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May 29, 2015

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 October-December 2013 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

October 2013 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 Legislature 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 geologic repository for the disposal of spent nuclear fuel. The report's highlights assist readers to focus on the significant activities that took place during the month, both locally and nationally.

Local:

- The Nuclear Regulatory Commission (NRC) forwarded a letter to Maine Yankee notifying them that the recent merger of Maine Public Service and Bangor Hydro Electric Company did not constitute a direct or indirect license transfer of Maine Yankee's federal license. Maine Public Service and Bangor Hydro combined own 12% of Maine Yankee.
- The legislatively mandated Group, representing the Department of Environmental Protection (DEP), the State Police, the Public Advocate, the Department of Health and Human Services' Radiation Control Program and Maine Yankee, met for its quarterly meeting to discuss the State's and Maine Yankee's activities pertinent to the oversight of the ISFSI. The State Inspector briefed the group on his participation in the National Working Group making recommendations to the Department of Energy (DOE) on funding state grants for spent nuclear fuel shipments, the status of the State's Confirmatory Summary Report on the Maine Yankee decommissioning, and his observance of a national mock exercise of a derailed spent fuel shipment in Fort Wayne, Indiana. Maine Yankee briefed the Group on the new maintenance building that was constructed in the old staff building parking lot to allow for the construction of seven new offices in the Security and Operations Building. Maine Yankee informed the Group that it had reported to DOE the characteristics of all the spent fuel in its canisters. They also noted that the DEP required chemical sampling of the wells for the fall period would start the following week with the spring and summer testing performed next year. Maine Yankee provided an update on the national scene. The noteworthy news included the Court of Appeals recent ruling that the NRC must resume the Yucca Mountain license proceeding that it suspended two years earlier. Most of the participants in the initial licensing proceeding were urging the NRC to complete the Safety Evaluation Report on the Yucca repository. In addition, Maine Yankee expressed their hope that the Federal Court of Claims would issue its verdict before the end of the year on their second round of lawsuits against the federal government for not taking the spent fuel. Maine Yankee expected the Court to rule in their favor considering the Court's favorable ruling in their first round of lawsuits with the other two Yankee plants in New England, Connecticut Yankee and Yankee Rowe in Massachusetts. Moreover, Maine Yankee also noted that in August they filed their third round of lawsuits against the federal government.
- Maine Yankee held its annual emergency plan exercise with participation from local and state officials. The exercise involved a small single engine plane that crashed into the north berm of the ISFSI and scattered burning debris into the ISFSI causing some cask temperature sensors to read high. The scenario also included some visible chipping of a vertical concrete cask with rebar exposed and

increased radiation levels. State Police and the Wiscasset Police Department were called in and the National Guard was alerted. However, it was determined early on that this was an accident and not a terrorist attack as the pilot had issued a "Mayday" distress call just before the crash. The Wiscasset Ambulance was called in to extract the pilot.

The national highlights primarily focused on NRC and federal court activities.

National:

- The NRC filed with the U.S. Court of Appeals for the D.C. Circuit its opposition to the petitioners' filing for a writ of mandamus and an emergency motion for preliminary injunction relief over the NRC Chairman's decision not to recuse herself from the Yucca Mountain license proceeding. The NRC maintained that the petitioners had not complied with the Federal Rules of Appellate Procedure for seeking injunctive relief, have not demonstrated that the Chairman has pre-judged the Yucca Mountain license application, failed to prove that equitable relief was necessary, and their claim was not ripe since the Chairman had not issued any final order that affected the petitioners. On the same day the NRC also filed a notice of unavailability due to the government shutdown. However, the NRC did stipulate it would make available any or all counsel for oral argument should the Court order it.
- The NRC Chair sent letters to the Senate's Subcommittee Chair on Clean air and Nuclear Safety and the Chair of the House's Committee on Energy and Commerce transmitting the first monthly status report on the NRC's activities and expenditures from the Court's August 13 Order through the end of September. The status report indicated the following activities would be considered:
 - Completion of the Safety Evaluation Report on the Yucca Mountain license application,
 - Completion of the DOE's supplement to their Yucca Mountain Environmental Impact Statement,
 - Resolving contentions through adjudication,
 - Reconstituting the Licensing Support Network, and
 - Restart of external litigation against the NRC.

The NRC indicated they had expended \$51,507 from mid-August through the end of September, which left \$11,004,517 in unobligated funds for the resumption of the Yucca Mountain licensing proceeding. They did note that \$2,493,290 remained unexpended but obligated and that those funds could be made available pending closeout audits of some outstanding contracts. An identical letter was sent to the Chair of the House's Committee on Energy and Commerce.

- Six Republican Senators from the states of Alabama, Arkansas, Idaho, Louisiana, Mississippi, and Wyoming forwarded a letter to NRC Chairman Macfarlane urging the Chairman to promptly comply with the August 13 Court of Appeals Order to resume the Yucca Mountain licensing process. The Senators strongly recommended that the NRC complete the Safety Evaluation Report on the proposed repository.
- The NRC issued a news release extending the public comment period until December 20 over its proposed waste confidence rule and generic environmental study on extended storage of spent nuclear fuel. The extension was necessary to accommodate five public meetings that were cancelled due to the government shutdown.
- The D.C. Circuit Court of Appeals issued an Order denying the rehearing en banc (before the full Court) requested by the State of Nevada on the Court's August ruling for restarting the Yucca Mountain licensing proceeding. Since the Supreme Court rarely grants a writ of certiorari, Nevada's Chief Deputy Attorney General stated she would not appeal the Court's denial to the Supreme Court.
- The NRC held a public meeting of its draft waste confidence generic environmental impact statement in Chelmsford, Massachusetts. The purpose of the meeting was for the NRC staff to provide an overview of the Waste Confidence draft generic environmental impact statement and proposed rule. There were 79 attendees, which included members of the public, representatives from State and local government

from Massachusetts, Maine, New Hampshire, and New York, besides members from industry and public advocacy groups. Questions raised during the public comment period addressed the three deficiencies identified by the U.S. Court of Appeals, namely indefinite storage of spent nuclear fuel, spent fuel pool leaks and fires. Numerous topics and concerns were expressed by 37 individuals during the public comment period. Some advocated for the safe storage of spent nuclear fuel and a permanent geologic repository while others supported the current rulemaking process. Most opposed nuclear power. Some proposed phasing out nuclear power and replacing it with renewable energy. Some advocated for the expedited transfer of spent fuel from pools to dry concrete casks in hardened onsite storage facilities. Others were concerned with impacts from climate change to earthquakes and tsunamis impacting coastal facilities, such as the Fukushima reactors in Japan. Some expressed opposition to the transportation of spent nuclear fuel while others expressed concern over the health effects of radiation. There was vocal opposition to local plants, especially Vermont Yankee, Pilgrim, and Seabrook.

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

There was one fire-related impairment and that was due to an electrical fault in the fire suppression panel in the document room. The system was immediately taken out of service and compensatory measures initiated. Further troubleshooting revealed a panel transformer problem requiring a complete replacement of the panel. A panel was ordered.

There was one security-related impairment for the month that involved an internet connection failure due to an off-site system outage. Compensatory measures were put into place until the service provider repaired the system three days later. There were sixteen security events logged for the month. Thirteen were due to transient environmental conditions. The remaining three were security related and were cleared within one day.

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

- 1st CR: Was written to document a radiation monitor losing contact multiple times. The system was monitored for several days. The system was rebooted and the condition cleared. Additional monitoring was performed over several days and the issue never re-appeared.
- 2nd CR: Documented that the attachment point on a weapon sling came apart. The unit was repaired the same day.
- 3rd CR: Documented that the wording in a security related procedure was unclear and inconsistent with other documents. Site personnel were briefed on the issue within a day. The procedure will be revised as part of the formal revision cycle.
- 4th CR: Was written to document the fire suppression problem described in the fire-related impairment above.
- 5th CR: Was written to document a backup radio found without power. The problem was a blown fuse that was replaced the same day.
- 6th CR: Documented that during a gutter inspection on the Security and Operations Building a static discharge was experienced between the building and the man lift. Work was immediately terminated. Further investigation revealed that temporary ground strap should be used whenever work is performed in proximity to the Central Maine Power switchyard.
- 7th CR: Was written to document that internet connection failure described in the security impairment above.

Other ISFSI Related Activities

1. On October 1, Maine Yankee conducted its annual emergency plan training at the Maine Emergency Management Agency (MEMA) offices with representatives from MEMA, State Police, Department of Health and Human Services, Department of Environmental Protection, and the National Guard's Civil Service Team.
2. On October 8, the NRC forwarded a letter to Maine Yankee notifying them that the recent merger of Maine Public Service and Bangor Hydro Electric Company did not constitute a direct or indirect license transfer of Maine Yankee's federal license. Maine Public Service and Bangor Hydro combined own 12% of Maine Yankee.
3. On October 8, the legislatively mandated Group, representing the Department of Environmental Protection (DEP), the State Police, the Public Advocate, the Department of Health and Human Services' Radiation Control Program and Maine Yankee, met for its quarterly meeting to discuss the State's and Maine Yankee's activities pertinent to the oversight of the ISFSI. The State Inspector briefed the group on his participation in the National Working Group making recommendations to the Department of Energy (DOE) on funding state grants for spent nuclear fuel shipments, the status of the State's Confirmatory Summary Report on the Maine Yankee decommissioning, and his observance of a national mock exercise of a derailed spent fuel shipment in Fort Wayne, Indiana. Maine Yankee briefed the Group on the new maintenance building that was constructed in the old staff building parking lot to allow for the construction of seven new offices in the Security and Operations Building. Maine Yankee informed the Group that it had reported to DOE the characteristics of all the spent fuel in its canisters with more details to follow-up in the future. They also noted that the DEP required chemical sampling of the wells for the fall period would start the following week with the spring and summer testing performed next year. Maine Yankee provided an update on the national scene. The noteworthy news included the Court of Appeals recent ruling that the NRC must resume the Yucca Mountain license proceeding that it suspended two years earlier. Most of the participants in the initial licensing

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.

proceeding were urging the NRC to complete the Safety Evaluation Report on the Yucca repository. In addition, Maine Yankee expressed their hope that the Federal Court of Claims would issue its verdict before the end of the year on their second round of lawsuits against the federal government for not taking the spent fuel. Maine Yankee expected the Court to rule in their favor considering the Court's favorable ruling in their first round of lawsuits with the other two Yankee plants in New England, Connecticut Yankee and Yankee Rowe in Massachusetts. Moreover, Maine Yankee also noted that in August they filed their third round of lawsuits against the federal government.

4. On October 23, Maine Yankee held its annual emergency plan exercise with participation from local and state officials. The exercise involved a small single engine plane that crashed into the north berm of the ISFSI and scattered burning debris into the ISFSI causing some cask temperature sensors to read high. The scenario also included some visible chipping of a vertical concrete cask with rebar exposed and increased radiation levels. State Police and the Wiscasset Police Department were called in and the National Guard was alerted. However, it was determined early on that this was an accident and not a terrorist attack as the pilot had issued a "Mayday" distress call just before the crash. The Wiscasset Ambulance was called in to extract the pilot.
5. In October, the State Inspector renewed his safeguards training to maintain intact his access to Safeguards and Security Sensitive Information.

Environmental

The State received the 2013 third quarter results in October from the field replacement of its thermoluminescent dosimeters around the ISFSI and the Maine Yankee industrial site. The results from the quarterly TLD change out continued to illustrate three distinct exposure groups: elevated, slightly elevated, and normal. The high stations identified were G and K with an average of 27.6 milliRoentgens² (mR).

There were six stations in the slightly elevated group (E, F, J, L, O, and Q) with an average of 25.4 mR. Some stations continue to trade places due to background variations. Four remained and two others traded places from the previous quarter. For example, stations E and O that were in the normal group last quarter returned to the slightly elevated group this quarter. These deviations will be tracked over the next several quarters to see if a pattern develops. There were nine stations (A, B, C, D, H, I, M, N, and P) in the normal group as opposed to the previous quarter's eleven and they averaged 22.4 mR.

The Maine Yankee industrial site TLDs averaged 21.9 mR, which is comparable to the normally expected background radiation levels of 15 to 30 mR for the coast of Maine. Some of the background levels are highly dependent upon tidal effects, and local geology. However, virtually all the stations exhibit seasonal fluctuations that are affected by the out gassing of the naturally radioactive gas, Radon.

The four control TLDs that were stored at the State's Health and Environmental Testing Laboratory (HETL) in Augusta averaged about 11.8 mR. Although the storing of the control TLDs at HETL's pre-World War II steel vault lowers the natural background values, the 11.8 mR value for this quarter was higher than last quarter's control results of 10.4 mR. Even though seasonal fluctuations were expected, the high background from one quarter to the next in a shielded environment was very unusual. Discussions with the vendor were on-going. Although we have not pinpointed the cause of the fluctuations yet, there was no doubt that something was

² A milliRoentgen (mR) is a measurement of radiation exposure. For a further explanation, refer to the glossary on the Radiation Program's website.

impacting the TLDs. The controls were initially part of a program to better quantify the individual impacts of storage and transit exposures on the TLDs. However, as indicated above, they also have been instrumental in pointing out changes that would normally have not been captured if it were not for the program.

As a further application of this TLD control assessment, on September 12 three of the seven control TLDs received for the fourth quarter of 2013 were returned to the State's TLD vendor, Global Dosimetry in California, for an analysis of the transportation exposures. The initial set of results from the control TLD badges returned indicated an average of 11.9 mR for the total exposure picked up between leaving the vendor, arriving at the State and then immediately being shipped back and received by the vendor. The 11.9 mR was more than double the last quarter's reported 5.5 mR transit badges, which is very troubling. After two years the State is starting to see signs of a pattern developing for the different quarters. Nevertheless, it is too early to tell if the pattern is real. More time is needed to verify if the pattern continues. Besides seasonal and daily fluctuations in the background, modest increases or decreases could be attributed to an extra few days or a few days less transit. However, the extra transit times or background fluctuations would not explain the doubling of values for this quarter.

The field control TLDs at Ferry Landing on Westport Island, the Edgecomb Fire Station and the roof of the State's Health and Environmental Testing Laboratory read 23.7, 25.2, and 21.2 mR, respectively.

As noted in earlier reports, the State's maintains an environmental air sampler on the roof of HETL for local or national events. The air sampler was extremely instrumental during the Fukushima event in Japan over two years ago in quantifying the levels of radioactivity that was coming from the cripple reactors. This year's third quarter results did not identify any unusual radioactive elements and were within historical ranges for both gross beta³ and Beryllium-7, a naturally radioactive cosmogenic element that is produced from cosmic rays interacting with the nitrogen and oxygen atoms in the atmosphere. The gross beta results ranged from 21.3 to 47.8 femto-curies per cubic meter (fCi/m³)⁴. A composite of the six bi-weekly air filter samples was used to measure the Beryllium-7's concentration of 95.4 fCi/m³.

For informational purposes Figure 1 on page 7 illustrates the locations of the State's 17 TLD locations in the vicinity of the ISFSI. The State's locations are identified by letters with the highest location being station K this quarter as opposed to the historically high station G.

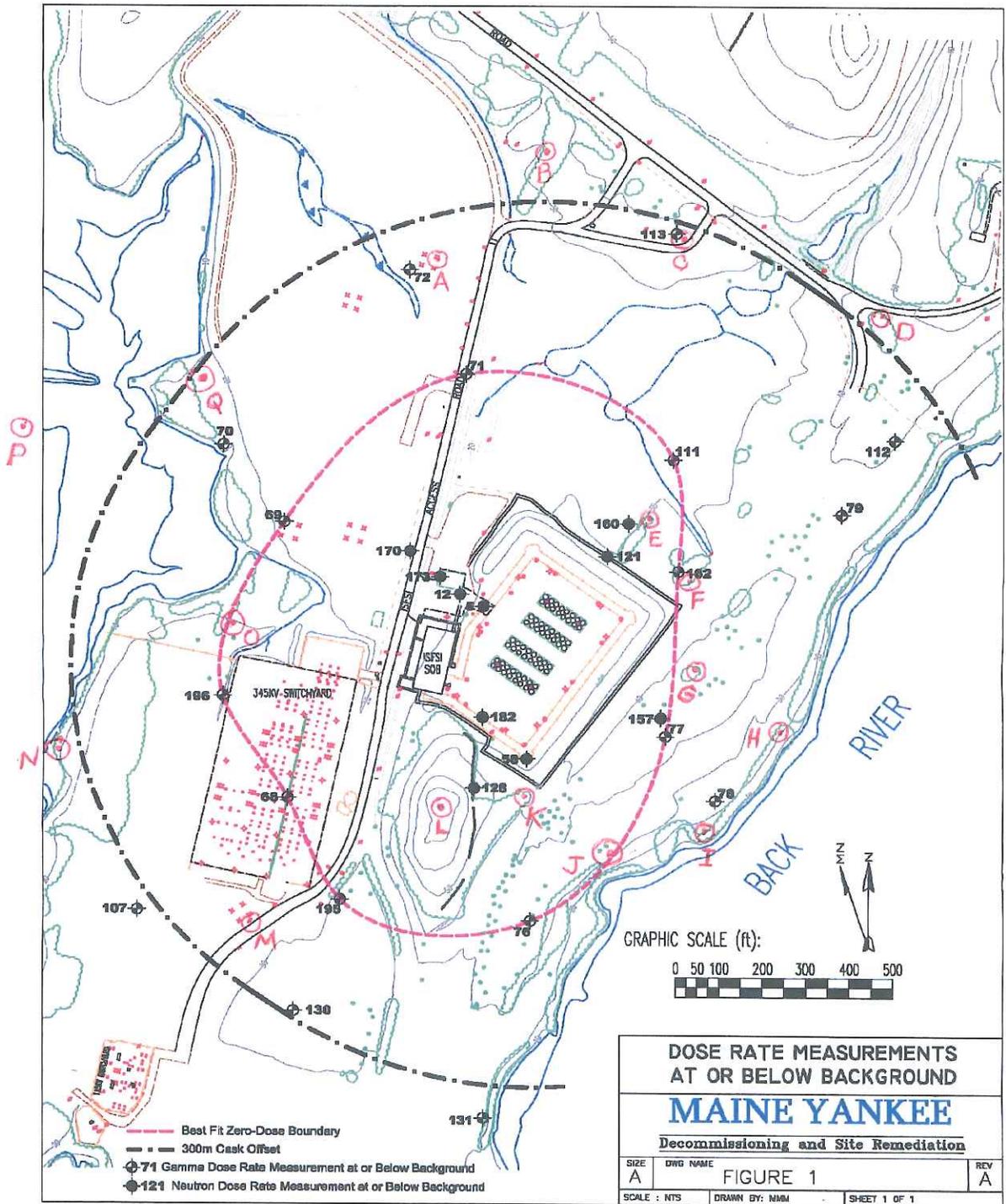
Other Newsworthy Items

1. On October 1, the petitioners (Aiken County, South Carolina, Nye County, Nevada, and the state of South Carolina) filed a response with the U.S. Court of Appeals for the District of Columbia Circuit to the NRC's motion for an extension of time to respond to the petitioners' initial filing for expedited review and preliminary injunction on the NRC Chairman's decision to not recuse herself from the resumption of the Yucca Mountain license proceeding. The petitioners provided their basis for maintaining that the NRC Chair should recuse herself and stated that the Court should act on their petition to ensure their right to an impartial adjudicator and the public's right to an impartial panel on the Yucca Mountain licensing process. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.

³ Gross Beta is a simple screening technique that measures the total number of beta particles emanating from a potentially radioactive sample. High values would prompt further analyses to identify the radioactive species. Refer to the glossary on the website for further information.

⁴ A fCi/m³ is an acronym for a femto-curie per cubic meter, which is a concentration unit that defines how much radioactivity is present in a particular air volume, such as a cubic meter. A "femto" is a scientific prefix for an exponential term that is equivalent to one quadrillionth (1/1,000,000,000,000,000).

Figure 1



Other Newsworthy Items

2. On October 1, the Spanish Government Agency, ENRESA, awarded Westinghouse Electric Company the main engineering services for the centralized high-level waste and spent fuel interim storage facility that will be located in central Spain. The facility could begin operation by the end of 2017. The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
3. On October 2, the U.S. Court of Appeals for the D.C. Circuit issued an Order granting the NRC's motion for an extension of time to respond to the petitioners' motion for preliminary injunctive relief from the NRC Chair refusing to recuse herself from the Yucca Mountain licensing process. The Order also provided dates by which the petitioners and the respondents must submit their replies. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On October 9, the NRC Chair sent a letter to Senator Carper on amending certain provisions of the regulations governing ISFSI and making the dry cask storage licensing process more efficient. The Chair pointed to enhanced internal coordination, more frequent communications with licensees, improved tracking mechanisms and technical reviews that resulted in a new, more accelerated process for dry cask storage certificates of compliance. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On October 9, the NRC filed with the U.S. Court of Appeals for the D.C. Circuit its opposition to the petitioners' filing for a writ of mandamus and an emergency motion for preliminary injunction relief over the NRC Chairman's decision not to recuse herself from the Yucca Mountain license proceeding. The NRC maintained that the petitioners had not complied with the Federal Rules of Appellate Procedure for seeking injunctive relief, have not demonstrated that the Chairman has pre-judged the Yucca Mountain license application, failed to prove that equitable relief was necessary, and their claim was not ripe since the Chairman had not issued any final order that affected the petitioners. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions. On the same day the NRC also filed a notice of unavailability due to the government shutdown. However, the NRC did stipulate it would make available any or all counsel for oral argument should the Court order it. The web link for the [unavailability filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
6. On October 9-11, a Nuclear Waste Confidence and Storage Management Summit was held in Baltimore, Maryland. The following topics were presented and discussed:
 - Update on the NRC Waste Confidence Studies and Regulations
 - Prospects for Action on Waste Confidence
 - Update on Implementation of the Blue Ribbon Commission Recommendations
 - Perspectives on getting to Permanent Disposition of Spent Fuel
 - Perspectives on the Impacts of the Current State of Nuclear Waste Confidence
 - Perspectives on Consent-Based Siting of Fuel Storage
 - State Regulator Perspectives on Nuclear Fuel' Storage and Transportation
 - Dealing with Local Stakeholders' Concerns Regarding Fuel Storage and Relicensing
 - Centralized Interim Storage Issues and Progress
 - Spent Fuel Consolidation – Transportation and Other Operational Issues
 - Update on NRC Guidance on Spent Fuel Monitoring and Management
 - Implementing Enhancements to Onsite Fuel Storage Pools

The web link for the [agenda](#) can be accessed by positioning the cursor over the underlined text and following the directions.

7. On October 11, the Nuclear Waste Technical Review Board (NWTRB) issued a news release announcing the date of their next public meeting. The Board would focus on DOE's research and development activities associated with their Used Fuel Disposition Program. Some of the topics discussed would include studies on long-term storage of high burnup spent nuclear fuel and direct disposal of dry storage containers in various geologic media. The web link for the [meeting notice](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On October 15, the petitioners (Aiken County, South Carolina, the three business leaders from the Tri-City area of Hanford, Washington, Nye County, Nevada, and the states of South Carolina and Washington, and the National Association of Regulatory Utility Commissioners) filed a response with the U.S. Court of Appeals for the D.C. Circuit on the State of Nevada's petition for rehearing en banc (before all the judges on the Appeals Court). Nevada contended that the Appeals Court ruling that the NRC's suspension of the Yucca Mountain licensing proceeding violated the Nuclear Waste Policy Act was a useless thing and, therefore, the rehearing should be granted and the initial mandamus overturned. The petitioners countered that the Court's ruling did take into consideration equitable factors that were consistent with previous Court precedent and Nevada failed to present a question of exceptional importance for the court to grant a rehearing. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
9. On October 16, Nye County, Nevada, the state of South Carolina, and Aiken County, South Carolina filed their reply with the D.C. Circuit Court of Appeals to the NRC's opposition to their writ of mandamus and emergency motion for preliminary injunction. The petitioners argued that an objective observer would conclude the Chairman lacked impartiality based on her prior rejection of the federal government's modeling of the Yucca Mountain repository, the NRC failed to apply the recusal standards, the Chair's recusal decision made this ripe for adjudication, and the writ should be issued as the petitioners would suffer irreparable harm if the NRC Chairman participated in the Yucca Mountain licensing process. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
10. On October 23, the NRC Chair sent a letter to the Senate's Subcommittee Chair on Clean air and Nuclear Safety transmitting the first monthly status report on the NRC's activities and expenditures from the Court's August 13 Order through the end of September. The status report indicated the following activities would be considered:
 - o Completion of the Safety Evaluation Report on the Yucca Mountain license application,
 - o Completion of the DOE's supplement to their Yucca Mountain Environmental Impact Statement,
 - o Resolving contentions through adjudication,
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 - o Restart of external litigation against the NRC.The NRC indicated they had expended \$51,507 from mid-August through the end of September, which left \$11,004,517 in unobligated funds for the resumption of the Yucca Mountain licensing proceeding. An identical letter was sent to the Chair of the House's Committee on Energy and Commerce. The web link for the [letter](#) and report can be accessed by positioning the cursor over the underlined text and following the directions.
11. On October 24, six Republican Senators from the states of Alabama, Arkansas, Idaho, Louisiana, Mississippi, and Wyoming forwarded a letter to NRC Chairman Macfarlane urging the Chairman to promptly comply with the Court's August 13th Order to resume the Yucca Mountain licensing process. The Senators strongly recommended that the NRC complete the Safety Evaluation Report on the proposed repository. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.

12. On October 28, the NRC issued a news release extending the public comment period until December 20 over its proposed waste confidence rule and generic environmental study on extended storage of spent nuclear fuel. The extension was necessary to accommodate five public meetings that were cancelled due to the government shutdown. The news release provided links and information on how to comment on the NRC's draft Waste Confidence Generic Environmental Impact Statement. The web link for the [news release](#) can be accessed by positioning the cursor over the underlined text and following the directions.
13. On October 28, two Representatives introduced legislation (H.R.3354) in the House's Committee on Energy and Commerce. The proposed legislation would require that spent nuclear fuel would be stored in certified dry cask storage after being cooled. The bill also specified timelines when spent fuel in pools would be required to be placed in dry casks and stored in hardened onsite storage facilities after conducting a cost benefit analysis. The bill also mandated annual reports from each facility on the amount of stored spent nuclear fuel, on how much of the fuel is stored by what method, and how much of the fuel has moved from one storage method or location to another. The web link for the [legislation](#) can be accessed by positioning the cursor over the underlined text and following the directions.
14. On October 28, the D.C. Circuit Court of Appeals issued an Order denying the rehearing en banc (before the full Court) requested by the State of Nevada on the Court's August ruling for restarting the Yucca Mountain licensing proceeding. Since the Supreme Court rarely grants a writ of certiorari, Nevada's Chief Deputy Attorney General stated she would not appeal the Court's denial to the Supreme Court. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
15. On October 28, the NRC held a public meeting of its draft waste confidence generic environmental impact statement in Chelmsford, Massachusetts. The purpose of the meeting was for the NRC staff to "provide an overview of the Waste Confidence draft generic environmental impact statement and proposed rule." There were 79 attendees, which included members of the public, representatives from State and local government from Massachusetts, Maine, New Hampshire, and New York, besides members from industry and public advocacy groups. Questions raised during the public comment period addressed the three deficiencies identified by the U.S. Court of Appeals, namely indefinite storage of spent nuclear fuel, spent fuel pool leaks and fires. Numerous topics and concerns were expressed by 37 individuals during the public comment period. Some advocated for the safe storage of spent nuclear fuel and a permanent geologic repository while others supported the current rulemaking process. Most opposed nuclear power. Some proposed phasing out nuclear power and replacing it with renewable energy. Some advocated for the expedited transfer of spent fuel from pools to dry concrete casks in hardened onsite storage facilities. Others were concerned with impacts from climate change to earthquakes and tsunamis impacting coastal facilities, such as the Fukushima reactors in Japan. Some expressed opposition to the transportation of spent nuclear fuel while others expressed concern over the health effects of radiation. There was vocal opposition to local plants, especially Vermont Yankee, Pilgrim, and Seabrook. The web link for the [meeting summary](#) can be accessed by positioning the cursor over the underlined text and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

November 2013 Monthly Report to the Legislature

Executive Summary

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The national highlights primarily focused on Nuclear Regulatory Commission (NRC) and federal court activities.

National:

- The U.S. Court of Federal Claims issued its ruling on the Maine Yankee, Connecticut Yankee and Yankee Atomic (in Massachusetts) companies' lawsuit against the federal government on their partial breach of the standard contract to take and dispose of the spent nuclear fuel stranded at their respective sites. The Court awarded Maine Yankee \$35.7 million for the period from January 2003 through December 2008. Connecticut Yankee and Yankee Atomic received \$126.3 million and \$73.3 million, respectively, from January 2002 through December 2008. An earlier Federal Appeals Court ruled that damage awards can only cover costs that have been incurred. Consequently, the three companies will be litigating the federal government every several years for costs assumed by their ratepayers.
- The NRC issued a Memorandum and Order directing its staff to complete and issue the Safety Evaluation Report (SER) associated with the Yucca Mountain construction authorization application, to load documents in the Licensing Support Network (LSN) into the NRC's non-public ADAMS online database while declining to reconstitute the LSN, and continued to hold in abeyance the legal proceedings over the construction application. The Order requested the Department of Energy (DOE) to prepare the supplemental environmental impact statement for the NRC to complete its review of the Yucca Mountain application under the National Environmental Policy Act. The Order acknowledged that documents used as references in the SER and supplemental EIS would be publicly released. The Order also noted the Commission declined to decide the Timbisha Shoshone Tribal Council's renewed motion for recognition.
- The U.S. Court of Appeals for the D.C. Circuit ordered the Secretary of Energy to submit to Congress a proposal to reduce the fee that nuclear utilities pay for a nuclear waste disposal program under the Nuclear Waste Policy Act "to zero until such time as either the Secretary chooses to comply with the Act as it is currently written, or until Congress enacts an alternative waste management plan." The Secretary's latest fee adequacy assessment provided a range between a \$2 trillion deficit and a \$4.9 trillion surplus, which led the Secretary to conclude the range was so great he could not determine whether the fee was inadequate or excessive. The Court decided the range presented was so large "as to be absolutely useless as an analytical technique". The Court further noted that the Secretary's

assessment was again a “derogation of his responsibility under the statute” and further remarked that “the Secretary may not comply with his statutory obligation by concluding that a conclusion is impossible”.

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 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.

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

There were two fire-related impairments. The first was associated with the document control room fire suppression panel. A repair was attempted and it failed again the next day. Compensatory measures were put in place immediately. The entire panel was replaced in December. The second impairment was related to a fire door that was not closing properly. Compensatory measures were instituted immediately and the door closer was replaced three days later.

There were three security-related impairment for the month. The first involved the loss of internet connection due to an offsite system outage. Compensatory measures were put into place until the service provider repaired the system within one hour. The second was a similar internet connection issue that was restored three days later. Compensatory measures were instituted in the interim. The third was due to the fire impairment associated with the improperly closing door. Compensatory measures were put into place until the door closer was replaced. In addition, there were three security events logged for the month, two were related to the loss of the internet connection issues mentioned above and the third was related to the door closer problem.

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

- 1st CR: Documented an oil leak from a utility vehicle onto the pavement. The area was cleaned up with spill pads and the vehicle was sent offsite for repairs.
- 2nd CR: Documented an individual stopping on Old Ferry Road who exited the vehicle with a hunting rifle. The Local Law Enforcement Agencies were contacted and responded. The individual left the area prior to the Wiscasset Police arriving.
- 3rd CR: Was written to document the routine surveillances of the new vehicle barrier system were not being implemented according to procedure. The surveillances were based on vendor recommendations. Routine task tracking items were developed to capture these requirements and the surveillances were subsequently performed the following month.
- 4th CR: Was written to document that the new vehicle barrier system was operating slowly during cold weather due to oil viscosity issues. The vendor was contacted and they advised adjusting the flow valves. The flow valve adjustment was performed during the next scheduled surveillance the following month.
- 5th CR: Was written as a tracking CR to cover various quality assurance surveillance activities related to correspondence processing.
- 6th CR: Was written as a tracking CR to cover various quality assurance surveillance activities, some of which were associated with the vehicle barrier system.
- 7th CR: Documented the need for a formalized and detailed ISFSI Manager transition plan based on the pending retirement of the current ISFSI Manager. A plan was created based on Connecticut Yankee's example.
- 8th CR: Documented that a fire door was not tripping closed when tested. Troubleshooting indicated a low battery. The battery was replaced the same day.
- 9th CR: Was written to document that the desk log form was not printing out properly. The problem was found to be within the software settings. The settings were changed and the problem was corrected four days later.
- 10th CR: Documented that the vehicle barrier system gate was not left in the correct position and the pin was installed incorrectly. The pin was modified to ensure it is readily evident to personnel how to install it correctly.
- 11th CR: Documented a Radiation Technician signing in on the wrong Radiation Work Permit. The Technician was counseled and briefed on the scope of each Radiation Work Permit to ensure the proper permit will be used in the future.
- 12th CR: Was written to document a vendor not calling in after a system related issue had cleared. The vendor counseled their staff on the requirement to call Maine Yankee once the offsite system was restored.
- 13th CR: Documented a utility vehicle found with low coolant and oil that was milky. Since the engine was still under warranty, the vendor replaced the engine.
- 14th CR: Documented a non-security alarm zone that had failed. The zone was permanently taken out of service the following week.
- 15th CR: Documented the fire-related impairment with the door closer problem described above.

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.

Environmental

The environmental information is published on a quarterly basis. There was no new information to report this month.

Other Newsworthy Items

1. On November 4, the NRC held a public meeting in Charlotte, North Carolina to receive public comments on their Waste Confidence Proposed Rule and Draft Generic Environmental Impact Statement (DGEIS) supporting the Proposed Rule. 204 people attended the meeting that included members of the public, industry, public advocacy groups, and representatives from the Environmental Protection Agency's Region IV. 70 provided comments. Besides support for renewable energy, stop making more nuclear waste, and safe storage of spent fuel in dry casks and spent fuel pools, some commenters expressed general opposition to nuclear power, the Waste Confidence rulemaking and generic approach. Some criticized the DGEIS assumptions, including institutional controls and replacement of dry casks every 100 years, and NRC's evaluation of risk from accidents, especially those caused by terrorism and earthquakes. Others raised concerns on the health effects of radiation, specific issues relative to local nuclear power plants, and climate changes, while some advocated for hardened onsite storage of dry casks. The web link for the [meeting summary](#) can be accessed by positioning the cursor over the underlined text and following the directions. Due to the government shutdown, several public meetings initially scheduled for October were rescheduled for November. They included Orlando, Florida on November 6, Oak Brook, Illinois on November 12, Rockville, Maryland on November 14, Carlsbad, California on November 18, and San Luis Obispo, California on November 20. Participation ranged from 45 people in Orlando, Florida to 230 in San Luis Obispo, California. Individual commenters at the public meetings ranged from 16 to 65. The concerns expressed at each of the public meetings raised very similar themes to those expressed in Charlotte, North Carolina. The web link for the meeting summaries for [Orlando](#), [Oak Brook](#), [Rockville](#), [Carlsbad](#), and [San Luis Obispo](#) can be accessed by positioning the cursor over the underlined texts and following the directions.
2. On November 8, the NRC issued a news release requesting public comment on control and accounting of special nuclear material (SNM). SNM includes plutonium, enriched uranium and uranium-233, radioactive elements normally found in research reactors, nuclear power reactors, spent fuel pools, and ISFSI's. The proposal would change the collecting and reporting requirements for these materials as well as strengthen the requirements for tamper-safe containers and vaults. The web link for the news [release](#) can be accessed by positioning the cursor over the underlined text and following the directions.
3. On November 12, the Nuclear Waste Strategy Coalition (NWSC) held their fall meeting in Washington D.C. The first day of the session focused on the vital role of the Courts in 2013 and future implications, stakeholders and congressional perspectives from the House and Senate on nuclear waste reform, update on DOE strategy and activities, a status report on the U.S. nuclear program and current waste issues, spurring action on funding reform and a federal corporation, and charting a path forward without a map. Other topics included public opinion on nuclear waste related issues. The second day centered on congressional meetings on Capitol Hill. The State is a member of the NWSC, which is an ad hoc organization of state utility regulators, state attorneys general, consumer advocates, electric utilities, local governments, tribes, and other public and private sector experts on nuclear waste policy matters. 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. The web link for the [agenda](#) and some of the presentations from the

[Courts](#), [NRC](#), [reform](#), [charting a path](#), [consent based siting](#), [managing the nuclear fuel cycle](#), and [public opinion](#) can be accessed by positioning the cursor over the underlined texts and following the directions.

4. On November 13, the Prairie Island Indian Community issued a statement expressing their concerns that a dry cask storage facility on the Prairie Island twin reactor site could remain stranded indefinitely and requested that the federal government honor its promise to transfer the waste out of the community. The dry storage casks are located 600 yards from tribal homes. “The Tribe has been pushing for the removal of the nuclear waste since 1994 when Xcel Energy was first allowed to store the waste near its reservation.” The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On November 13, researchers from England’s University of Sheffield announced that they had developed a method to significantly reduce the volume of plutonium contaminated wastes by 85 to 95% by mixing the waste with blast furnace slag (a by-product of steel production) and heating them to form a corrosion resistant material - glass. The vitrification process would reduce the cost of interim storage and geologic disposal. The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
6. On November 14, the U.S. Court of Federal Claims issued its ruling on the Maine Yankee, Connecticut Yankee and Yankee Atomic (in Massachusetts) companies’ lawsuit against the federal government on their partial breach of the standard contract to take and dispose of the spent nuclear fuel stranded at their respective sites. The Court awarded Maine Yankee nearly \$35.87 million for the period from January 2003 through December 2008. Connecticut Yankee and Yankee Atomic received \$126.3 million and \$73.3 million, respectively, from January 2002 through December 2008. An earlier Federal Appeals Court ruled that damage awards can only cover costs that have been incurred. Consequently, the three companies will be litigating the federal government every several years for costs assumed by their ratepayers. The web link for the three Yankees [press release](#) and the Court [ruling](#) can be accessed by positioning the cursor over the underlined text and following the directions.
7. On November 18, the NRC issued a Memorandum and Order directing its staff to complete and issue the SER associated with the Yucca Mountain construction authorization application, to load documents in the LSN into the NRC’s non-public ADAMS online database while declining to reconstitute the LSN, and continued to hold in abeyance the legal proceedings over the construction application. The Order requested the DOE to prepare the supplemental environmental impact statement for the NRC to complete its review of the Yucca Mountain application under the National Environmental Policy Act. The Order acknowledged that documents used as references in the SER and supplemental EIS would be publicly released. The Order also noted the Commission declined to decide the Timbisha Shoshone Tribal Council’s renewed motion for recognition. The web link for the [Memorandum and Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On November 18-19, the U.S. Nuclear Waste Technical Review Board (NWTRB) held a technical workshop on the impacts of dry storage canister designs on future handling, storage, transportation and geologic disposal of spent nuclear fuel. Topics discussed on the first day included current dry storage system designs, implications of repackaging spent nuclear fuel from large dry storage systems into smaller packages for transport or disposal, implications of direct disposal of large dry storage system designs for repository design, and international perspectives. The second day consisted of two panel discussions in the morning, one on the implications of repackaging used nuclear fuel and the other on implications of direct disposal of large dry storage canisters. The afternoon focused on what issues were raised from the panel sessions, which addressed what factors would affect the need to repackage, such as the heat emitted by and the radiation levels of the dry storage canisters, criticality control, material degradation of dry storage canisters and/or spent nuclear fuel assemblies, and the size of the disposal containers. In preparation for the workshop the NWTRB staff prepared a briefing document to assist

participants and facilitate discussions. The web link for the [agenda](#) and the [briefing document](#) can be accessed by positioning the cursor over the underlined texts and following the directions.

9. On November 19, the U.S. Court of Appeals for the D.C. Circuit ordered the Secretary of Energy to submit to Congress a proposal to reduce the fee that nuclear utilities pay for a nuclear waste disposal program under the Nuclear Waste Policy Act “to zero until such time as either the Secretary chooses to comply with the Act as it is currently written, or until Congress enacts an alternative waste management plan.” The Secretary’s latest fee adequacy assessment provided a range between a \$2 trillion deficit and a \$4.9 trillion surplus, which led the Secretary to conclude the range was so great he could not determine whether the fee was inadequate or excessive. The Court decided the range presented was so large “as to be absolutely useless as an analytical technique”. The Court further noted that the Secretary’s assessment was again a “derogation of his responsibility under the statute” and further remarked that “the Secretary may not comply with his statutory obligation by concluding that a conclusion is impossible”. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
10. On November 19, the NRC Chairman transmitted the October monthly status report on the Commission’s activities and expenditures related to the resumption of the Yucca Mountain licensing process. The status report described Nye County’s petition for the NRC Chair to recuse herself from the Yucca Mountain proceeding, the Commission’s review of all the participants’ responses to their August 30 Order, and the staff’s preparation for the Commission a legal decision on the path forward for the licensing process. These activities amounted to \$92,227 in expenditures. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On November 20, the NWTRB held its fall Board meeting in Washington, D.C. The morning session summarized the findings from the technical workshop held earlier that week, provided an overview of DOE’s research and development (R&D) programs on spent fuel storage, transportation, material recovery, and waste form, discussed ductile to brittle transition temperatures for high-burnup cladding alloys from pressurized water reactors, and presented a test plan to investigate the performance of fuel cladding and storage container systems during extended storage of high-burnup fuel. In the afternoon DOE presented an overview of spent fuel and high-level waste disposal R&D program. Sandia National Laboratory discussed the inventory and results of their evaluation of waste form and disposal options, while Oak Ridge National Laboratory described how to integrate standardization into the nuclear waste management system. The web link for the [agenda](#) and [presentations](#) can be accessed by positioning the cursor over the underlined text and following the directions.
12. On November 21, the law firm of Van Ness Feldman, which served as an outside counsel to the President’s Blue Ribbon Commission, provided an assessment of the D.C. Circuit’s recent decision to indefinitely suspend the nuclear waste fee. The evaluation provided a background on the issue, discussed the November 19 Court decision, described related congressional and recent NRC actions, and explained the implications of the decision. The web link for the [assessment](#) can be accessed by positioning the cursor over the underlined text and following the directions.
13. On November 25, the Nuclear Waste Management Organization of Canada announced that, of the 21 communities expressing an interest in hosting a geologic repository for used nuclear fuel, four were not selected for more detailed study. They were the Saskatchewan communities of English River First Nation and Pinehouse, and the Ontario communities of Ear Falls and Wawa. Four others, (Creighton in Saskatchewan, and Ignace, Hornepayne and Schreiber in Ontario), were ruled as having a strong potential to meet site selection criteria. The remaining thirteen communities will be assessed in 2014 with twelve of them located in Ontario. In the second phase that could last up to four years the communities will be involved in preliminary safety assessments, geoscientific and environmental investigations along with more detailed social, economic and cultural studies. Canada’s nuclear waste

program is a nine step process that would culminate in the construction and operation of a repository, currently projected to open in 2035. The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.

14. On November 27, the State of Nevada petitioned the NRC for clarification of its November 18 restart order on the resumption of the Yucca Mountain licensing proceeding. Nevada maintained that, by NRC ordering the Yucca Mountain SER to be completed first, it did not allow for discovery to occur concurrently with the SER. Nevada further contended that if discovery should ever resume, it would be impossible to receive depositions from nearly one hundred expert witnesses in less than sixty days. Therefore, Nevada requested that the Commission clarify their order to safeguard the rights of the parties in the Yucca Mountain licensing process. Nevada also requested a similar clarification on the Commission's direction to the staff on work previously completed in conjunction with the SER. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
15. On November 27, the five parties (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and the National Association of Regulatory Utility Commissioners) requested a leave to file a motion with the NRC for reconsideration of the NRC's Memorandum and Order issued on November 18. The five parties listed four critical issues for reconsideration. The Commission should
 - Create a schedule for release of each individual SER Volume,
 - Provide detailed statements of the remaining work on each SER along with a cost estimate for each SER's completion.
 - Provide requested details and analysis so that its overall estimate of time and cost for all SERs can be evaluated, and lastly,
 - The Commission failed to adequately assess other NRC costs and sources of revenue for going forward with the licensing proceeding.

The five parties requested a revised order since they asserted the NRC's order does not fully comply with the Court of Appeals' mandamus order for the resumption of the Yucca Mountain licensing process. The web link for the [motion](#) can be accessed by positioning the cursor over the underlined text and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

December 2013 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 Legislature 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 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. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

The national highlights primarily focused on Nuclear Regulatory Commission (NRC) and federal court activities.

Local

- Maine Yankee submitted to the Nuclear Regulatory Commission (NRC) revision 2 of its Post-Shutdown Decommissioning Activities Report. The report was updated to indicate that Maine Yankee's decommissioning was completed, except for 12 acres remaining that included the ISFSI and a small parcel of land adjacent to the ISFSI. Besides editorial and administrative changes the revision also removed the list of specific low-level waste sites as their future availability was questionable since the decommissioning of the ISFSI could be two decades or more away and highly dependent upon the federal government's removal of the spent nuclear fuel and reactor internals from the site. Moreover, the revision also included Maine Yankee's new cost estimates of \$26.8 million in 2013 dollars for decommissioning the ISFSI in 2033. The revision further concluded that the environmental impacts from the ISFSI decommissioning would be minimal and were bounded by previous assessments.

The national highlights primarily focused on the NRC and federal court activities.

National:

- The Department of Energy's (DOE) Office of Inspector General issued an audit report on DOE's management of the Nuclear Waste Fund (NWF) for Fiscal Year 2013. The independent certified public accountants' review concluded that there were no deficiencies or instances of noncompliance warranting a disclosure and that the financial statements presented fairly the financial positions of the Fund for the years ending on September 30 of 2012 and 2013. According to the report the NWF had a balance of \$34.1 billion as of the end of September, 2013 with interest on the account accruing at over \$1.3 billion per year.
- The U.S. Court of Appeals for the D.C. Circuit issued an Order denying the DOE's petition for a 31 day extension to allow DOE time to request a rehearing on the Court's November 19 Order to forward to Congress a reduction in the NWF fee to zero. In addition, the Court further ordered the petitioners' motion for expedited issuance be granted and directed the Clerk of the Court to do so immediately.

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.

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Independent Spent Fuel Storage Installation (ISFSI)

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

There was one fire-related impairment and it was associated with a planned removal of a records storage vault. The paper documents were removed from the storage vault and temporarily stored in the building's truck bay. Periodic fire rounds were instituted until the papers were removed.

There was no security-related impairment for the month. However, there were four security events logged for the month and all involved transient environmental conditions.

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

- 1st CR: Documented ice building up in the Storage Building from leaking water. The cause was determined to be improper grading and door sills leaking. The area was regarded but various other repairs will be performed in warmer weather.
- 2nd CR: Documented an exterior, non-security door not operating properly. The door vendor was contacted and recommended a sill replacement during warmer weather.
- 3rd CR: Was written to document the vehicle gate not operating properly. The cause was found to be a switch that had frozen up due to the weather. The ice was cleared and the gate worked properly the next day.
- 4th CR: Was written to document a buried service vault collecting water. The vault was pumped out and is periodically monitored and pumped when necessary.
- 5th CR: Was written as to document a small fuel leak on a man-lift while parked in the Storage Building. The fuel valve was immediately tightened and about two ounces of fuel was cleaned up.

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.

- 6th CR: Documented an individual losing their keycard. The card was immediately deactivated and a new card issued. The original keycard was found two days later and destroyed.
- 7th CR: Documented that an alarm system was not properly tested after a brief interruption of internet service due to offsite system problems. The system was tested satisfactorily the same day. In addition, the procedure was changed to clarify that system testing is required regardless of the length of the system outage.
- 8th CR: Documented that an inventory log sheet was missing for one day during records processing. The sheet was never found and a note was placed in the records file indicating that the sheet as missing for one day.
- 9th CR: Was written to document that some electronic forms templates in the forms folder contained duplicates and various revisions. The duplicates and incorrect revisions of forms were removed from the folder.

Other ISFSI Related Activities

1. On December 12, Maine Yankee submitted to the NRC revision 2 of its Post-Shutdown Decommissioning Activities Report. The report was updated to indicate that Maine Yankee's decommissioning was completed, except for 12 acres remaining that included the ISFSI and a small parcel of land adjacent to the ISFSI. Besides editorial and administrative changes the revision also removed the list of specific low-level waste sites as their future availability was questionable since the decommissioning of the ISFSI could be two decades or more away and highly dependent upon the federal government's removal of the spent nuclear fuel and reactor internals from the site. Moreover, the revision also included Maine Yankee's new cost estimates of \$26.8 million in 2013 dollars for decommissioning the ISFSI in 2033. The revision further concluded that the environmental impacts from the ISFSI decommissioning would be minimal and were bounded by previous assessments.

Environmental

The environmental information is published on a quarterly basis. There was no new information to report this month.

Other Newsworthy Items

1. On December 2, the DOE sent a letter to the Chair of the House's Subcommittee on Environment and the Economy providing a monthly update of the DOE's activities and expenditures on the Yucca Mountain licensing process. The letter listed four activities DOE performed during September. They included their submission to the NRC on how they should proceed with the restart of the Yucca Mountain licensing proceeding, payments to the pension funds of retired Yucca Mountain workers, the fee adequacy assessment, and the maintenance of Yucca Mountain information. The DOE noted that these efforts amounted to \$593,000 in expenditures. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
2. On December 2, the NRC held a public meeting in Perrysburg, Ohio to receive public comments on their Waste Confidence Proposed Rule and Draft Generic Environmental Impact Statement (DGEIS) supporting the Proposed Rule. One hundred and twenty-eight people attended the meeting that included members of the public, industry, public advocacy groups, representatives from the Michigan Department of Environmental Quality and the Ohio Department of Health, and the Ottawa County Commissioners. 45 provided comments. Besides support for renewable energy and stopping making more nuclear waste, some commenters expressed general opposition to nuclear power, the Waste Confidence rulemaking and the limited public comment period. Some criticized the DGEIS assumptions, including institutional

controls, and NRC's evaluation of risk from accidents, especially those caused by flooding on the Great Lakes and climate change impacts on safe storage of spent fuel. Others raised concerns on the health effects of radiation, NRC oversight, safety of dry casks, Fukushima, General Electric boiling water reactors, and specific issues relative to local nuclear power plants. The web link for the [meeting](#) summary can be accessed by positioning the cursor over the underlined text and following the directions. Due to the government shutdown several public meetings initially scheduled for November were rescheduled for December. They included Minnetonka, Minnesota on December 4 and Rockville, Maryland on the 9. Participation ranged from 45 people in Minnetonka to 71 in Rockville. Individual commenters at the public meetings ranged from 17 to 24. The concerns expressed at each of the public meetings raised very similar themes to those expressed in Perrysburg, Ohio. The web link for the meeting summaries for [Minnetonka](#) and [Rockville](#) can be accessed by positioning the cursor over the underlined texts and following the directions.

3. On December 3, the DOE filed a motion with the U.S. Court of Appeals for the District of Columbia Circuit to increase the time allowed by 31 days for the DOE to request a rehearing en banc (before the full Court) on the Court's November 19 Order to suspend the its nuclear collection fee. The concern expressed by DOE was that some of their counsel being assigned to six other response briefs and Thanksgiving, Christmas, New Year's, and other religious holidays would impact on their ability to petition for review within the 45 day timeframe allotted. The web link for the [motion](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On December 4, the National Association of Regulatory Utility Commissioners (NARUC) filed a motion with the Court of Appeals for the D.C. Circuit to expedite the issuance of the Court's November 19 mandate to suspend the nuclear fee collection by submitting to Congress a proposal to change the fee to zero. The petitioners' request was predicated on DOE's historical disposition to delay, the approximate \$3 billion paid by ratepayers since 2009 when petitioners' first requested the Secretary of Energy to suspend the fee when DOE terminated the nuclear waste program, and the lawfully imposed delay of three months before the suspension takes effect. The petitioners' further remarked that, every quarter, ratepayers are currently paying \$188 million in nuclear waste fees. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On December 4, the quarterly conference call of the Federal Energy Regulatory Commission rate case settlement briefed participants on spent fuel storage issues. The status update noted that the Court of Federal Claims issued its decision in the three Yankee companies (Maine Yankee, Connecticut Yankee, and Yankee Atomic) Phase II lawsuit against the federal government. The General Counsel reported that the Judge awarded the three Yankees over \$235 million with \$126.3 million going to Connecticut Yankee, \$73.3 million to Yankee Atomic, and \$35.7 million to Maine Yankee. Both parties have until January 14 to appeal the Judge's decision. The Phase III lawsuits were filed on August 15 to which the federal government responded on November 18. The Three Yankees were hopeful that the lawsuits would go to trial in 2014. Further updates included the Court of Appeals three decisions. The first being the directive to the NRC to resume the Yucca Mountain licensing process. The second was the Court's denial of Nevada's petition for rehearing to the full court on the resumption order. The third ruling directed the DOE to suspend the collection of annual fees for nuclear waste disposal from nuclear utilities. There was no congressional movement on nuclear waste reform legislation.
6. On December 5, Nye County, Nevada, the states of South Carolina and Washington, and Aiken County, South Carolina filed a motion with the D.C. Court of Appeals for a summary reversal of NRC Chairman Macfarlane's decision not to recuse herself in the Court ordered resumption of the Yucca Mountain licensing proceeding. The petitioners contended that her participation would violate their due process rights to a fair and impartial license hearing under the fifth amendment of the U.S. Constitution. The petitioners cited her public and published testimonies criticizing the Yucca Mountain project in 2006,

2009, and 2010 as their basis that she be disqualified. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.

7. On December 9, the NRC staff filed with the Commission a response to Nevada's petition for clarification and the Five Parties' (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and NARUC) motion for reconsideration of the Commission's November 18 Order for the resumption of the Yucca Mountain Licensing proceeding. The staff concluded that Nevada's request for clarification from the Staff Requirements Memorandum (SRM) was misplaced since the SRM is a tool for the Commission to provide direction to its staff outside the Commission's ruling. On the Five Parties motion the staff determined that there was no compelling reason to grant reconsideration since there was no indication of any errors that would invalidate the Commission's Order. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On December 9, Nevada filed with the NRC its response to the Five Parties' (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and NARUC) request for leave to file a motion for reconsideration and their motion for reconsideration of the Commission's Yucca Mountain resumption Order. Nevada maintained that the request for leave was not warranted under NRC's regulations since the Five Parties can move for reconsideration without receiving prior permission to do so. Furthermore, Nevada contended that the Five Parties' motion for reconsideration should be denied since the motion was asking the Commission to grant certain relief that the Court denied. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
9. December 9, the NRC Chair forwarded a letter to the Chair of the House Subcommittee on Energy and Power listing responses to thirteen questions posed by the House Subcommittee Chair in his November letter to the NRC on various agency activities and expenditures. The NRC's responses to the Yucca Mountain Project activities were captured in questions four through six. The three questions focused on anticipated release dates for the Yucca Mountain Safety Evaluation Reports, the resources necessary to issue a final decision on the Yucca Mountain repository, and whether the Commission will request additional funds to complete the licensing process. The web link for the [letter](#) and [three questions](#) can be accessed by positioning the cursor over the underlined text and following the directions.
10. On December 9, the Five Parties' filed with the NRC its response to Nevada's petition clarification of the restart Order and Staff Requirements Memorandum (SRM). The Five Parties concluded that there was nothing in the SRM that would circumvent NRC rules while finalizing the Safety Evaluation Reports. Nevada maintained that work was not considered complete unless it had received staff management and Office of General Counsel review. The Five Parties viewed this assertion as restricting the staff to adopting only previous technical work that had received such a review and advocated for the Commission to reject any such restrictions. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On December 10, the House Committee on Energy and Commerce issued a memorandum in preparation for a December 12 hearing on oversight of NRC management. The focus of the hearing would be on the recent Court's Order to resume the Yucca Mountain licensing proceeding, the efficient uses of resources, and legislative reform of the Commission's authorities. The memorandum provided a historical background on the NRC's formulation and governance authority, a summary of the proposed legislation to reform the Commission's authorities in light of the previous Chair's Yucca Mountain and Fukushima actions and leadership style, and Yucca Mountain related issues. The web link for the [memorandum](#) can be accessed by positioning the cursor over the underlined text and following the directions.

12. On December 11, the NRC Chair sent identical letters to the House of Representatives and the Senate stating the agencies activities in response to the Court ordered mandate to resume the Yucca Mountain licensing review. The Chair mentioned the Commission Order for all parties in the Yucca Mountain licensing proceeding to comment on how the NRC should move forward with the Court Order, the staffs' updated cost estimates for the licensing process, and the subsequent Commission Order directing the staff to resume the licensing proceeding and requested the DOE to complete their supplemental environmental impact statement. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
13. On December 11, the DOE's Office of Inspector General issued an audit report on DOE's management of the NWF for Fiscal Year 2013. The independent certified public accountants' review concluded that there were no deficiencies or instances of noncompliance warranting a disclosure and that the financial statements presented fairly the financial positions of the Fund for the years ending on September 30 of 2012 and 2013. According to the report the NWF has a balance of \$34.1 billion as of the end of September 2013 with interest on the account accruing at over \$1.3 billion per year. The web link for the [report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
14. On December 11, the Chair of the House Committee on Energy and Commerce and the Chair of the Subcommittee on Environment and the Economy forwarded a letter to Energy Secretary Moniz requesting that he respond to several questions and requests for information governing the DOE's actions since the D.C. Circuit's rulings to mandate the resumption of the Yucca Mountain Licensing process and the Nuclear Waste Fund fee suspension, and the NRC's Order for the DOE to complete its supplemental environmental impact statement (EIS) on groundwater impacts. The questions centered on DOE's actions to fulfill the fee suspension, whether the DOE will comply with the Nuclear Waste Policy Act and the NRC's Order on the supplemental EIS, DOE expenditures from the Nuclear Waste Fund, and why the DOE ceased providing monthly reports on the status of the Nuclear Waste Fund collections since 2010. The Chairs also requested DOE's supporting information relative to their responses to the questions with plans, schedules, and estimates. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
15. On December 12, the House Committee on Energy and Commerce held a hearing on "Oversight of NRC Management and the Need for Legislative Reform". Testimony was provided by the NRC Chair with all the Commissioners in attendance. Chairman Macfarlane's testimony covered such topics as the current operating reactors, new construction, decommissioning, Yucca Mountain, waste confidence, Fukushima, security, international, sequestration and government shutdown, internal Commission procedures, and a look ahead. Nearly half of her testimony centered on Fukushima. On Yucca Mountain she described what activities the Commission took in response to the Court's resumption Order and the NRC's follow-on Order for resuming Yucca Mountain licensing activities. The Chair also stated the Commission would provide monthly status reports on their Court Ordered mandate. The web link for the [testimony](#) can be accessed by positioning the cursor over the underlined text and following the directions.
16. On December 13, DOE filed with the D.C. Court of Appeals their opposition to the petitioners' (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and NARUC) motion for expedited issuance of the Court's mandate to suspend the Nuclear Waste Fund fee collection. DOE challenged the petitioners' claim of a financial impact as justification for the Court to issue its mandate and contended that such an edict would compromise due process and circumvent the Court's long standing procedures and precedent. Consequently, DOE requested that the petitioners' motion be denied. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.

17. On December 13, the DOE filed with the D.C. Court of Appeals its reply to their initial motion for a 31 day extension to request the full Court's rehearing on their Order for DOE to propose to Congress to lower the Nuclear Waste Fund (NWF) fee to zero. The filing was in response to the petitioners' (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and NARUC) opposition to DOE's extension request. DOE objected to the petitioners' characterization of their request as a tactic to delay compliance with the Court's Order and provided reasons for good cause for the Court to grant the extension. The web link for the [reply](#) can be accessed by positioning the cursor over the underlined text and following the directions.
18. On December 17, the petitioners' (Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina, and NARUC) filed with the D.C. Circuit their reply in support of their motion for expedited issuance of the mandate for DOE to lower the NWF fee to zero. The petitioners' presented several Court cases where mandates were expeditiously issued based on financial impacts. The web link for the [reply](#) can be accessed by positioning the cursor over the underlined text and following the directions.
19. On December 18, NRC Chair Macfarlane forwarded NRC's monthly status report to the Chair of the House Committee on Energy and Commerce on their activities and expenditures that impacted the Nuclear Waste Fund. Activities included the on-going legal advice to the Commission and the Commission Order on the resumption of the Yucca Mountain licensing proceeding, which included direction to the staff and request for DOE to furnish its supplemental environmental impact statement. The NRC activities resulted in \$6,821 in expenditures, which left \$10.9 million of unobligated funds for the licensing process. The web link for the [letter](#) and report can be accessed by positioning the cursor over the underlined text and following the directions.
20. On December 20, the Nuclear Waste Strategy Coalition (NWSC) submitted a letter to the NRC praising the Waste Confidence Directorate's public outreach efforts on their successful nationwide meetings and stakeholder involvement. However, the NWSC expressed concern that the NRC's inordinate use of extended storage scenarios for bounding the impacts in the draft generic environmental impact statement may become policy. The NWSC emphasized their support for the federal government to abide by the Nuclear Waste Policy Act and seek congressional funding to complete the Yucca Mountain licensing review. Such actions would provide assurance to the public that the federal government would uphold their obligation. The NWSC is an ad hoc organization of state utility regulators, consumer advocates, tribal governments, local governments, electric utilities, and other government and industry experts on nuclear waste policy matters. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
21. On December 20, the U.S. Court of Appeals for the D.C. Circuit issued an Order denying the DOE's petition for a 31 day extension to allow DOE time to request a rehearing of the Court's November 19th Order to forward to Congress a reduction in the NWF fee to zero. In addition, the Court further ordered the petitioners' motion for expedited issuance be granted and directed the Clerk of the Court to do so immediately. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
22. On December 20, the Decommissioning Plant Coalition (DPC) sent a letter to the NRC commenting on their Waste Confidence Ruling and Generic Environmental Impact Statement (GEIS). The DPC expressed concern that the NRC may unintentionally endorse indefinite on-site storage of spent nuclear fuel as public policy. They noted that the federal government's continued default on its responsibilities has raised the specter of relying on extended on-site storage as a means of achieving waste confidence. The DPC proposed some comments that would clarify some of the statements in the draft GEIS on 100 years as a reasonable timeframe for the need of dry transfer systems and replacement of ISFSI casks and

concrete pads. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.

23. In December, the DOE's Office of Used Nuclear Fuel Disposition issued a report, entitled "Preliminary Report on Dual-Purpose Canister Disposal Alternatives (FY '13)". The 190 page report documented the first phase of a multi-year effort to recognize the technical feasibility and logistics for the direct disposal of dual-purpose canisters and other types of storage canisters. Disposal concepts included salt formations, crystalline (hard) rock and sedimentary media such as clay or shale. Backfilling presented thermal management concerns for hard and sedimentary rocks as waste package temperatures increased significantly. Although the salt concept was not hindered by the immediate backfill of the canisters, the hard and sedimentary rocks would require ventilation for probably longer than 50 years to remove the decay heat of the used fuel to meet the peak host rock temperature of 180 degrees. The preliminary analyses indicated that direct disposal could be technically feasible but further research was necessary to narrow the range of disposal concepts to be evaluated. The web link for the [report](#) can be accessed by positioning the cursor over the underlined text and following the directions.