Department of Health and Human Services
Maine People Living Safe, Healthy and Productive Lives
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

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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 May 2014 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
Holly Lusk, Senior Health Policy Advisor
Kenneth Albert, Director, Maine Center for Disease Control and Prevention
Patricia W. Aho, Commissioner, Department of Environmental Protection
Timothy Schneider, Maine Public Advocate
Lieutenant Scot 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

May 2014 Monthly Report to the Legislature

Executive Summary

As part of the State's long standing oversight of Maine Yankee's nuclear activities, 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 Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility located in Wiscasset, Maine.

The report covers activities at the storage facility, including the State's ongoing environmental radiation surveillance and the national debate over the licensing and construction of a consolidated interim storage facility or a geologic repository for the disposal of spent nuclear fuel. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local

- The Nuclear Regulatory Commission (NRC) issued its biennial report on the security, safety and compliance of NRC regulations at Maine Yankee's ISFSI. The report evaluated the adequacy of Maine Yankee's ISFSI programs such as radiation protection, fire protection, emergency preparedness, surveillance, maintenance, environmental monitoring, training, quality assurance, corrective actions, and security. Maine Yankee had identified that, since 2008, it had not submitted their Emergency Plan implementing procedure changes to the NRC as required by NRC regulations. They also identified that they had not performed an independent assessment of their 2013 emergency preparedness program as required by NRC regulations. The NRC inspector verified that none of the procedure changes were significant or decreased the effectiveness of the emergency preparedness program and that appropriate corrective actions were taken to address both issues. The report concluded that there were no findings of significance in the safety and compliance areas and there were no findings in the security program.

The national highlights primarily focused on the federal government's activities.

National:

- The NRC Commissioners testified before the House Energy and Power Subcommittee on its budget request and policy priorities. One of the issues discussed was NRC's efforts to restart the Yucca Mountain licensing proceeding. The Commission maintained that it did not have the funds to resume the entire licensing process, but did not request any additional funding in its budget. The NRC Chairman was not supportive of a supplemental budget request whereas the other Commissioners were in favor of requesting additional funding. Subcommittee members emphasized the importance of completing the Yucca Mountain Safety Evaluation Report (SER) first while the Commissioners opposed any further spending on Yucca licensing activities, they did favor the issuance of their SER.
- The Department of Energy's (DOE) Director of Office of Standard Contract Management issued a memorandum stating that the adjustment of the spent nuclear fuel disposal fee would be set to "0.0 mill per kilowatt hour of electricity generated and sold". The memorandum was in response to a November 2013 Court of Appeals ruling directing the DOE to lower the fee to zero unless Congress acts by overriding the request. Since Congress did not act, the fee suspension went into effect. The fee suspension provided relief to the consumers receiving electricity from nuclear utilities. However, it did not provide relief from the continued storage of used nuclear fuel as the federal government was still

unable to meet its obligations under the Nuclear Waste Policy Act to remove the used fuel from their sites.

Introduction

As part of the Department of Health and Human Services' responsibility under Title 22, Maine Revised Statutes (MRS) §666 (2), as enacted under Public Law, Chapter 539 in the second regular session of the 123rd Legislature, the foregoing is the monthly report from the State Nuclear Safety Inspector.

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 on-going, 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.

Commencing with the January 2010 report, the glossary and the historical perspective addendum are no longer included in the report. Instead, this information is available at the Radiation Control Program's website noted above. In some situations, the footnotes may include some basic information and may redirect the reviewer to the website. In October 2011, the format of the report was changed to include an executive summary which replaced the official memorandum to the legislative leadership transmitting the report. To further streamline efforts, beginning in August of 2012, the report featured hyperlinks to documents that would normally be attached as copies to the report. The hyperlinks should facilitate the reports review with some readers focusing on the report while others who wish to explore the cited documentation can do so.

Independent Spent Fuel Storage Installation (ISFSI)

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

There were no fire- or security-related impairments for the month. However, there were four security events logged for the month. Two involved transient environmental conditions, one involved a security system, and the other a security-related computer.

There were sixteen condition reports[1] (CR) for the month and they are described below.

1st CR: Documented that several financial records were not scanned properly before being placed into electronic storage. The records were recovered and rescanned. The procedural expectations were reinforced with the staff.

2nd CR: Documented that several individuals had not completed their annual Plant Access Training within one year. The individuals completed the training and going forward, a process was put in place to track training due dates.

3rd CR: Was written to document a security system issue due to transient conditions.

4th CR: Was written to document that a weapons magazine had been misplaced during a patrol. The magazine was recovered and was due to its pouch becoming unfastened. The individual was counseled and the pouch was taken out of service.

5th CR: Was written to document that a security vest was in poor condition and was taken out of service.

6th CR: Documented that the floor of the Maintenance Building was chipped when a tool was dropped

[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.

on it. The damaged area was repaired with cement.

7th CR: Documented that a vehicle pulled into the site entrance road and an individual took photographs of the site and signage. The Local Law Enforcement Agencies and the Maine State Police were notified. The individual was identified, questioned and counseled by the authorities. A voluntary report was made to the NRC Operations Center.

8th CR: Documented an issue with a security system. The vendor was contacted and corrected the computer coding issue.

9th CR: Was written to document that a thermoluminescent dosimeter (TLD)[2] was dropped and broken. The TLD was given to the Radiation Protection Manager for reading and a new TLD was issued.

10th CR: Was written to document the lessons learned from the May 2014 Fire/Medical Drill. The lessons learned were shared with the entire staff through a First Line Briefing.

11th CR: Documented that two environmental TLDs were found frozen in ice and later found to be unreadable. The data sheets were corrected and the radiation contractor was counseled on entering any equipment issues into the corrective action process. Going forward, it was also decided that heavier duty bags would be used for the environmental TLDs.

12th CR: Documented an issue with a security-related computer. The system was re-booted and returned to service.

13th CR: Documented that a pocket dosimeter was not working properly. The dosimeter was taken out of service and replaced.

14th CR: Was written to document that an individual's dose records included an incorrect birthdate. The record was corrected.

15th CR: Was written to document that a computer requiring back up power was not plugged into the correct outlet. The computer was plugged into the correct outlet and training was provided to the staff on backup power requirements. In addition, the outlets were labelled to describe the requirements for backup power.

16th CR: Documented that a truck pulled into the entrance road and damaged a Maine Yankee sign. The sign was replaced.

Other ISFSI Related Activities

1. On May 6, the NRC issued its biennial report on the safety and compliance of NRC regulations. The report evaluated the adequacy of Maine Yankee's ISFSI programs such as radiation protection, fire protection, emergency preparedness, surveillance, maintenance, environmental monitoring, training, quality assurance, and corrective actions. Maine Yankee had identified that since 2008 it had not submitted their Emergency Plan implementing procedure changes to the NRC as required by NRC regulations. Maine Yankee also identified that they had not performed an independent assessment of their 2013 emergency preparedness program as required by NRC regulations. The NRC inspector verified that none of the procedure changes were significant or decreased the effectiveness of the emergency preparedness program and that appropriate corrective actions were taken to address both issues. The report concluded that there were no findings of significance.

2. On May 15, the NRC issued its biennial report of the security program at the Maine Yankee ISFSI. Since the report contained sensitive security-related information, it was not available for public disclosure. However, the report did state that the results of the inspection did not indicate any findings.

3. On May 30, Maine Yankee met with State Radiation Program Officials to discuss security-related issues and the State's need to know. Both parties agreed that the State Nuclear Safety Inspector, as the State Liaison Officer's official designee, has the authority for access to security sensitive and safeguards

[2] Thermoluminescent Dosimeters (TLD) are very small, passive radiation monitors requiring laboratory analysis. For a further explanation, refer to the glossary on the Radiation Program's website.

information in the normal process of performing his official duties. The State Liaison Officer serves as the principal communications liaison between the NRC and the State.

Environmental

The next set of quarterly results will be available in July's monthly report.

Other Newsworthy Items

1. On May 7, the NRC Commissioners testified before the House Energy and Power Subcommittee on its budget request and policy priorities. One of the issues discussed was NRC's efforts to restart the Yucca Mountain licensing proceeding. The Commission maintained that it did not have the funds to resume the licensing process, but did not request additional funding in its budget. The NRC Chairman was not supportive of a supplemental budget request whereas the other Commissioners were in favor of requesting additional funding. Subcommittee members emphasized the importance of completing the Yucca Mountain Safety Evaluation Report (SER) first while the Commissioners opposed further spending on Yucca licensing activities until after the SER was published.

2. On May 9, the Finnish agency for nuclear waste management reported that all the vertical shafts for the laboratory for Finland's deep geologic waste repository were drilled and completed. The final repository construction license application was submitted in 2012 to the Ministry of Employment and Economy. The construction permit for the repository was expected in 2015 with the repository potentially receiving spent nuclear fuel as early as 2022. The agency also announced that it was using the same welding technique for encapsulating the used nuclear fuel in canisters as that of Sweden. The web link for the article can be accessed by positioning the cursor over the underlined text and following the directions.

3. On May 13-15, the DOE's held its fifth annual National Transportation Stakeholders Forum (NTSF) in Minnesota. The three day meeting featured a number of topics that included tribal perspectives on transportation and emergency response activities, the cause of the radioactive leak and the on-going recovery at the Waste Isolation Pilot Plant, the interface between storage and transportation, advances in transportation information systems, enhancements to shipment security, emergency response planning, training, and exercises, engaging states, tribes, and the public in transportation planning, how rail shipments are planned, executed, regulated, and improved, and preparing to ship spent nuclear fuel. The last topic was of considerable interest as the need for legislation, questioning of DOE's authority, lessons learned from prior work, no work on siting, pilot storage facility with a capacity of 5,000 to 10,000 metric tons of used nuclear fuel, development of the Stakeholder Tool for Assessing Radioactive Transportation, standardization of containers for storage, transportation and disposal, draft national transportation plan, evaluation of shutdown sites infrastructure, hardware needs such as rail casks, railcar needs, escort and buffer cars, and testing of rail cars. The take away from the summary of the discussion was that the development of a transportation system was a multi-year process, the facility destination needs to be known at least 4 to 5 years prior to commencing any shipments, a collaborative process with stakeholders a key to successful development and operation of a large scale transportation system. The Forum is the mechanism through which DOE communicates at a national level with states and tribes about the Department's shipments of radioactive waste and materials. The purpose of the NTSF is to bring transparency, openness, and accountability to DOE's offsite transportation activities through collaboration with state and tribal governments on packaging and transportation, emergency management, security, inspection and enforcement, and radiation protection.

4. On May 13, the Senator Barbara Boxer from California, Senator Bernie Sanders from Vermont, and Senator Edward Markey from Massachusetts introduced three bills to address the safety of spent fuel storage and decommissioning plans. Two of the bills dealt with decommissioning while the third, Senate bill S.2325 – Dry Cask Storage Act of 2014, required the transfer of seven year old spent nuclear fuel stored in spent fuel pools to be transferred to dry cask storage. The legislation also provided funding to help reactor licensees implement their transfer plans and expanded the emergency planning zone out to 50 miles for the non-compliant reactor operators. The web links for the Senate Committee's press release and the Senate bill can be accessed by positioning the cursor over the underlined text and following the directions.

5. On May 14, the results of an online survey noted that 68% of the Swedes were aware of a deep geologic repository being planned for used nuclear fuel with over half the respondents wanting more information on it. The poll also showed that more than 40% knew of the disposal method of copper canisters in bedrock embedded with bentonite clay. The Swedish government passed a law that directed the generators of used nuclear fuel the responsibility to dispose of it. The nuclear industry then formed the Swedish Nuclear Fuel and Waste Management Company to manage and dispose of the spent nuclear fuel generated. In 2011, the Company submitted its license application to construct a repository in Forsmark. The Swedish Radiation Safety Authority will render its assessment to the Swedish government in 2015. The web link for the article can be accessed by positioning the cursor over the underlined text and following the directions.

6. On May 15th DOE's Director of Office of Standard Contract Management issued a memorandum stating that the adjustment of the spent nuclear fuel disposal fee will be set to "0.0 mill per kilowatt hour of electricity generated and sold". The web link for the directive can be accessed by positioning the cursor over the underlined text and following the directions.

7. On May 16, the Nuclear Waste Strategy Coalition issued a press release on the nuclear waste fee being suspended. In November 2013 the Court of Appeals for the D.C. Circuit ordered DOE to lower the fee to zero unless Congress acts by overriding the request. Since Congress did not act, the fee suspension went into effect yesterday. The suspension provided relief to the consumers receiving electricity from nuclear utilities, but it did not provide relief from the continued storage of used nuclear fuel as the federal government was still in no position to remove the used fuel from their sites. The web link for the news release can be accessed by positioning the cursor over the underlined text and following the directions.

8. On May 19, the NRC Chairman submitted a letter to the House Chair of the Energy and Commerce Committee on the April status report on the staff's activities and expenditures related to the resumption of the Yucca Mountain licensing process. Activities included on-going work on the four volumes of the safety evaluation report for Yucca Mountain, the completion of accessibility of the licensing support documents, and agency attorneys' support for staff and the Commission. The expenditures for the month amounted to about $941,000, leaving a balance of nearly $6.9 million. The web link for the letter and report can be accessed by positioning the cursor over the underlined text and following the directions.

9. On May 28, White Pine County Commission approved Resolution 2014-09 and joined eight other Nevada counties supporting the completion of the licensing process on the Yucca Mountain nuclear waste repository. The other eight counties approving similar resolutions were Esmeralda, Lincoln, Lander, Elko, Mineral, Churchill, and Nye County, where Yucca Mountain is located.

10. On May 30, the NRC Commissioners published the staff requirements memorandum on the tier 3 lessons learned from the Fukushima incident. The Commission voted to cease all further generic assessments of expedited spent fuel transfers to dry cask storage. However, the Commission ordered additional studies on this issue. Although the NRC Chairman did agree on the generic expedited transfer assessment as defined in the current three-phased program be closed, she did not approve the elimination of further generic assessment as it related to broader spent fuel management alternatives but rather called on further consideration of longer transfer times to dry storage, direct discharge into a dispersed pattern, alternate disposal patterns, alternative storage rack designs, and longer term research on accident tolerant fuel.