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State Nuclear Safety Inspector Office
Maine CDC – DHHS

September 2012 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 facility located in Wiscasset, Maine.

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

LOCAL:

- The French/German TV station "Arte" conducted separate interviews with Eric Howes, Public and Government Affairs Director for Maine Yankee, Jay Hyland, Manager of the State's Radiation Control Program, the State Nuclear Safety Inspector (SNSI), and Mr. Raymond Shadis, Executive Director of Friends of the Coast. The main topic of discussion with the SNSI was his Maine Yankee decommissioning experience. Besides being interested in nuclear reactor decommissioning, the television crew was also interested in spent nuclear fuel storage. Both are topics of interest in France and Germany, especially in the aftermath of the 2011 Fukushima incidents in Japan.
- Maine Yankee's Community Advisory Panel (CAP) held its annual meeting at the Davis Island Grill in Edgecomb. Maine Yankee and the State Nuclear Safety Inspector provided updates of their activities on the spent fuel storage facility in Wiscasset. Maine Yankee noted that they had installed a new weather station at the site to monitor chlorides in the air for stress corrosion cracking in stainless steel as a possible degradation mechanism for extended storage of the spent fuel canisters. The meeting also coincided with the CAP's 15th anniversary of its inception. The CAP was initially formed to provide advice to Maine Yankee on its decommissioning and act as a liaison to the public. When the plant was fully decommissioned in the fall of 2005, the CAP changed its charter from decommissioning to spent fuel storage and removal and has maintained this focus to the present. Maine Yankee mentioned they appreciated the significant contribution from each CAP member and remarked that the "panel's efforts led the entire company to change their thinking on what Maine Yankee needed to accomplish."

The national highlights primarily focused on the Nuclear Regulatory Commission, proposed federal legislation, and litigation as noted below:

National:

- The Nuclear Regulatory Commission (NRC) directed the staff to conduct a two year environmental study and revision to its waste confidence rule to satisfy the deficiencies noted in the Appeals Court decision. The Appeals Court declared that the NRC Waste Confidence Decision and Temporary Storage Rule were major federal actions requiring either an environmental impact statement or an environmental assessment indicating a finding of no significant impact. The Court also held that the NRC should have

evaluated the environmental impacts with no repository available. The Court also found deficiencies in the NRC's consideration of spent fuel pool leaks and fires. The Commission directed the staff to ensure ample opportunity for public engagement and comment.

- The Senate Energy and Natural Resources Committee held a hearing on the Nuclear Waste Administration Act of 2012. The bill closely tracked the recommendations from the Blue Ribbon Commission's report that was issued last January. However, the bill did depart from the BRC's recommendation of a federal corporation, similar to the Tennessee Valley Authority, to administer the nation's nuclear waste stockpile. The bill instead recommended a new, independent executive branch agency. Although the bill would allow for one pilot storage facility to be built before a host community agreed to a repository, the bill did require "an agreement for a repository before allowing the new agency to store nuclear waste at other storage facilities." The other three senior senators, who assisted in drafting the legislation, parted ways on the issue of storage facilities. Since they wanted to move faster with storage, they expressed concern the legislation's insistence on prior congressional approval for a repository location as delaying progress for decades in the moving of spent nuclear fuel to consolidated storage facilities. Most of the testimony at the hearing expressed concerns over the bill's creation of another federal agency instead of a federal corporation and the mandate of prohibiting interim storage until the Nuclear Regulatory Commission received an application for a permanent disposal facility. Senator Cantwell from Washington raised the specter of more delays by suggesting disposing of defense-related wastes separate from commercial nuclear fuel wastes instead of the commingling plan provided under the Nuclear Waste Policy Act.
- The Electric Power Research Institute (EPRI) released an update to its 2010 study on the "Impacts Associated with Transfer of Spent Nuclear Fuel from Spent Fuel Storage Pools to Dry Storage after five Years of Cooling, Revision 1." The study was updated in response to the disaster at the Fukushima nuclear reactors. The earlier EPRI study looked at the benefits and risks of early movement toward dry storage. The study confirmed that there were operational trade-offs, such as higher radiation exposures to workers, and little real gain. Besides increasing the collective radiation dose to plant workers, the early movement to dry cask storage could cost the nuclear industry upwards of \$4 billion and take as long as 10 to 15 years to accomplish.
- Entergy Nuclear Palisades sued the federal government for \$100 million for not taking possession and disposing of its used nuclear fuel at its two Michigan plants, Palisades and Big Rock Point. The Big Rock Point site is fully decommissioned. Entergy's lawsuit was the latest legal challenge on the federal government's failure to create a centralized disposal location for used nuclear fuel. With this latest filing all of Entergy's nine nuclear stations have filed suit against the U.S. government.
- The petitioners (Aiken County, South Carolina, the three business leaders from the Tri-City area of Hanford Washington, the states of South Carolina and Washington, the National Association of Regulatory Utility Commissioners, and Nye County, Nevada) filed its status report with the U.S. Court of Appeals for the District of Columbia on the mandamus case to compel the Nuclear Regulatory Commission to resume the license proceedings on Yucca Mountain geologic repository. In August the Court ordered the case to be held in abeyance pending congressional deliberations on Fiscal Year 2013 appropriations. The petitioners pointed out that the House and Senate had passed and President Obama signed into law a continuing resolution that did not contain any specific text relevant to the case. Consequently, the petitioners requested that the Court issue the writ of mandamus.

Introduction

As part of the Department of Health and Human Services' responsibility under Title 22, Maine Revised Statutes Annotated (MRSA) §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 as opposed to copies of documents attached to the report for those readers who prefer reviewing the documentation cited.

Independent Spent Fuel Storage Installation (ISFSI)

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

There were no fire-related impairments for the month. Although there were no security-related impairments for the month, there were fourteen security events logged and were all related to transitory and environmentally related camera issues.

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

1st CR: Was written to document a person who parked at the site entrance road.

2nd CR: Documented a person taking photos at the site entrance.

3rd CR: Was written to track the closure of open items in a trend analysis.

4th CR: Documented the removal of a fire extinguisher from a vehicle that was not replaced.

5th CR: Documented a radiation detector having a dead battery. The battery was replaced.

6th CR: Documented that the dead battery would not hold a charge.

7th CR: Was written to document the inconsistent use of a procedure attachment. Guidance was provided to ensure consistent use of the attachment.

8th CR: Documented the use of an outdated procedure attachment.

9th CR: Was written to document a missing page in a testing packet.

10th CR: Documented a procedure referencing a terminated license.

11th CR: Was written to address a controlled copy document not containing all the previous revisions.

12th CR: Documented the deficiencies associated with a regular exit light at the Security and Operations Building needing attention.

13th CR: Documented an oil stain found at the entrance gate. Suspected a construction vehicle associated with the Central Maine Power switchyard work, but none was found.

14th CR: Was written to document the issuance of a procedure with an outdated attachment. The procedure was reissued with the correct attachment.

15th CR: Documented a minor leak from a service technician's vehicle. The spill was cleaned up and the vehicle removed from the site.

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 Program's website.

- 16th CR: Documented a new sign not containing the appropriate reference to the law. A new sign was ordered.
- 17th CR: Was written to document another spill of less than one half cup from a recently repaired site vehicle.
- 18th CR: Documented a protocol error by the facility's off-site security vendor.
- 19th CR: Was written to document another individual taking pictures at the site entrance.
- 20th CR: Documented a serial number error on an inventory sheet.

Other ISFSI Related Activities

1. On September 3rd a person was parked at the site entrance road. The local law enforcement agencies (LLEA) were notified and intercepted the individual. Apparently, the person was test driving a car. The LLEA counseled the individual. The Nuclear Regulatory Commission's (NRC) Operations Center was not notified. Later on that day, another person was observed taking photos at the site entrance. The LLEA was again notified and intercepted the individual on Route 1. The person was counseled. The NRC Operations Center was notified.
2. On September 5th the French/German TV station "ARTE" conducted separate interviews with Eric Howes, Public and Government Affairs Director for Maine Yankee, Jay Hyland, Manager of the State's Radiation Control Program, the State Nuclear Safety Inspector (SNSI), and Mr. Raymond Shadis, Executive Director of Friends of the Coast. The main topic of discussion with the SNSI was his Maine Yankee decommissioning experience. The television crew was interested in reactor decommissioning and spent nuclear fuel storage which are topics of interest in France and Germany, especially in the aftermath of the 2011 Fukushima incidents in Japan.
3. On September 18th Maine Yankee submitted its annual special nuclear material report to the Department of Energy. The report identified and quantified those special materials within the used nuclear fuel that are fissionable, such as Uranium-235 and Plutonium-239.
4. On September 20th Maine Yankee's Community Advisory Panel (CAP) held its annual meeting at the Davis Island Grill in Edgecomb. Maine Yankee and the State Nuclear Safety Inspector provided updates of their activities on the spent fuel storage facility in Wiscasset. Maine Yankee noted that they had installed a new weather station at the site to monitor chlorides in the air for stress corrosion cracking in stainless steel as a possible degradation mechanism for extended storage of the spent fuel canisters. The meeting also coincided with the CAP's 15th anniversary of its inception. The CAP was initially formed to provide advice to Maine Yankee on its decommissioning and act as a liaison to the public. When the plant was fully decommissioned in the fall of 2005, the CAP changed its charter from decommissioning to spent fuel storage and removal and has maintained this focus to the present. Maine Yankee mentioned they appreciated the significant contribution from each CAP member and remarked that the "panel's efforts led the entire company to change their thinking on what Maine Yankee needed to accomplish."
5. On September 25th another individual was observed taking pictures at the site entrance. The local law enforcement agencies (LLEA) were notified and intercepted the individual. The person was a former site worker. He was counseled by the LLEA and released. The NRC Operation's Center was not notified.

Environmental

The thermoluminescent dosimeters² (TLDs) for the State's environmental radiation surveillance of the ISFSI were received on September 17th. Three of the seven controls were returned on September 18th to the California vendor for processing to determine the shipping exposure. The TLDs will be placed in the field at the end of the quarter.

Other Newsworthy Items

1. On September 5th the quarterly conference call of the Federal Energy Regulatory Commission rate case settlement briefing on spent fuel storage issues was held. The group was briefed on the status of the Phase I and II cases. The federal government filed a petition with the U.S. Court of Appeals to reconsider its unanimous decision awarding the three Yankee companies (Maine Yankee, Connecticut Yankee, and Yankee Rowe) nearly \$160 million for the federal government's failure to take the used nuclear fuel. The three companies were later notified that the U.S. Court of Appeals for the DC Circuit denied the federal government's petition for rehearing of the Yankee companies' Phase I spent fuel cases. The federal government has 90 days in which to appeal the Court's decision by challenging the Claims Court's favorable decision with the U.S. Supreme Court. The Phase II case record is closed and awaiting a decision. The updates also included the status of congressional appropriation bills and further deliberations on a six-month continuing resolution, Senator's Bingaman comprehensive legislation to implement the Blue Ribbon's Commission recommendations, the status of the congressionally mandated July 26th report from the Department of Energy (DOE) on how they will implement the Blue Ribbon Commission's recommendations, the DOE's visits to the three Yankee companies sites at the end of August on their available transportation infrastructure, the Court's current abeyance on the mandamus case pending congressional deliberations on appropriations, the Nuclear Regulatory Commission's (NRC) waste confidence ruling, subsequent litigation, and Court order vacating the NRC's decision and ruling, and the NRC ISFSI security rule, which could change the scope of security at standalone ISFSIs. Additional updates were provided on activities of the Decommissioning Plant Coalition, the Nuclear Energy Institute, the Nuclear Waste Strategy Coalition, the National Association of Regulatory Utility Commissioners, and the New England Council. It was mentioned that after 75 years the New England Governor's Conference (NEGCG) ceased operating on August 31st and that the Coalition of Northeastern Governors will make a determination on which NEGCG functions will be continued and at what level.
2. On September 6th the Nuclear Regulatory Commission (NRC) directed the staff to conduct a two year environmental study and revision to its waste confidence rule to satisfy the deficiencies noted in the Appeals Court decision. The Appeals Court declared that the NRC Waste Confidence Decision and Temporary Storage Rule were major federal actions requiring either an environmental impact statement or an environmental assessment indicating a finding of no significant impact. The Court also held that the NRC should have evaluated the environmental impacts with no repository available. The Court also found deficiencies in the NRC's consideration of spent fuel pool leaks and fires. The Commission directed the staff to ensure ample opportunity for public engagement and comment. The [news release](#) web link can be accessed through the underlined text.
3. On September 6th Nuclear Waste Strategy Coalition (NWSC) held its first bi-weekly conference call to discuss at length its draft testimony for the Senate Energy and Natural Resources Committee's

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.

hearing on Senator Bingaman's proposed legislation to manage the nation's used nuclear fuel and high-level waste. The stakeholders provided extensive feedback during the call as to the testimony's content, tone, points to highlight, and recommendations for the congressional record. The NWSC is an ad hoc organization of state utility regulators, state attorneys general, consumer advocates, electric utilities, local governments, tribes, and associate members. Its primary focus is to protect ratepayer payments into the Nuclear Waste Fund and to support the removal and ultimate disposal of spent nuclear fuel and high-level radioactive waste currently stranded at numerous sites across the nation.

4. On September 7th the Southern Association of Regulatory Utility Commissioners (SEARUC) sent a letter to the Senate Majority and Minority Leaders, the Speaker of the House and the Minority Leader of the House calling on Congress to:
 - Call on the Department of Energy to remove the spent nuclear fuel from reactor sites in our region,
 - Protect the ratepayers by ensuring the Nuclear Waste Fund is used specifically for managing the nation's used nuclear fuel, and
 - Continue the Nuclear Regulatory Commission's license review of the Yucca Mountain application for a final determination of suitability

The [letter's](#) web link can be accessed through the underlined text.

5. On September 7th the U.S. Nuclear Waste Technical Review Board issued a meeting notice that its next meeting in Idaho Falls, Idaho will focus on the Department of Energy's Office of Used Fuel Disposition activities for packaging, transporting and disposing of spent nuclear fuel and high-level waste. For more information the [notice's](#) web link can be accessed through the underlined text and clicking on the September 7th press release.
6. On September 12th the [Senate Energy and Natural Resources Committee](#) held a hearing on the Nuclear Waste Administration Act of 2012. The bill closely tracked the recommendations from the Blue Ribbon Commission's report that was issued last January. However, the bill did depart from the BRC's recommendation of a federal corporation, similar to the Tennessee Valley Authority, to administer the nation's nuclear waste stockpile. The bill instead recommended a new, independent executive branch agency. Although the bill would allow for one pilot storage facility to be built before a host community agreed to a repository, the bill did require "an agreement for a repository before allowing the new agency to store nuclear waste at other storage facilities." The other three senior senators, who assisted in drafting the legislation, parted ways on the issue of storage facilities. Since they wanted to move faster with storage, they expressed concern the legislation's insistence on prior congressional approval for a repository location as delaying progress for decades in the moving of spent nuclear fuel to consolidated storage facilities. Most of the testimony at the hearing expressed concerns over the bill's creation of another federal agency instead of a federal corporation and the mandate of prohibiting interim storage until the Nuclear Regulatory Commission received an application for a permanent disposal facility. Senator Cantwell from Washington raised the specter of more delays by suggesting disposing of defense-related wastes separate from commercial nuclear fuel wastes instead of the commingling plan provided under the Nuclear Waste Policy Act. Written testimony from two panels of witnesses can be found at the web site's underscored text above. Additional written testimony was submitted by the following organizations, the [Energy Communities Alliance](#), the [National Association of Regulatory Utility Commissioners](#), the [Nuclear Energy Institute](#), the [National Conference of State Legislatures](#), and the [Nuclear Waste Strategy Coalition](#). Remarks by the Committee Chairman, [Senator Bingaman](#) from New Mexico, and Ranking Committee Member, [Senator Murkowski](#) from Alaska are also included.

7. On September 12th-13th the Nuclear Regulatory Commission held a Spent Fuel Storage and Transportation Regulatory Conference. The purpose of the conference was to discuss regulatory and technical issues. Topics included operating experience, non-spent fuel issues, high burnup fuel impact on cladding integrity and fuel reconfiguration, vacuum drying events and shielding issues. The meeting's [notice and agenda's](#) web link can be accessed through the underlined text.
8. On September 13th the Electric Power Research Institute (EPRI) released an update to its 2010 study on the "Impacts Associated with Transfer of Spent Nuclear Fuel from Spent Fuel Storage Pools to Dry Storage after five Years of Cooling, Revision 1." The study was updated in response to the disaster at the Fukushima nuclear reactors. The earlier EPRI study looked at the benefits and risks of early movement toward dry storage. The study confirmed that there were operational trade-offs, such as higher radiation exposures to workers, and little real gain. Besides increasing the collective radiation dose to plant workers by nearly 2000 units, the early movement to dry cask storage could cost the nuclear industry upwards of \$4 billion and take as long as 10 to 15 years to accomplish.
9. On September 13th the Nuclear Waste Strategy Coalition held a second bi-weekly conference call to specifically update its membership on the previous day's Senate hearing on Senator Bingaman's bill on nuclear waste management, the status of the Continuing Resolution for keeping the government running, the status of the Department of Energy's July 26th report to Congress, and the recent Nuclear Regulatory Commission (NRC) Waste Confidence Environmental Impact Statement announcement. Testimonies from one of the Blue Ribbon Commission (BRC) members and a nuclear industry representative expressed concerns over the proposed legislation's creation of another federal agency to manage the nation's nuclear waste as opposed to the BRC's recommendation of a federal corporation. They viewed the creation of another federal agency as being subject to the same congressional budgetary constraints and political appointments creating long term stability concerns that plagued the Department of Energy. What's more, when queried by the Committee's Ranking Member, Senator Murkowski, DOE'S Assistant Secretary to Nuclear Energy, Dr. Lyons', was unable to provide a date or timeframe on when the DOE report would be available to Congress. Finally, the language in the Continuing Resolution did not provide any guidance to the Court on the mandamus case. The prevailing opinion was that the Court will most likely uphold the mandamus case and compel the NRC to resume the licensing proceedings on Yucca Mountain.
10. On September 27th the Nuclear Waste Strategy Coalition (NWSC) held its third bi-weekly conference call to update its membership on the three litigation cases before the Court (the nuclear waste fund fee suspension, the waste confidence rule, and the mandamus case), the Department of Energy's report that was due July 26th on their roadmap for implementing the Blue Ribbon Commission's recommendations, congressional updates on appropriations, and upcoming events, workshops and meetings. The NWSC is an ad hoc organization of state utility regulators, state attorneys general, consumer advocates, electric utilities, local governments, tribes, and associate members. Its primary focus is to protect ratepayer payments into the Nuclear Waste Fund and to support the removal and ultimate disposal of spent nuclear fuel and high-level radioactive waste currently stranded at numerous sites across the nation.
11. On September 27th Entergy Nuclear Palisades sued the federal government for \$100 million for not taking possession and disposing of its used nuclear fuel at its two Michigan plants, Palisades and Big Rock Point. The Big Rock Point site is full decommissioned. Entergy's lawsuit was the latest legal challenge on the federal government's failure to create a centralized disposal location for used nuclear fuel. With this latest filing all of Entergy's nine nuclear stations have filed suit against the U.S. government.

12. On September 28th the petitioners (Aiken County, South Carolina, the three business leaders from the Tri-City area of Hanford Washington, the states of South Carolina and Washington, the National Association of Regulatory Utility Commissioners, and Nye County, Nevada) filed its status report with the U.S. Court of Appeals for the District of Columbia on the mandamus case to compel the Nuclear Regulatory Commission to resume the license proceedings on Yucca Mountain geologic repository. In August the Court ordered the case to be held in abeyance pending congressional deliberations on Fiscal Year 2013 appropriations. The petitioners pointed out that the House and Senate had passed and President Obama signed into law a continuing resolution that did not contain any specific text relevant to the case. Consequently, the petitioners requested that the Court issue the writ of mandamus. The [petitioner's court filing](#) can be accessed through the underlined text.
13. On September 30th the last two dozen jobs at the Yucca Mountain project expired. The remaining federal jobs were part of a small group who received positions for two years as part of the funding from the American Recovery and Resource Act. At the height of the project 2750 federal and contract employees worked on Yucca Mountain.
14. Two counties and two municipalities in New Mexico have combined to form the Eddy-Lea Energy Alliance. The goal of the Alliance is to convince the federal government to cite a spent fuel storage site in their area. The site would be midway between Carlsbad and Hobbs, New Mexico and house nearly 70,000 metric tons of nuclear waste currently stored at nuclear power plants. The Alliance is also pursuing plans to host a geologic repository for disposing of the nation's nuclear waste. Their plans include pushing for a federal study to determine if their underground salt formations are suitable for such a repository.

Other Related Items:

1. On August 24th the Prairie Island Indian Community petitioned the Nuclear Regulatory Commission (NRC) for a critical look at the risks of on-site storage since outdoor casks will likely remain in place for decades. The Indian Community's land borders the Minnesota Prairie Island nuclear power plant. The Tribe was one of the original petitioners in the lawsuit that claimed that the NRC overstepped its bounds in its 2010 Waste Confidence Decision and Temporary Storage Rule by not conducting an environmental impact statement on extended storage. The U.S. Court of Appeals for the D.C. Circuit agreed and vacated the NRC's decision and rule.