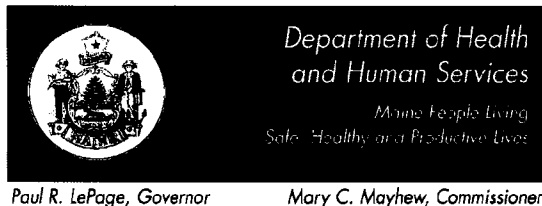


MAINE STATE LEGISLATURE

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February 17, 2016

MEMORANDUM

TO: Senator Michael Thibodeau, President of the Senate, and Representative Mark Eves, Speaker of the House

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

SUBJECT: State Nuclear Safety Inspector's January through April 2015 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 reports focus on activities at the site and include highlights of the national debate on storing and disposing of the used nuclear fuel. For your convenience, highlights of local and national events are captured in the executive summary of the reports.

The enclosed reports provide 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 Sorensen, Senior Health Policy Advisor
Kenneth Albert, Director, 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

March 2015 Monthly Report to the Legislature

Executive Summary

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's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local:

- Maine Yankee submitted its annual Decommissioning Funding Assurance Status Report to the Nuclear Regulatory Commission (NRC). The report stated that approximately \$30 million was available at the end of December 2014 and about \$23.2 million would be required to decommission the ISFSI in 2032, when it was assumed that the Department of Energy (DOE) would remove the spent fuel and Greater Than Class C wastes.

National:

- Senators Reid and Heller from Nevada introduced legislation, S.691 Nuclear Waste Informed Consent Act, which required the consent of the affected State and local governments and Indian Tribes before the NRC could authorize the construction of a nuclear waste repository.
- The NRC announced that the staff will prepare a groundwater supplement to DOE's Yucca Mountain Environmental Impact Statement (EIS). DOE refused NRC's request to supplement their original EIS and decided instead to update its groundwater impact study.
- DOE's independent Technical Assessment Team (TAT) investigated the Waste Isolation Pilot Plant's airborne radioactive release into the environment that contaminated 21 workers with low levels of radioactivity. The TAT concluded that only one drum was involved in the release and the breach was caused by a reaction from incompatible wastes which resulted in an internal build-up of gasses that forced the drum's lid to open and releasing the radioactive gasses.
- President Obama signed a memorandum revising a 1985 policy signed by President Reagan giving DOE authority to develop a separate repository for defense-related nuclear wastes since some defense wastes was less radioactive, cooler and easier to handle than commercial wastes.
- A Bipartisan Senate Coalition introduced the "Nuclear Waste Administration Act of 2015," which mirrored legislation initially proposed by former New Mexico Senator Bingaman back in 2013. The provisions of the proposed Act included:
 - a) an independent government agency
 - b) a consent-based process
 - c) a linkage between the siting of storage facilities and a repository
 - d) a new working capital fund, and
 - e) allowing the Energy Secretary to dispose of defense-related wastes.

Introduction

As part of the Department of Health and Human Services' long standing oversight of Maine Yankee's nuclear activities under Title 22, Maine Revised Statutes (MRS) §666 (2), legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the ISFSI facility located in Wiscasset, Maine.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and ongoing, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report. Past reports, historical addendum, and glossary are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

During March the general status of the ISFSI was normal, with one instance of spurious alarms due to environmental conditions.

There was one fire-related impairment for the month and it was the ongoing fire impairment put in place to cover the office build-out project. Compensatory measures were put in place and will continue until the project is completed in July.

There were two security-related reports logged for the month and they were both due to environmental conditions. Compensatory measures were put into place until the conditions cleared.

There were 18 condition reports¹ (CR) for the month and they are described below.

- 1st CR: Documented a degraded security system due to environmental conditions. Compensatory measures were put into place until the conditions cleared.
- 2nd CR: Documented that unescorted access background check documents were misplaced and most likely discarded. The vendor was contacted and forwarded copies of the documents.
- 3rd CR: Documented a water leak into a temporary construction trailer. The cause was due to ice buildup and was subsequently removed.
- 4th CR: Documented a water leak into the front gatehouse. The cause was excessive snowmelt around the foundation. The water was mopped up and the snow cleared.
- 5th CR: Documented that a channel on the radio system was not working properly. The problem was found to be an antenna and cable that were degraded. The antenna and cable were replaced.
- 6th CR: Documented that one of two state police radio channels was not working properly when contacting the Lincoln County Communications Center and Maine State Police (MSP). After troubleshooting the issue it was determined to be due to the MSP moving the frequency onto a secondary radio system. MSP indicated that the frequency would be moved back to their base system in the near future. This frequency is not required to meet communications requirements with the MSP.
- 7th CR: Documented a housekeeping issue in an office area. The office was cleaned up to meet housekeeping expectations.
- 8th CR: Documented that a personal vehicle was damaged in the parking lot from another vehicle door opening. The issue was resolved between the individuals involved.
- 9th CR: Documented a self-assessment done to review and incorporate NRC guidance on suspicious

¹ A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Control Program's website.

- aircraft. The new guidance was incorporated into a site procedure and shared with the staff.
- 10th CR: Documented that a MSP telephone number did not work during a periodic test. After discussing with the State Police, the problem was the telephone at the MSP office. The telephone was replaced and tested satisfactorily.
- 11th CR: Documented that a sole source justification was not completed for a purchase order for contracted services as required by procedure. The sole source justification was developed and placed in the purchase order file.
- 12th CR: Documented that a fire extinguisher on a vendor's forklift had expired. The fire extinguisher was replaced.
- 13th CR: Documented that a construction worker onsite for the office build-out project had exhibited behavior which may have violated the company's policy on fitness for duty. The individual was assessed and voluntarily left the site permanently.
- 14th CR: Documented that workers received a shock while operating a gas powered vacuum while attempting to pick up snow. The work was stopped and the vacuum was tagged out to prohibit further usage.
- 15th CR: Documented some errors in the fourth quarter 2014 environmental TLD data sheets. The vendor had filled in data from a previous quarter and this was caught during a review by the Radiation Protection Manager. The vendor was contacted to correct the data.
- 16th CR: Documented that a space heater was replaced as part of the office build-out project without the breaker being locked and tagged out. The circuit was checked and found to be de-energized. Therefore, no hazard existed, but the breaker was not locked and tagged as required by procedure. The individual was coached and counseled and a process change was made such that all electrical work for the project was documented at the start of each shift and could not be changed without Maine Yankee approval.
- 17th CR: Documented that hardhats are recommended to be changed out after five years of use and several hardhats at the site exceeded this recommendation. The hardhats were taken out of service and a process was put in place to check Personal Protective Equipment on a yearly basis.
- 18th CR: Documented that a concrete dam with overflow piping had become degraded at the small pond near Maine Yankee's entrance. Planning was in progress to replace the dam.

Other ISFSI Related Activities

1. On March 3, Maine Yankee submitted its annual Decommissioning Funding Assurance Status Report to NRC. The report stated that about \$23.2 million would be required to decommission the ISFSI in 2032, when it is assumed that the DOE will remove the spent fuel and Greater Than Class C wastes. According to the report approximately \$30 million was available at the end of December 2014. The funds are segregated from the balance of the Nuclear Decommissioning Trust that is used primarily for the ongoing management of the storage facility.

Environmental:

No quarterly information is available this month.

Other Newsworthy Items:

1. On March 3, after performing new geological studies near Creighton, Saskatchewan and Schreiber, Ontario, Canada's Nuclear Waste Management Organization concluded that the geology of each locality was unsuitable for hosting a repository for spent nuclear fuel. Nine other communities in Ontario were still undergoing further studies and evaluations. The web link for the announcement can be accessed by positioning the cursor over the underlined text and following the directions.

2. On March 4, the DOE's Principal Deputy Assistant Secretary for Nuclear Energy responded to the House Chair's February 25 letter on DOE's and the Defense Threat Reduction Agency's (DTRA) intent to plan activities at the proposed Yucca Mountain repository site. The Deputy Assistant confirmed that DOE and the DFTA were not proposing any activities at the Yucca Mountain site. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
3. On March 10, Senators Reid and Heller from Nevada introduced legislation that would require the consent of the affected State and local governments and Indian Tribes before the NRC could authorize the construction of a nuclear waste repository. The Senate bill, S.691 Nuclear Waste Informed Consent Act, would provide a state, municipality, or tribe new veto powers over storing waste at the Yucca Mountain site or any future proposed site. The Senators stated that the proposed bill would allow the will of the people to be reflected through a statewide public referendum. A companion bill was introduced in the House by two of Nevada's four Representatives. The web link for the proposed legislation can be accessed by positioning the cursor over the underlined text and following the directions.
4. On March 12, NRC announced that the staff would prepare a groundwater supplement to Yucca Mountain's Environmental Impact Statement (EIS). The DOE refused and decided to update its groundwater impact study instead of supplementing their original EIS. The supplement will focus on a key aquifer and how both radiological and chemical contaminants could impact the aquifer. It will also provide additional information on the impacts from surface discharges of groundwater, the cumulative amount of radiological as well as chemical contaminants that enter the aquifer from the repository, the amount reasonably expected to remain over time, and estimated amounts of contaminants deposited at or near the surface and their potential impacts. The web link for the news release can be accessed by positioning the cursor over the underlined text and following the directions.
5. On March 17, DOE's independent Technical Assessment Team (TAT) investigating the Waste Isolation Pilot Plant's radioactive waste drum breach in the Plant's underground repository that released airborne radioactive material into the environment and contaminated 21 workers with low levels of radioactivity. The TAT concluded that only one drum was involved in the release and the breach was caused by a reaction from incompatible wastes that resulted in an internal build-up of gasses that forced the drum's lid to open thereby releasing the radioactive gases. The combination of nitrate salt residues, kitty litter, and a neutralizing agent resulted in a reactive mixture. The TAT was led by scientists from the Savannah River National Laboratory and included scientists from other National Laboratories such as Lawrence Livermore, Oak Ridge, Pacific Northwest, Sandia, and Idaho. The web links for the TAT's summary and Report can be accessed by positioning the cursor over the underlined texts and following the directions.
6. On March 24, President Obama signed a memorandum revising President Reagan's 1985 policy giving DOE authority to develop a separate repository for defense-related nuclear wastes. The justification for de-commingling commercial and defense wastes was predicated on some defense wastes being less radioactive, cooler and easier to handle than commercial wastes, which would mean a simpler design and less challenging licensing or transportation issues. The Energy Secretary outlined the new strategy, which provided a historical perspective on circumstances that led to the initial policy of comingling commercial and defense wastes along with DOE's role, listed advantages on the disposal of defense-related wastes over commercial spent fuel, and promoted a concurrent path moving forward on storage and disposal of commercial nuclear wastes. In conjunction with the new strategy DOE also released a report, entitled, "Report on Separate Disposal of Defense High-Level Radioactive Waste" that explained the logic for the policy change. The web links for the memorandum, DOE's Fact Sheet and the Report can be accessed by positioning the cursor over the underlined texts and following the directions.

7. On March 24, a Bipartisan Senate Coalition introduced the “Nuclear Waste Administration Act of 2015” which mirrored legislation initially proposed by former New Mexico Senator Bingaman back in 2013. The provisions of the proposed Act included:
- a) An independent government agency with an Administrator appointed by the President and confirmed by the Senate.
 - b) A consent-based process for establishing a pilot storage facility for shutdown and decommissioned reactor sites, other temporary storage facilities for non-priority spent fuel, and a repository.
 - c) A linkage between the siting of storage facilities and a repository such that storage facilities can continue to be sited up to ten years after the enactment of the legislation and further storage facilities can only be sited as long as a repository site has been selected for evaluation.
 - d) A new working capital fund from fees assessed to nuclear utilities and made immediately available to the new agency without further Congressional appropriation.
 - e) Allowing the Energy Secretary to determine how best to dispose of defense-related wastes and provides for the new agency to manage those wastes separately by siting, constructing, and operating those facilities.

The web links for the proposed senate news release and the proposed legislation can be accessed by positioning the cursor over the underlined texts and following the directions.

8. On March 25, the NRC Chair forwarded to the House Chair of Energy and Commerce the Commission’s monthly status report on its activities on the Yucca Mountain licensing proceedings as mandated by the D.C. Circuit Court of Appeals. The February status report noted the completion of the five volumes of the Safety Evaluation Report (SER). The Commission approved other SER activities going forward such as records retention and the development of a lessons learned report, and making their Licensing Support Documents publicly available. In addition, the Commission approved a revised schedule and cost estimate for completing a supplement to DOE’s initial environmental impact statement. The staff projected 12 to 15 months to complete the supplement at a cost of about \$2 million. Most of the \$175,569 expended during February was for the completion of the SER. Of the \$13.55 million available \$9.4 million has been expended leaving a balance going forward of about \$4.1 million. The web links for the letter and the report can be accessed by positioning the cursor over the underlined texts and following the directions.
9. On March 27, in a surprise development Senator Harry Reid from Nevada announced that he would not seek re-election in 2016. His congressional career started in the House in 1982 and then in the Senate in 1986. Prior to January 2015 Senator Reid had been the Senate Majority Leader since 2007. As such he was instrumental in forestalling and blocking any funding to move the Yucca Mountain licensing application forward. Senator Reid is currently the Senate Minority Leader.