

# MAINE STATE LEGISLATURE

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Paul R. LePage, Governor

Mary C. Mayhew, Commissioner

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 (800) 606-0215

February 29, 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 May through August 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 123<sup>rd</sup> 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

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

Local:

- Maine Yankee recommended to the Department of Environmental Protection to reduce their chemical groundwater sampling program on Bailey Point.

National:

- Representative Conaway from Texas drafted legislation that would authorize the Department of Energy (DOE) to contract with a private company to construct a storage facility for spent nuclear fuel or develop one on its own.

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 123<sup>rd</sup> 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](http://www.maineradiationcontrol.org) and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

During June, the general status of the ISFSI was normal, with no instances of spurious alarms due to environmental conditions.

There were two fire-related impairments for the month. One impairment was associated with the ongoing office build-out project with periodic fire rounds instituted as a compensatory measure. The impairment will be cleared when the new fire system is placed into service. The second impairment was due to a fire door not closing properly. The door was repaired and the impairment was cleared.

There were four security incident reports logged for the month and one was related to a transient environmental condition. The second was due to a loss of internet connectivity with an offsite vendor. The third was due to a degraded security system. The fourth was due to a computer system issue. In all cases, compensatory measures were put into place until the issues were resolved.

There were 23 condition reports<sup>1</sup> (CR) for the month and they are described below.

- 1<sup>st</sup> CR: Documented was a tracking CR for lessons learned from the May 2015 Fire-Medical Drill. The CR remains open with several suggestions being pursued such as an additional fire hydrant and more frequent flushing of the fire pond piping.
- 2<sup>nd</sup> CR: Documented a computer system issue associated with door alarms. Compensatory measures were put into place until the issue was resolved
- 3<sup>rd</sup> CR: Documented that a computer backup function was not enabled properly after a reboot. The function was enabled and personnel retrained on the requirement.
- 4<sup>th</sup> CR: Documented that a door latch on a utility vehicle was missing. The part was ordered and installed.
- 5<sup>th</sup> CR: Documented that an Automated External Defibrillator unit failed its battery check. The battery was replaced.
- 6<sup>th</sup> CR: Documented the loss of internet connectivity with an offsite vendor. Compensatory measures were put into place until the issue was resolved.
- 7<sup>th</sup> CR: Documented that the controlled copy of a manual was missing from the Conference Room. The issue is under evaluation as to whether the manual should be deleted from controlled status.
- 8<sup>th</sup> CR: Documented that an overheated extension cord was found in the construction area. The cord was taken out of service and discarded. The issue was loose connections on a plug. All other extension cords onsite were checked and found to be satisfactory.
- 9<sup>th</sup> CR: Documented a degraded security system. Compensatory measures were put into place until a component was replaced.
- 10<sup>th</sup> CR: Documented that a weapons turnover was observed to be not in accordance with the weapons handling procedure. The individuals were counseled on the proper process and all personnel were informed of the proper process. Procedure clarifications were also being considered.
- 11<sup>th</sup> CR: Documented a procedure non-conformance regarding keeping an access authorization list in the Alarm Station. The procedure was revised to provide clarification.
- 12<sup>th</sup> CR: Was written as a tracking CR to track changes to a procedure due to changes in Fire Protection designees onsite. The issue is under evaluation.
- 13<sup>th</sup> CR: Documented a procedure non-compliance regarding signing documents in and out of the repository. The individual was counseled on the proper process.
- 14<sup>th</sup> CR: Documented a possible software issue regarding computer login screens. This issue is under evaluation.
- 15<sup>th</sup> CR: Documented that a temporary light in the construction area was touching and melting the plastic casing. The light was taken out of service and all other lighting was checked for similar issue.
- 16<sup>th</sup> CR: Documented that a video recorder re-booted itself with no operator input. This issue is under evaluation.
- 17<sup>th</sup> CR: Was written to document a fire door closer not working properly. A fire impairment was implemented until the issue was repaired.
- 18<sup>th</sup> CR: Documented that a daily log check was not completed properly. The individual was coached on the proper process.
- 19<sup>th</sup> CR: Was written to document that a security system degradation due to environmental conditions. Compensatory measures were put into place until the issue was resolved.
- 20<sup>th</sup> CR: Was written to document that one state police radio channel was not working properly. The

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<sup>1</sup> 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.

Maine State Police was contacted and the issue was an equipment problem on their end. The issue has since been resolved.

21<sup>st</sup> CR: Documented a water leak into the Operations Building. The issue was due to incomplete ducting as part of the office buildout project. The ductwork has been sealed.

22<sup>nd</sup> CR: Documented that a Resistance Temperature Detector (RTD) conduit was impacted by a manlift during Vertical Concrete Cask inspections. The RTD continued to function as designed and the conduit was repaired the next day.

23<sup>rd</sup> CR: Documented that an environmental thermoluminescent dosimeter (TLD) (#6) could not be found during TLD changeout activities. The TLD was subsequently found on 7/2/15 on a nearby tree.

#### *Other ISFSI Related Activities*

1. On June 11, Maine Yankee forwarded their recommendations to the Department of Environmental Protection (DEP) to modify the existing chemical groundwater sampling program on Bailey Point. According to the Consent Order every five years Maine Yankee can make suggestions to change the sampling program. Now that enough data has been collected over the past ten years, Maine Yankee was able to perform a comprehensive review that included statistical trend analyses, comparisons with the model developed for the site, and evaluations of the geochemical conditions for the chemical parameters being monitored. The review indicated that a majority of the monitored parameters met health and environmental guidelines and there was no human exposure since there are no residential facilities onsite and no use for the groundwater. Therefore, Maine Yankee is recommending reduced monitoring with a highly focused sampling program for those remaining wells.
2. On June 18, Maine Yankee submitted to the NRC its changes to the storage facility's Physical Security Plan to address administrative changes and its protection of certain radioactive material in its possession from theft or diversion. Since the Plan involved security sensitive information disclosure to the public was prohibited.

#### Environmental:

The State's second quarter results will be published in the August monthly report.

#### Other Newsworthy Items:

1. On June 16, Representative Conaway from Texas crafted legislation to amend the Nuclear Waste Policy Act and entitled it, "Interim Consolidated Storage Act of 2015." There were five key provisions to the proposed legislation, interim storage, repository, linkage, fulfillment of the federal government's responsibilities, and benefits to host communities. The draft bill would authorize DOE to develop its own storage facility or contract with a private company. The bill would remove the Yucca Mountain land and water rights issues as impediments to the licensing process and expand the disposal capacity of the Yucca site to above the current 70,000 ton limit. The proposed legislation would also direct DOE to take title to the spent nuclear fuel and increase financial incentives to the hosting state(s). The web link for the [draft legislation](#) can be accessed by positioning the cursor over the underlined text and following the directions.
2. On June 16, the U.S. Nuclear Waste Technical Review Board issued a report entitled, "Evaluation of Technical Issues Associated with the Development of a Separate Repository for U.S. Department of Energy-Managed High-Level Radioactive Waste and Spent Nuclear Fuel." The Report was in response to the Administration's earlier decision to develop two mined repositories, one for the disposition of defense-related high-level waste (HLW) and some DOE spent nuclear fuel (SNF) and another to dispose of commercially generated HLW and SNF along with other DOE managed HLW and SNF. In the Report the Board made four recommendations:

- Consider waste form performance in different host-rock types after degradation of the waste package in future assessments.
- Develop a better understanding of the degradation rates of DOE SNF types in potential repository geologic environments.
- Evaluate approaches, benefits, and costs of repackaging cooler naval SNF into smaller disposal packages.
- Conduct research on borehole sealing technology and assess whether more robust engineered barriers might be required for disposing of selected waste forms in deep boreholes.

The web link for the Report can be accessed by positioning the cursor over the underlined text and following the directions.

3. On June 22, the Georgia Public Service Commission (PSC) forwarded a letter to the Georgia Congressional delegation seeking their help in urging Congress to move forward past the stalemate on spent nuclear fuel and high-level waste removal from operating and shutdown nuclear plants. The Commission advocated funding for the Yucca Mountain license application, pressing for consolidated interim storage with priority to shutdown sites, funding and governance reform for the nation's nuclear waste program, and supporting transportation infrastructure. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
4. On June 24, the Swedish Radiation Safety Authority issued its preliminary findings on the construction application submitted by SKB, the builder and operator of the impending spent nuclear fuel repository at Forsmark. The Swedish Regulator was cautiously optimistic that the proposed facility could meet the country's long-term radiation protection standards, but further work was necessary to take a final position on whether the radiation protection requirements would be met over a minimum period of 100,000 years. The Swedish agency also noted that additional reviews were necessary to resolve the manufacture of the copper canisters that will be used to house the spent nuclear fuel. The web link for the article can be accessed by positioning the cursor over the underlined text and following the directions.
5. On June 24, the NRC Chair forwarded to the House Chair of the Committee on Energy and Commerce the agency's May monthly status report on the resumption of the Yucca Mountain licensing process. The staff noted that they had completed the five volume set of their Safety Evaluation Report (SER) on the DOE's Yucca Mountain license application with the issuance of Volumes 2 through 5, its completion of SER records retention and development of a lessons-learned report, and its work on the supplemental environmental impact statement (EIS) on groundwater. The Commission also approved, pending funding, the loading of the Licensing Support documents into its public library. The staff estimated that \$3.2 million would be required to complete the EIS supplement, the lessons-learned report and the public availability of the licensing documents. The web link for the cover letter and status report can be accessed by positioning the cursor over the underlined text and following the directions.
6. On June 24, the U.S. Nuclear Waste Technical Review Board's (NWTRB) summer meeting focused on DOE's plans for the transportation of spent nuclear fuel from nuclear power plants to an interim storage site or a geologic repository. The Board posed several questions for the presenters to address. The discussion centered on research and development activities as well as new equipment designs. DOE also provided information on how damaged fuel would be handled. The NRC provided their regulatory perspectives on transportation. The Western States Energy Board provided their take on the impact of transportation on states in their region. The Swiss presented their program for managing and transporting spent nuclear fuel. The web link for the agenda can be accessed by positioning the cursor over the underlined text and following the directions. The individual presentations can be accessed by clicking on the following link <http://www.nwtrb.gov/meetings/2015/june/15june24.html> and then clicking on the name of the presenter.