT: State Nuclear Safety Inspector's April 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
David Sorenson, Senior Health Policy Advisor
Sheryl Peavey, Chief Operating Officer, Maine Center for Disease Control & 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

April 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 notified the Nuclear Regulatory Commission (NRC) of a change in its Board's membership. An Eversource Energy member resigned and another was appointed. (Eversource Energy is a New England company formed by the 2015 merger of Northeast Utilities and its operating companies and NSTAR. Eversource has a 24% ownership in Maine Yankee.)
- Maine Yankee submitted three annual reports to the NRC, its 2016 individual monitoring report, its radioactive effluent release report, and its radiological environmental operating report. The individual monitoring report noted that no individual received a dose equal to or greater than 100 mrem¹. Since the storage casks are virtually leak tight, there were no gaseous or liquid releases to report for the year. The environmental report summarized the results of the direct radiation measurements for nine locations on-site and two control stations off-site. One location has been consistently high since March, 2005. The higher values over time have been assumed to be due to the station's line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 1.28 mrem at its highest location, which was much lower than the Environmental Protection Agency's annual public limit of 25 mrem.
- The Department of Energy (DOE) published an initial report and then held a webinar on its analysis of how it would ship all the spent nuclear fuel from the Maine Yankee site. The Department initially evaluated six heavy haul truck scenarios, five direct rail situations, and five barging options. Since there were no storage or disposal locations, DOE used a fictitious location at the geographical center of the continental U.S. (GCUS). In its latest screening, DOE assessed six potential shipping routes: a heavy haul truck from Maine Yankee to Portland and then by rail to the GCUS, rail from Maine Yankee by Barber's Junction in Massachusetts to GCUS, a barge from Maine Yankee to Portland and then by rail to the GCUS, rail from Maine Yankee to near Boston to the GCUS, rail from the Maine Yankee site to New York City to the GCUS, and finally, a barge from Maine Yankee to Norfolk, Virginia and then by rail to the GCUS. Sixteen weighting factors such as costs, risks, population and worker doses, infrastructure, and security were employed to evaluate each route. Of the six scenarios, the most likely shipping route would be by direct rail from Maine Yankee through Barber's Junction in Massachusetts to GCUS. DOE calculated a likely turnaround of six weeks from loading the spent fuel canisters into shipping casks to the GCUS and return of the empty shipping casks to the Maine Yankee site. DOE assumed that it would take 13 shipping campaigns and take approximately 20 months to remove all the spent nuclear fuel and Greater Than Class C wastes from the site at an estimated cost of about \$24 million.

¹ A mrem or millirem is a conventional unit that is based on how much of the radiation energy is absorbed by the human body multiplied by a quality factor that is a measure of the relative hazard for the different types of particles or rays.

National:

- Both the Nuclear Energy Institute (NEI) and seven nuclear utilities and the State of Nevada filed motions to intervene with the fifth Circuit Court of Appeals on Texas' lawsuit to force the federal government to rule on the licensing of the Yucca Mountain Project. NEI's and the nuclear utilities' petition was limited to Texas' request for seeking restitution from and the release of the Nuclear Waste Fund (NWF), which they say would deplete the NWF, undermine the utilities' contractual position with the federal government, and potentially increase future fees. Nevada's motion was to defend its sovereign interests and to protect the health, safety, and welfare of its citizens.
- Waste Control Specialists (WCS) of Texas, one of two private firms seeking a license to operate a consolidated interim storage facility for commercial spent nuclear fuel, sent a letter to the NRC requesting a temporary suspension of all safety and environmental reviews commencing immediately and until such time WCS is sold to Energy Solutions later this summer. Initially, to minimize cash outlays, WCS employed in-house staff and received cost sharing contributions from two cask manufacturers. WCS noted that it now has "financial burdens that currently make pursuit of licensing unworkable" as the cost profile for pursuing a storage license has increased dramatically with the NRC's recent \$7.5 million higher estimate for reviews, higher public participation and NRC hearing costs, the loss of one of its cost sharing partners, and operating losses at its facilities. Consequently, WCS has to focus its limited resources on its licensed facilities, defend against the Department of Justice's antitrust suit against the merger of Energy Solutions and Waste Control Specialists, and complete its sale to Energy Solutions. After the sale, WCS is expected to petition the NRC to resume the licensing process.
- The House Subcommittee on Environment held a hearing on the newly draft legislation, "the Nuclear Waste Policy Amendments Act of 2017." There were two panels of invited witnesses. The first panel included all three Representatives from Nevada, one Senator from Nevada, and a Representative from South Carolina. The second panel's testimonies were from the former Director of the DOE's Office of Civilian Radioactive Waste Management, the Chairman of the Nuclear Issues Subcommittee of the National Association of Regulatory Utility Commissioners, the Senior Scientist of the Global Security Program at the Union of Concerned Scientists, the Chair of the Backend Working Group of the U.S. Nuclear Infrastructure Council, and the General President of the United Association Union of Plumbers, Pipefitters, Welders and Service Techs of the United States and Canada. The discussion issues centered on the provisions in the proposed legislation, the licensing requirements pertinent to a permanent disposal facility, authorization of monitored retrievable storage (MRS) and DOE's contractual methods to carry out such a program, potential partnerships for states and communities that host a MRS or a repository, and efforts to speed-up the clean-up at DOE sites. The most contentious provisions of the proposed Act would deprive states of their regulatory rights over land, air, and water. In the first panel, the entire Nevada delegation were vehemently opposed to the provisions of the Act that would pave the way for a repository to be constructed at Yucca Mountain and strip Nevada of its rights to regulate its land, air, and water, whereas the South Carolina Representative was in agreement with the Act's provisions. In the second panel, except for the Union of Concerned Scientists' representative, all the panelists endorsed the Act as written and provided some helpful guidance on how best to effect some of the Act's provisions. In addition, the House Subcommittee Chair also received written letters from interested parties on the draft legislation. The Governor of Nevada and the American Gaming Association were strongly opposed to the discussion draft as was the Natural Resources Defense Council and the 80 environmental organizations that co-signed the letter. The Nevada Section of the American Nuclear Society and Nye County's Board of Commissioners, where Yucca Mountain is located, eagerly expressed their support for the Subcommittee's actions and movement on the Yucca Mountain Project.
- Dallas County Commissioners added their voice to a growing number of counties in Texas by passing a resolution opposing any spent nuclear fuel shipments through their regions. Since the shipping routes are approved by the federal government, the resolutions are not binding. The oppositions have steadily increased since Waste Control Specialists submitted their license application for a spent fuel storage license in Andrews County, Texas, near the New Mexico border.

- Both the Minnesota House and Senate issued resolutions urging Congress to revive the Yucca Mountain licensing proceedings. Likewise, the State of Georgia also passed similar resolutions encouraging their congressional delegation to immediately enact legislation to reestablish a national Nuclear Waste Program according to the Nuclear Waste Policy Act.
- The Massachusetts Land Court recently ruled that the zoning permit that the town of Pilgrim issued for the spent fuel dry cask storage facility at the Pilgrim Nuclear Power Station was valid. The lawsuit from four local residents challenged the town's permit for the storage facility claiming that the storage facility violated zoning laws and required a special permit and a public hearing.
- Holtec International announced that they were launching a licensing campaign to include the spent nuclear fuel stored in all canister types currently in-use at all the nuclear plant sites in the country. This would include both vertically as well as horizontally stored canisters.
- The Quay County Commission in New Mexico adopted in October 2016 a resolution supporting a federal contract to perform an experimental test to drill a borehole three miles deep into the earth's crust. The DOE is looking to demonstrate the viability of potentially disposing some defense-related high-level radioactive sources. Since then residents have banded together to oppose the federal government's deep borehole project, which resulted in the Quay County Commission adopting a new resolution withdrawing their support "because of overwhelming public opposition." A similar resolution was proposed in Otero County, New Mexico to withdraw its earlier neutral position and officially oppose the proposed borehole project within their borders.
- The NRC Chairman forwarded the staff's monthly status report on their activities and carryover funds from the NWF on the Yucca Mountain licensing process. The report noted that \$12.2 million of the \$13.5 million balance in carryover funds has been expended since the D.C. Circuit Court of Appeals' ruling in 2013.
- AREVA Financial Services (AFS), holder of the DOE contract for the Yucca Mountain Project, announced to its workforce that it was anticipating that the DOE will officially announce the restart of the Yucca Mountain license proceedings in the next few weeks. Since AFS estimated 350 engineers would be required to support a restart, it was trying to determine how much of its workforce would be interested in seeking these engineering positions. AFS' action was in response to President Trump's budget allocation of \$120 million to revive the Yucca Mountain licensing process.