

MAINE STATE LEGISLATURE

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Department of Health and Human Services
Commissioner's Office
221 State Street
11 State House Station
Augusta, Maine 04333-0011
Tel.: (207) 287-3707; Fax (207) 287-3005
TTY Users: Dial 711 (Maine Relay)

April 30, 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

SUBJECT: State Nuclear Safety Inspector's January, February and March 2018 Monthly Reports 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

March 2018 Monthly Report to the Legislature

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, 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.

Local:

- Maine Yankee submitted to the Nuclear Regulatory Commission (NRC) its Funding Status Report for Managing Irradiated Fuel and Greater Than Class C (GTCC) Waste and its Decommissioning Funding Assurance Status Report. The Irradiated Funding Report indicated that \$125.1 million had been accumulated as of December 31, 2017, to manage the irradiated fuel and GTCC waste. The report projected that \$182.2 million would be needed to manage the fuel and GTCC through 2036. The Decommissioning Report estimated that \$22.1 million in current dollars would be necessary to decommissioning the storage facility in Wiscasset. As of the December 31, 2017, the Decommissioning Fund, a separate Fund than the Irradiated Fuel Fund, had accumulated about \$38.4 million for the ISFSI decommissioning. In both instances, Maine Yankee has the authority from its power contracts and agreements under the Federal Energy Regulatory Commission to collect additional funds should costs exceed their current projections.
- Maine Yankee notified the NRC of one Board of Directors' change and one Executive Committee change. The Board change involved National Grid USA, which is owned by a foreign sponsor that controls the stock of New England Power Company, one of the owners of Maine Yankee. A Certificate of Foreign Sponsor Representative was executed to ensure that New England Power Company, "nor any of its parent companies, will exert control, domination, or influence over operational, safety, or security matters at Maine Yankee." The other change involved the Executive Committee's new appointee, who serves on the Board of Directors and had earlier executed a Certificate of Foreign Sponsor Representative at the time of his initial appointment to the Board.

National:

- Holtec International announced that the NRC had accepted their license application for a proposed consolidated interim storage facility. The initial license application is for the storage of 500 spent fuel canisters. The subterranean design has a maximum capacity of 10,000 canisters. The design, approved by the NRC in 2015, can store all the spent nuclear fuel produced in the U.S., including all the diverse types of spent fuel canisters, whether stored horizontally or vertically, currently licensed, making it a truly universal spent fuel storage facility. In addition, Holtec also announced that their HI-STAR 100MB transport cask for transporting multi-purpose canisters from storage sites in the U.S. won the international competition over six other bidders for deployment in China.
- The Department of Energy (DOE) responded to the Northeast High-Level Radioactive Waste Transportation Task Force's (a subsidiary of the Council of State Governments' Eastern Regional Conference) letter. They noted how instrumental the states and tribes have been in successful DOE shipping campaigns. Although DOE was very appreciative of the Task Force's past efforts, confronted with limited resources, they felt it was necessary to limit their involvement in regional meetings, cancel the Transportation Core Group meetings, and focus instead on national events that are more broadly attended such as the National Transportation Stakeholders Forum.

- Representatives from Maine (Chellie Pingree), Connecticut, Vermont, Wisconsin, Texas, and four from California sent a letter to the Chair of the House Appropriations Committee requesting their assistance in the timely removal of spent nuclear fuel from shuttered nuclear plants in their states. They emphasized the growing federal liability and burden on taxpayers that could reach \$30.8 billion by 2021. Although pleased with the Blue Ribbon Commission's focus and the Trump Administration's top priority to address a path forward, it is imperative that the \$10 million in the President's budget move forward on a pilot consolidated interim storage facility with priority given to shutdown reactors to break the stalemate that exists and allow redevelopment of those sites in their communities.
- Nevada Senator Dean Heller sent a letter to Chairman of the Senate Committee on Energy and Natural Resources re-emphasizing his staunch opposition to the Trump Administration's plan to restart the Yucca Mountain licensing proceedings. He commended the Chair for seeking a bipartisan solution for the nation's nuclear waste problem and informed the Chair of his willingness to support consent-based siting. He expressed how the current law forces a federally imposed mandate to cite a repository at Yucca Mountain in total opposition to the will of Nevada's citizens. He further iterated his concerns on the suitability of the site and whether Nevada will receive fair and full consideration of their safety and security contentions on the Yucca Mountain site. He urged the Chair to not support the Administration's funding request. Likewise, Nevada Congresswoman Jacky Rosen sent a letter to both House and Senate Appropriators urging them to not fund the Yucca Mountain Project in the FY 2018 Omnibus legislation because the proposed repository would threaten the health and safety of Nevadans as well as the national security and readiness of the Air Force, since the largest air and ground military training space, the Nevada Test and Training Range, is adjacent to the Yucca Mountain site.
- Sixty Representatives from Congress sent a letter to House Speaker Paul Ryan and Minority Leader Nancy Pelosi strongly urging them to include the President's \$150 million budget request for nuclear waste disposal in the final omnibus negotiations for FY 2018. The Representatives cited the \$800 million a year in legal damages that the federal government has been paying for their failure to dispose of the spent nuclear fuel. The Representatives stated that Congress has a legal and moral obligation to the taxpayers who have paid over \$40 billion to address this issue over the past 35 years in addition to the over three billion dollars to dispose of the nation's defense-related waste and have nothing to show for it.
- Waste Control Specialists (WCS) and the French firm, Orano USA, formerly AREVA Nuclear Materials, announced the formation of a joint venture to resume the licensing activities for a consolidated interim storage facility in Andrews County, Texas. The joint venture will request the NRC to resume WCS' suspended license application for a consolidated storage facility that it originally submitted two years ago.
- Nevada Senator Catherine Cortez Masto sent a letter to Energy Secretary Perry requesting "information on current Yucca Mountain activities and expenditures," including potential expenditures that would be related to a restart of the Yucca Mountain licensing activities. The Senator noted that there were discrepancies between what was reported by then Assistant Secretary Lyons in 2014 to the House regarding \$21.7 million in carryover funds available, as compared to a recent letter from the U.S. Nuclear Infrastructure Council indicating that only \$10 million was available as carryover funds. Since Congress had not appropriated any funds for Yucca Mountain since 2010, the Senator was concerned over the apparent drawdown of funds. The Senator requested the obligated and unobligated balances in the Nuclear Waste Fund for both the commercial and defense-related accounts for fiscal years 2017 and 2018, and how much was spent during that timeframe on Yucca Mountain licensing activities. On the 2017 and 2018 breakdowns, the Senator also requested the expenditures for pension fund obligations for retired Yucca Mountain workers, closeout of legacy accounts, administration costs, financial audits, investment guidance, maintenance of records, including technical and scientific information, and preservation of geologic samples. Senator Cortez Masto also asked how much was spent from FY 2007 through FY 2011, when the Yucca Mountain Project was suspended, and estimate how much will it cost the DOE to complete the licensing of the Yucca Mountain repository.
- AREVA Federal Services, now known as Orano Federal Services, published its preliminary design and prototype fabrication of railcars for transport of high-level radioactive material thereby completing phase two of the five phase DOE project. The submission ensures that the design of the railcar and the two buffer

cars meets the Association of American Railroad (AAR) guidelines for transporting High-Level Radioactive Material. The submittal also included the dynamic modeling input and output data files to DOE. The design package was approved by AAR's Equipment Engineering Committee and allowed the DOE contractor to proceed and build the prototype cars for testing according to the AAR's test requirements (S-2043 standard).

- The Executive Director of Nevada's Agency for Nuclear Projects presented an update on Yucca Mountain repository and transportation impacts to the Nevada Legislative Committee on High-Level Radioactive Waste. The presentation outlined the repository timeframes in three categories: transportation 50 years or more, pre-closure operations at 100 years or more, and post-closure at 1,000,000 years with concerns over groundwater contamination, human intrusion, erosion, and volcanism. The transportation period includes construction of a 300-mile railroad, 9,495 rail casks shipments (or 2800 trains) and 2,650 truck cask shipments. If there is no second repository, then the number of rail casks increases to 21,909, (6,700 trains) and 5,025 truck casks. During pre-closure 11,200 waste packages and 11,500 drip shields would be emplaced in the underground tunnels and drifts. If there is no second repository, then the waste packages and drip shields increase to 25,900 and 26,200, respectively. The post-closure would include repository closure, surface restoration, monitoring and retrieval of the waste, if it became necessary. Nevada has 218 admitted contentions in opposition to the DOE license application. If the licensing proceedings resume, another 30-50 contentions are expected to be filed. The contentions challenge site suitability, the drip shields, the hot repository concept (heat generated by the waste packages), groundwater, native American cultural impacts, shipping cask vulnerability to severe accidents and terrorist attacks, and radiological impacts from transportation.
- The NRC published in the Federal Register the Citizens Oversight's, Inc. petition for rulemaking. The petitioners request that the NRC revise their regulations to require a 1,000-year design life for spent fuel storage canisters. The petition requires that the canisters, structures, systems, and components important to safety maintain their safety margins over the design life. The petitioners contend that the changes are necessary as spent fuel will be stored indefinitely and that only a "hardened, extended-life, local, monitored surface storage" (HELMS) system would meet these requirements.
- The NRC responded to Nevada Senator Heller's six questions on the Yucca Mountain licensing proceedings. Questions ranged from whether the Commission's cost estimate to restart Yucca Mountain Project have changed to where are the 3.6 million licensing documents housed and how to gain access to them to holding limited appearance hearings in Las Vegas to holding virtual hearings before remote adjudicatory boards located in Rockville, Maryland to whether NRC's FY 19 budget includes funding resources to support stakeholder participation in the Licensing Support Network Advisory Review Panel meetings. NRC said that their cost estimates had not changed, their budget request did not include funds to support stakeholder participation in LSN meetings, that all the licensing documents were housed in the NRC's Agency wide Documents Access and Management System, that they would allow for limited appearance hearings locally and, although virtual hearings are a possibility, most likely the contentions will be heard near the proposed Yucca Mountain facility.

International:

- The United Kingdom's geologic developer Radioactive Waste Management opened geological disposal consultations to find willing host communities in England and Northern Ireland. The consultations were initiated after a five-year hiatus when two willing host communities in the Cumbrian Region in North-West England failed to gain backing from local councils in 2013. Since then the government took the time to look at the international success of consent-based engagements in Finland and Sweden and reflected that engagement in their latest policy development and consultations.
- Canada's Nuclear Waste Management Organization (NWMO) issued its 2017 annual report highlighting its many activities in 2017 that included 15 mobile transportation exhibits with indigenous and municipal events, hosting 22 tours of Canada's proof test facility, published 40 news articles and 49 reports, sponsored 133 local initiatives proposed by communities, supported numerous research projects underway at 16 universities, and increased its knowledge-sharing agreements to seven countries around the world. In

addition, NWMO also published its five-year strategic plan on Adaptive Phased Management and how it will meet its eight key strategic objectives over that time-period:

1. Building Sustainable Relationships and Adapting Plans
2. Collaboratively Advancing the Site Selection Process
3. Demonstrating Safety and Feasibility of the Repository and Engineered-Barrier System
4. Planning for Construction and Operation
5. Improving Technical Knowledge
6. Developing Transportation Plans
7. Providing Financial Surety
8. Ensuring Governance and Accountability

Each year the rolling five-year plan and eight strategic objectives are revised based on feedback or new knowledge. Recent changes involve increased transparency and simplicity, and a longer review period for host communities to comment on implementation plans.