# 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 (800) 606-0215

September 12, 2016

#### MEMORANDUM

TO:

Senator Michael Thibodeau, President of the Senate, and Representative Mark Eaves, Speaker of

the House

FROM:

Mary C. Mayhew, Commissioner

Department of Health and Human Services

SUBJECT: State Nuclear Safety Inspector's June 2016 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 focuses on activities at the site and includes highlights of the national debate on storing and disposing the used nuclear fuel. For your convenience highlights of local and national events are captured in the executive summary to the report.

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.

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 Sorenson, Senior Health Policy Advisor

Sheryl Peavey, 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 2016 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

• The Department of Energy (DOE) held an informal meeting with local officials and the public in Wiscasset. The informal meeting included selectmen, town officials, residents, county officials, State, representatives of Maine's congressional delegation, and Maine Yankee. DOE's Associate Deputy Assistant Secretary informed the attendees of what DOE was doing with consent-based siting and to listen to what the communities have to say on the siting process.

#### National:

- The U.S. Court of Appeals denied the states of Connecticut, New York, and Vermont, the Prairie Island Indian Community, and numerous environmental organizations' petitions on the Nuclear Regulatory Commission's (NRC) continued storage rule. The petitioners had filed suit and argued that the NRC had not appropriately characterized its rule, considered alternatives and mitigation measures, and insufficiently analyzed the impacts of continued storage of spent fuel. The Court disagreed and maintained that the NRC did not engage in arbitrary or capricious decision-making.
- NRC officials notified Waste Control Specialists (WCS) that their License Application for a
  construction of a consolidated interim storage facility for spent nuclear fuel lacked "sufficient technical
  information" and safety- and security-related details for them to review. NRC gave the company until
  July 28 to respond to the staff's request for additional information.

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

There was one fire-related impairment for the month. It involved a concrete penetration seal that was temporarily removed to route a small cable through. A fire watch was established during the work period. The fire seal was restored and the work was completed by end of the shift.

There were no security-related impairments for the month. However, there were three security incident reports (SIR) logged for the month. One of the incidents involved a momentary loss of a video signal. Another occurred during testing of the security system. The last one involved the replacement of a video recorder. All three incidents required compensatory measures.

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

- 1<sup>st</sup> CR: Documented a momentary loss of a video feed. All video related CRs were compiled under one CR for a common solution. The CR disposition is open pending an evaluation. A new video recorder is being procured and other components are being evaluated.
- 2<sup>nd</sup> CR: Documented the recommendations from an electrical safety assessment. All recommended labelling for electrical panels due to Arc Flash hazards were installed.
- 3<sup>rd</sup> CR: Documented a momentary loss of video feed. All video related CRs were compiled under one CR for a common solution. The CR disposition is open pending an evaluation. A new video recorder is being procured and other components are being evaluated..
- 4<sup>th</sup> CR: Documented the evaluation of observations from the 2016 Fire and Medical Drill. The CR will remain open pending an evaluation.
- 5<sup>th</sup> CR: Documented the need to evaluate processes and programs effectiveness with regards to raising concerns as a result of the events in the Orlando shooting on 6/11/2016. A draft assessment was developed which indicated Maine Yankee's processes were robust for raising concerns.
- 6<sup>th</sup> CR: Documented a North Attic lighting deficiency.
- 7<sup>th</sup> CR: Documented an old fence post protruding out of the ground. The post was marked to highlight it as a tripping hazard.
- 8<sup>th</sup> CR: Documented a deficiency with a non-security video system controller. The controller was replaced which corrected the issue.
- 9<sup>th</sup> CR: Documented a deficiency with a non-security video system controller, similar to the previous CR. The controller was replaced which corrected the issue.
- 10<sup>th</sup> CR: Documented a gap in a concrete cask inlet screen. The screen was repaired. An extent of condition review was applied and several other screens were corrected as well.
- 11<sup>th</sup> CR: Documented that an on-shift security personnel did not carry a contingency weapon when required.
- 12<sup>th</sup> CR: Documented the use of compensatory measures for a security system degradation identified during testing. The system was repaired, tested and placed back in service.
- 13<sup>th</sup> CR: Documented an old fence post protruding out of the ground. The post was marked to highlight it as a tripping hazard.
- 14<sup>th</sup> CR: Documented that there was a potential issue with the weapons program regarding procedural and/or policy guidance on maintenance, storage, training and administration.
- 15<sup>th</sup> CR: Documented recommended enhancements to a procedure dealing with the testing of security equipment.
- 16<sup>th</sup> CR: Documented the results and recommendations of a training program self-assessment.

<sup>&</sup>lt;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.

17<sup>th</sup> CR: Documented that one of the six data ports was found blocked on a video recorder. The open ports had been properly blocked per procedural requirements.

18<sup>th</sup> CR: Documented a minor gasoline leak to the ground from a personal vehicle. The spill was cleaned up including the contaminated soil. The Maine DEP and the NRC were notified of the spill of approximately 1 quart.

#### Other ISFSI Related Activities

There were no ISFSI related activities to report on this month.

#### Environmental:

The next anticipated reporting of the State's environmental results will be in the August monthly report.

### Other Newsworthy Items:

- 1. On June 2, the DOE held its fifth national Consent-Based Siting meeting in Boston. The purpose of the meeting was to hear from the public and interested stakeholders on what concepts matter as the Department develops a national consent-based process to site storage and disposal facilities for spent nuclear fuel and high-level radioactive waste. The welcoming remarks were presented by the honorable Marge Kilkelly, a former state Representative and Senator from Wiscasset, Maine and current Senior Policy Advisor to U.S. Senator Angus King. She elaborated on her fifteen years of experience with the Maine Yankee Community Advisor Panel (CAP), which she chaired, and how the CAP was instrumental in assisting local people to voice their concerns over the jet engine type noise caused by the outdoor heat exchangers Maine Yankee had constructed to cool the spent fuel pool during its decommissioning. Maine Yankee responded to the neighbors' noise concerns by redesigning the pitch and speed of the cooling blades. Examples like this and its drive for transparency resulted in the community trusting the CAP to have their voices heard and their issues resolved, which was vital during the decommissioning. The DOE followed with remarks on how they were moving forward on the consent-based siting process. Then four panel members shared their perspectives on a consent-based process, which was followed by a public discussion with the DOE and the panelists. Next, the public was assembled into seven groups that focused on their thoughts as to what was important to them for a consent-based process. Each group's main ideas were captured and then summarized for the entire assembly. After the summaries those who wished to speak further were allowed to do so during the public comment period. Wiscasset Board of Selectmen Chair Ben Rines "read a resolution that was adopted by Wiscasset voters in 2001, which asked the federal government to take immediate possession of the remaining nuclear waste at the Maine Yankee site." The web link for the agenda can be accessed by positioning the cursor over the underlined text and following the directions.
- 2. On June 3, the U.S. Court of Appeals denied the states of Connecticut, New York, and Vermont, the Prairie Island Indian Community, and numerous environmental organizations' petitions for review and held that the NRC did not engage in arbitrary or capricious decision-making. The petitioners had filed suit against the NRC in the Courts over its adoption of a generic environmental impact statement in arriving at its continued storage rule for spent nuclear fuel. The petitioners argued that the NRC had not appropriately characterized its rule, considered alternatives and mitigation measures, and insufficiently analyzed the impacts of continued storage of spent fuel. The Court disagreed and elaborated on its reasons why the NRC met all the requirements in all cases. The web link for the Court ruling can be accessed by positioning the cursor over the underlined text and following the directions.
- 3. On June 3, the Chair of the Nuclear Waste Technical Review Board forwarded a letter to DOE's Acting Assistant Secretary for Nuclear Energy on the Board's comments on DOE's post examination plan for high burnup spent nuclear fuel sister rods. Even though the Board believed the experimental test

activities would provide valuable information on the potential degradation of high-burnup spent fuel, the Board expressed that the current DOE plan should be revised to address seven other issues and to tie the testing to information gaps previously identified by DOE. The Board listed the other issues as justification for proposed sister rod examinations and testing, establishing a baseline, whole rod heating tests, test method verification, preservation of sister rods, low temperatures in the High Burnup Dry Storage Cask Research and Development Project cask, and modeling. The Board hoped that DOE would have the benefit of these comments in preparation for their June 6 meeting on the post examination plan and factor them in a revised plan that would be available to the Board prior to their July 12 meeting on this test plan. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.

- 4. On June 3, DOE held an informal meeting with local officials and the public in Wiscasset. The informal meeting included selectmen, town officials, residents, county officials, State, representatives of Maine's congressional delegation, and Maine Yankee. DOE's Associate Deputy Assistant Secretary outlined a brief state of affairs and informed the attendees of what DOE was doing and to listen to what the communities have to say. The news article can be accessed at the following web link: <a href="http://lincolncountynewsonline.com/main.asp?SectionID=1&SubSectionID=75&ArticleID=68462">http://lincolncountynewsonline.com/main.asp?SectionID=1&SubSectionID=75&ArticleID=68462</a>.
- 5. On June 9, DOE's Acting Assistant Secretary of Nuclear Energy forwarded a response to the Chair of the U.S. Nuclear Waste Technical Review Board on the Board's technical evaluation of DOE's deep borehole program. The Acting Assistant Secretary informed the Board that they had already included many of the Board's recommendations. DOE did make a distinction between the appropriateness of expert opinions on the deep borehole field test versus those for an actual deep borehole waste facility. DOE provided two attachments to their letter. The first attachment offered DOE's general response to the Board's report and reiterated the deep borehole's seven test objectives "to demonstrate and evaluate technologies necessary for determining the feasibility and safety of deep borehole disposal." DOE went into much more detail how each specific objective would be met. The second attachment provided DOE's specific responses to the Board's nine recommendations with seven not requiring any further additional action after their explanation, one not requiring any further action, and one pending. The web link for the letter and enclosures can be accessed by positioning the cursor over the underlined texts and following the directions.
- 6. On June 10, the Chairman of the Spink County Board of Commissioners in South Dakota declared that county residents opposed the DOE research initiative to drill a deep borehole to test rocks up to three miles deep underground even though no defense-related nuclear waste would be buried in the borehole. According to the Chair's letter to Battelle, DOE's contractor on the Borehole Project would not be able "to secure the four votes needed in order to pass an application for Special Exception required for the project to begin." The web link for the County letter can be accessed by positioning the cursor over the underlined text and following the directions.
- 7. On June 14, DOE and Battelle responded to the Spink County Commission letter thanking them and the residents for allowing them to discuss the Deep Borehole Field Test. The letter reaffirmed that the Field Test was a scientific endeavor and that there was never any intention to bury radioactive waste in the borehole. The web link for the DOE letter can be accessed by positioning the cursor over the underlined text and following the directions.
- 8. On June 14, DOE's Acting Assistant Secretary for Nuclear Energy responded to the Chair of the House's Subcommittee on Environment and the Economy's March 17 letter to Energy Secretary Moniz on developing a comprehensive management policy for spent nuclear fuel. The cover letter noted that the enclosure contained responses to 14 questions from the March 17 letter. The Chair was informed that one of the questions contained proprietary information and, therefore, could not be fully disclosed.

The web link for the <u>letter</u> can be accessed by positioning the cursor over the underlined text and following the directions.

- 9. On June 21, the NRC Chairman forwarded to the House Chair of the Energy and Commerce Committee his monthly status report of the agency's activities and use of carryover funds on the Yucca Mountain Project. The report summarized what had been accomplished to date and noted that the staff published its final groundwater supplement to DOE's environmental impact statements (EIS). The supplement included "an appendix containing summaries of public comments and staff responses to the comments." The report also noted the staff's work on lessons learned from the licensing process and their continued work to upload the licensing document collection to the NRC's publicly accessible library. Of the \$96,246 expended in May, loading the documents cost \$45,334 while \$49,288 was spent completing the final EIS supplement on the responses to public comments on the NRC's EIS groundwater supplement. The remaining expenditures involved \$141 for some wrap-up activities and \$1,483 for other support costs. The web links for the cover letter and status report can be accessed by positioning the cursor over the underlined texts and following the directions.
- 10. On June 22, NRC officials notified Waste Control Specialists (WCS) that their License Application for a consolidated interim storage facility lacked "sufficient technical information" and safety- and security-related details. NRC gave WCS until July 28 to respond to staff's request for additional information. The additional information requested included some emergency plan information and mitigation of accidents involving the storage casks. WCS was expected to comply with the request by the deadline imposed by the NRC.
- 11. On June 30, the Radiation Safety Authority of Sweden endorsed plans to build a high-level radioactive waste repository near Osthammar, about 100 miles north of Stockholm, Sweden. The Safety Authority stated that "the envisioned repository fulfilled their nuclear safety and radiation protection requirements" for its design life of 100,000 years. The Authority analyzed the special copper sealed waste canisters that will be disposed at a depth of about 1600 feet in granite bedrock. The "Swedish government will decide whether to grant a permit, pending a hearing in an environmental court in Stockholm."
- 12. On June 30, the House Subcommittee on the Environment and the Economy announced a hearing for July 7 on "Federal, State, and Local Agreements and Economic Benefits for Spent Fuel Disposal." The witnesses who will provide testimony will include two panels of Nevada stakeholders. The first panel will be comprised with the four congressional delegates from Nevada while the second panel will include a state senator, a union representative, a County Commissioner from Nye County, Nevada, and a business executive. The web link for the press release can be accessed by positioning the cursor over the underlined text and following the directions.

### Newsworthy Items Not Previously Reported

1. On April 19, the President and Chief Executive Officer of Waste Control Specialist in Texas signed his firm's 165 page License Application for a consolidated interim spent fuel storage facility that was eventually submitted to the NRC on April 28. The Application covered such topics as operating procedures, quality assurance, operator training, inventory and records requirements, security information, emergency plan, environmental reports, proposed licensing conditions, and a decommissioning plan. The web link for the <u>License Application</u> and the 1277 page <u>Safety Analysis Report</u> supporting the Application can be accessed by positioning the cursor over the underlined texts and following the directions.