



Department of Health
and Human Services

Make People Living
Safe, Healthy and Productive Lives

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May 28, 2015

MEMORANDUM

TO: Senator Michael Thibodeau, President of the Senate, and Representative Mark Eves, Speaker of the House

FROM: Mary C. Mayhew, Commissioner
Mary C. Mayhew
Department of Health and Human Services

SUBJECT: State Nuclear Safety Inspector's June - September 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 – DIIHS

June 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 nationally. The national highlights primarily focused on a federal court decision, agency activities, and a congressional legislative proposal.

National:

- The Department of Energy's (DOE) Office of Nuclear Energy issued a report, entitled "A Project Concept for Nuclear Fuels Storage and Transportation". The report provided guidance for defining systems, equipment, and facilities necessary to implement DOE's strategy for the management and disposition of used nuclear fuel and high-level radioactive waste. The report included requirements for a pilot interim storage facility, a larger interim storage facility, and the transportation system and equipment needed to move used nuclear fuel from current storage locations to interim storage and then to a permanent geologic repository. The report provided a schedule for key milestones for interim storage facilities and transportation equipment for those facilities.
- The Waste Confidence Directorate of the Nuclear Regulatory Commission (NRC) informed stakeholders that it had drafted three documents for the Commission's review relative to the Waste Confidence environmental review and rulemaking. The first informed the Commission of its progress and recommendations for publishing the draft rule and environmental impact statement. The second provided a draft of the Federal Register Notice outlining the rule's proposed text, the explanations, and the conclusions that support the proposed rule. The final document was the draft generic environmental impact statement. The Commission was expected to review the draft reports and approve the documents. After approving the draft documents the NRC staff will publish the documents for a 75 day public comment period. In addition, the staff will hold 10 public meetings around the country to solicit public input.
- The National Association of Regulatory Utility Commissioners and the Nuclear Energy Institute filed a reply brief with the U.S. Court of Appeals for the D.C. Circuit that continued to challenge the Department of Energy's (DOE) Nuclear Waste Fund fee assessment that maintained it had the right to continue collecting \$750 million a year even "to fund a nonexistent nuclear waste program". The brief maintained that the 2009, 2010 and 2013 DOE fee determinations were legally defective as their considerations were not thorough, and their reasoning invalid and inconsistent with precedents and practice.
- Four senators introduced bipartisan legislation to safeguard and permanently dispose of used nuclear fuel and high-level waste. The bill, entitled the "Nuclear Waste Administration Act of 2013, is based in part on recommendations from the President's Blue Ribbon Commission for America's Nuclear Future. The legislation proposed a new agency to administer the nation's nuclear waste program and a consent-

based process to find sites for temporary and permanent storage. It also provided a linkage between storage facilities and a repository such that new storage facilities cannot be sited unless at least one site has been selected for evaluation as a potential repository. In addition, the proposed legislation would create a Working Capital Fund from which fees deposited into the Fund would be immediately available without congressional appropriations. Finally, the bill would allow the Energy Secretary to revisit the decision not to commingle defense and commercial used nuclear fuel.

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

There were no fire-related or security-related impairments for the month. However, there were eight security events logged for the month. Six involved transient environmental conditions. One was for a missing key card and the last one was for not initiating a security event report in a timely manner.

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

- 1st CR: Documented the finding of an abandoned cable during the excavation for a new vehicle barrier gate. The cable was cut and removed.
- 2nd CR: Documented the finding of a cracked thermometer during cleanup efforts. The thermometer was placed inside some clear plastic tubing and taken to the recycle facility.
- 3rd CR: Was written to document the performance of a regulatory screen on a form that did not contain a procedure revision number on the form. The proper procedure revision number was placed on the form.

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.

- 4th CR: Documented the contact between the building crane and a man-lift during the gate cable installation. The workers were counseled and additional supervision was assigned to the job.
- 5th CR: Documented the finding of an abandoned cable and piping during the trenching for the water line to the new maintenance building. This was not unexpected given the location of the new building to the old Staff building and annex.
- 6th CR: Documented the finding of a raw water line during the excavation for the water line to the new maintenance building. Again, this was not an unexpected occurrence.
- 7th CR: Documented excessive rain eroding the new gate excavation.
- 8th CR: Was written to document computer fan noise. The fan was replaced.
- 9th CR: Was written to document additional corrosion from excessive rain in the same location as before.
- 10th CR: Documented the failure to filter water pumped from the gate excavation. The Department of Environmental Protection was notified and a remediation plan was put into place.
- 11th CR: Documented one fire damper failing its surveillance. Damper was adjusted and retested satisfactorily.
- 12th CR: Was written to document a log filled out using an old revision number. The worker was counseled and the proper revision number used.
- 13th CR: Documented a small hydraulic spill of two tablespoons onto the pavement from a contractor's excavator. The excavator was removed for repairs. The spill was remediated and the spill pads were taken to a licensed disposal facility.
- 14th CR: Documented some minor damage to a heat shield on a temperature monitor from contact with the excavator. The minor damage was repaired and the operator of the excavator was counseled.
- 15th CR: Was written to document the discovery of an unsealed ceiling cable penetration. The penetration was sealed immediately. All the other penetrations were inspected and no unsealed cable penetrations were found.
- 16th CR: Documented a tractor mower hitting a rock. The mower was examined with no damage evident.
- 17th CR: Was written to track training observations from a self-assessment.
- 18th CR: Documented the tripping of the man-lift's electrical breaker. The man-lift was removed from service for repairs.
- 19th CR: Documented an emergency exit light bulb out. The bulb was replaced.

Environmental

The quarterly surveillance results will be reported in July's monthly report.

Other Newsworthy Items

1. On June 6, the quarterly conference call of the Federal Energy Regulatory Commission (FERC) rate case settlement briefing on spent fuel storage issues. The group was briefed on the status of the three Yankee companies (Maine Yankee, Connecticut Yankee, and Yankee Atomic) Phase I, II, and III lawsuits. In the first lawsuit the U.S. Court of Appeals unanimously awarded the three Yankee Companies nearly \$160 million for the federal government's failure to take the used nuclear fuel. On May 1st each of the three Yankee Companies filed their plans on how the damage awards would be distributed. All three Public Utilities Commissions in Connecticut, Maine, and Massachusetts supported the Yankees filings before FERC. However, the Attorney General of Massachusetts, Northeast Utilities and the Office of Consumer Advocate from New Hampshire filed motions to intervene in the case. FERC was expected to rule on the interventions by July 1st. In the Phase II lawsuits the parties were waiting for the Federal Court of Claims to issue its decision. The three Yankees were expected to file their Phase III lawsuits by the end of this year. The states were also briefed on the Department of

Energy's initiative to issue a Request for Proposal for bids to develop a general agreement on a volunteer siting process for those communities wishing to host an interim storage facility for housing used nuclear fuel. Currently, several organizations in four states (Kentucky, Mississippi, New Mexico, and Texas) were expressing an interest in hosting such a facility. However, the organizations were keenly interested in receiving funding from DOE to scope out a process that would best suit them. Finally, it was reported that the President's Proposed Budget released in April provided \$60 million for the continued assessment of the Blue Ribbon Commission's recommendations for managing the used nuclear fuel and for moving forward a consent-based siting process.

2. On June 7, the U.S. Nuclear Waste Technical Review Board (NWTRB) sent a letter to the Senate's Committee on Energy and Natural Resources providing comments to the Committee's discussion draft nuclear waste legislation. The NWTRB provided comments on the consent-based process, site characterization, safety case and regulatory standard, implementing organization, and transportation of defense waste. The comments pointed out some shortcomings and improvements to the discussion draft. According to international experience the most surprising comment was the support for a prescriptive consent-based process, which is contrary to what United States host communities have advocated. In addition, the Board also commented on two of the eight questions the Committee had asked for feedback before crafting legislation. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
3. On June 12, the Department of Justice (DOJ) and the Department of Energy (DOE) filed their initial brief to the U.S. Court of Appeals for the D.C. Circuit as respondents to the National Association of Regulatory Utility Commissioners and the Nuclear Energy Institute petition requesting the Court to declare the Energy Secretary's 2013 nuclear waste fee assessment as invalid. The DOJ and DOE maintained that the fee assessment was adequate, met the intent of the Nuclear Waste Policy Act of 1982 addressed the Court's concerns identified in the previous fee determination, and reject the petitioners' claims that the fee should be suspended until such time a national waste management plan is adopted. The web link for the [brief](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On June 15, the Department of Energy's (DOE) Office of Nuclear Energy issued a report, entitled "A Project Concept for Nuclear Fuels Storage and Transportation". The report provided guidance for defining systems, equipment, and facilities necessary to implement DOE's strategy for the management and disposition of used nuclear fuel and high-level radioactive waste. The report included requirements for a pilot interim storage facility, a larger interim storage facility, and the transportation system and equipment needed to move used nuclear fuel from current storage locations to interim storage and then to a permanent geologic repository. The report provided a schedule for key milestones for interim storage facilities and transportation equipment for those facilities. The web link for the [report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On June 18, the House's Subcommittee on Energy and Water Development and Related Agencies held a hearing for the Fiscal Year 2014 Appropriations Bill. The Appropriations Bill totaled \$30.4 billion with the highest priorities going to national defense and the Army Corps of Engineers. The Bill also proposed \$25 million to sustain the Yucca Mountain Project by supporting the Nuclear Regulatory Commission to finish its licensing proceedings. The Assistant Secretary of Energy testified before the House that the Department was moving forward on the Administration's strategy document to manage the used nuclear fuel by developing design concepts for storage facilities including an analysis of spent nuclear fuel shipments from shutdown reactor sites.
6. On June 19, the Nuclear Regulatory Commission (NRC) held a public teleconference to discuss the status of the Waste Confidence Generic Environmental Impact Statement (GEIS) and proposed rulemaking. The NRC staff identified the ten chapters and eight appendices of the draft GEIS. The staff

informed the public that the Commission Review Draft documents would be available on June 24th and anticipated that the draft GEIS and proposed rule would be published in late summer or early fall.

7. On June 19, the Nye County, Nevada issued a news release reaffirming its commitment to accept the Department of Energy's high-level radioactive waste as long as it can be done safely.
8. On June 24, the Nuclear Regulatory Commission (NRC) issued a press release seeking public input on their draft spent fuel pool study. The NRC initiated the study following the March 2011 Fukushima nuclear accidents. The study explored a full spent fuel pool and one with less fuel under earthquake conditions several times stronger than what a pool is designed for together with emergency procedures for adding water to the pool should the pool lose water. The draft study showed that a very strong earthquake is very unlikely to damage the pool to the point of losing water. Except for a few extraordinary instances, the study showed the spent fuel could be safely cooled. In those situations where the analysis showed fuel damage, the study deduced existing emergency measures would keep the population safe. The web link for the [press release](#) and the [spent fuel pool study](#) can be accessed by positioning the cursor over the underlined texts and following the directions.
9. On June 24, the Waste Confidence Directorate of the Nuclear Regulatory Commission (NRC) informed stakeholders that it had drafted three documents for the Commission's review relative to the Waste Confidence environmental review and rulemaking. The first informed the Commission of its progress and recommendations for publishing the draft rule and environmental impact statement. The second provided a draft of the Federal Register Notice outlining the rule's proposed text, the explanations, and the conclusions that support the proposed rule. The final document was the draft generic environmental impact statement. The Commission was expected to review the draft reports and approve the documents. After approving the draft documents the NRC staff will publish the documents for a 75 day public comment period. In addition, the staff will hold 10 public meetings around the country to solicit public input. The web link for the [notification](#) can be accessed by positioning the cursor over the underlined text and following the directions. The notification also provided web links for the three draft documents.
10. On June 26, the National Association of Regulatory Utility Commissioners and the Nuclear Energy Institute, petitioners in the case, filed a reply brief with the U.S. Court of Appeals for the D.C. Circuit that continued to challenge the Department of Energy's (DOE) Nuclear Waste Fund fee assessment that maintained it had the right to continue collecting \$750 million a year even "to fund a nonexistent nuclear waste program". The brief maintained that the 2009, 2010 and 2013 DOE fee determinations were legally defective as their considerations were not thorough, and their reasoning invalid and inconsistent with precedents and practice. The petitioners make seven legal arguments to demonstrate the inadequacy of DOE's claims. The web link for the [reply brief](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On June 26, the House Appropriations Committee passed their Energy and Water Development Bill by a vote of 28-21. The bill provided \$25 million for the Nuclear Regulatory Commission to continue its deliberations on the Yucca Mountain license application. The House's legislation did not fund the Department of Energy's strategy to implement the nuclear waste management recommendations of the President's Blue Ribbon Commission on America's Nuclear Future.
12. On June 26-27, the U.S. Nuclear Infrastructure Council in conjunction with the Institute of Nuclear Materials Management held a technical workshop on the Department of Energy's (DOE) 2021 proposed pilot interim storage project. The majority of speakers were from the DOE, the Nuclear Regulatory Commission (NRC), former DOE and NRC staff, and representatives from the national laboratories. Topics covered included DOE's key strategy components, pilot project elements, licensing, transportation, storage, industry's perspective, design concepts, states perspective, shipments from shut-

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

13. On June 27, four senators introduced bipartisan legislation to safeguard and permanently dispose of used nuclear fuel and high-level waste. The bill, entitled the “Nuclear Waste Administration Act of 2013, is based in part on recommendations from the President’s Blue Ribbon Commission for America’s Nuclear Future. The legislation proposed a new agency to administer the nation’s nuclear waste program and a consent-based process to find sites for temporary and permanent storage. It also provided a linkage between storage facilities and a repository such that new storage facilities cannot be sited unless at least one site has been selected for evaluation as a potential repository. In addition, the proposed legislation would create a Working Capital Fund from which fees deposited into the Fund would be immediately available without congressional appropriations. Finally, the bill would allow the Energy Secretary to revisit the decision not to commingle defense and commercial used nuclear fuel. The bill updated an earlier draft that received more than 2,500 comments. The web link for the [Senate news release](#), the [two page summary](#), and the [section by section analysis](#) of the Act can be accessed by positioning the cursor over the underlined text and following the directions.
14. On June 27, The Senate Appropriations Committee approved their version of their Energy and Water Development Bill by a vote of 24-6. The Senate bill had a limited provision that provided the Secretary of Energy with the authority to introduce a pilot program for a consolidated storage facility for used nuclear fuel. The Senate’s version did not include any language on the Yucca Mountain Project.
15. On June 28, the Chair of the House’s Subcommittee on the Environment and Economy forwarded a letter to Energy Secretary Moniz requesting any information on activities the Department of Energy’s Office of Nuclear Energy has initiated in response to the Administration’s strategy document for the management and disposal of nuclear waste. The request demanded specifics on deliverables, the amount of resources expended, whether revenues from the Nuclear Waste Fund were used, the legal basis for the activities, and the Department’s efforts at developing a consent-based process. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

July 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 during the month, both locally and nationally.

LOCAL:

- The Nuclear Regulatory Commission (NRC) issued Maine Yankee its exemption request from foreign ownership, control, or domination. Maine Yankee is partially and indirectly owned by corporations from foreign countries amounting to 74% of Maine Yankee (Spain 38%, United Kingdom 24%, and Canada 12%). In reviewing the request, the NRC came to the conclusion that the spent fuel storage facility in Wiscasset was not a production or utilization facility as defined under the Atomic Energy Act of 1954 as amended. Consequently, ISFSI's such as Maine Yankee can be exempted since they do not fall under the exclusive prohibition of the Atomic Energy Act and are not capable of producing or using special nuclear material such as plutonium, uranium-233, and either enriched uranium-233 or uranium-235. Since the restrictions apply only to financial ownership and do not involve technical or operational requirements, the NRC concluded the exemption would pose no risk to the public's health or safety.

The national highlights primarily focused on congressional initiatives and a journal article.

National:

- The U.S. Senate Committee on Energy and Natural Resources held a hearing to move forward a bill, Nuclear Waste Administration Act of 2013, that would permanently secure the disposal of the nation's nuclear waste backlogged at operating and shutdown reactor sites. The bill would implement some of the key recommendations from the President's Blue Ribbon Commission such as a new agency, a consent-based process for siting nuclear waste storage and disposal facilities, and a new working capital fund for the proposed waste facilities. The bipartisan bill established an aggressive timeline of ten years to operate a consolidated interim storage facility with the caveat that progress towards developing a geologic repository was maintained. If not, then the new Agency Head would be compelled to not site any further interim storage sites until a repository site was selected for evaluation.
- The House Subcommittee on Environment and the Economy held a hearing to examine the statutory and feasibility of the technical and economic support for the Department of Energy's (DOE) strategy on managing the nation's used nuclear fuel, and the status of the current activities implementing this strategy. Energy Secretary Moniz testified on behalf of DOE and reiterated the Administration's position that Yucca Mountain was not a workable option. He based his response on science and public

acceptance. Dr. Moniz believed that science may demonstrate that Yucca Mountain may be acceptable, but the public's trust was shattered when Yucca Mountain was singled out to be the only repository and, thereby, fostering opposition to this day. Several representatives were very skeptical that starting over from scratch with a consent-based approach would solve the nation's dilemma. They gave an example of Yucca Mountain where local support for the repository was very high whereas the State and outlying counties were not. Another example was the federally licensed interim storage facility on the reservation of the Goshute Indians in Utah. Again, local support was very high, but the rest of the State opposed it, eventually forcing the company to request its license be terminated. Finally, the Low-Level Waste Policy Act (LLPA) was cited as another example. The LLPA was enacted by Congress in 1980 for states to form regional compacts using a consent-based approach to dispose of their low-level waste. After 33 years only two facilities exist nationally and 34 states have no access to their higher concentrations of low-level waste. If the low-level waste compacts with much lower concentrations of radioactivity were any indication of public sentiment, then public acceptance of high-level waste and used nuclear fuel would fare even less.

- The American Nuclear Society's Radwaste Solutions journal published an article, entitled, "Consent-Based Siting: What Have We Learned?" The article was written by a senior professional staff person at the U.S. Nuclear Waste Technical Review Board and reflected the author's opinions not necessarily those of the Board. The article provided a historical perspective on consent-based siting along with consent approaches from eight foreign countries besides the U.S. experience. The consent processes for Sweden, Finland and Canada were examples of approaches that enhanced public acceptance. The lessons learned over the past 50 years indicated that a) "any siting process that ignored the views, values, and preferences of a potential host community was unlikely to succeed" and b) it "strongly suggested that consent-based processes which include volunteers would not necessarily culminate in a durable selection of a site." The author offered three design conditions that could increase the likelihood of success.
 - Advancing a persuasive and technically defensible case for the safety of a country's disposal concept prior to seeking a community's consent could increase its chances for acceptance.
 - Institutional continuity and culture likely influence whether bonds of trust are formed between waste managers and potential host communities.
 - Any consent-based process will likely struggle with the issue of how power will be distributed between the federal government on the one hand and state and local governments on the other.

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.

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

There was one fire-related impairment for the month. The impairment had to do with the fire loading in the truck bay from the build-up of paper awaiting the arrival of the shredding truck.

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

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

- 1st CR: Documented a problem with the site's gate. Replacement parts were ordered and the gate was fixed.
- 2nd CR: Documented a rifle sling becoming disengaged from the rifle. The sling was replaced.
- 3rd CR: Documented a problem with the man-lift drive system. The problem could not be reproduced so a service technician was called in. No problem was identified.
- 4th CR: Was written to document an insect sting to a worker. Ice was applied.
- 5th CR: Was written to document the automatic start of the diesel generator without a loss of power. The problem was traced to a loose wire in the auto transfer switch. The wiring harness was replaced.
- 6th CR: Documented low voltage on the incoming power line. The taps on the building's transformer were changed to deliver the proper voltage to the building.
- 7th CR: Documented the loss of the signal alert on the diesel auto transfer switch. The control board was replaced.
- 8th CR: Was written to document the loss of communication with the gate house during a lightning storm. The modules were reset and repowered the following shift.
- 9th CR: Documented a procedure not being updated to reflect a change in the regulation. The procedure was revised.
- 10th CR: Documented uneven wear on the John Deere tires. It was later determined that the wear was normal for a four wheel drive vehicle with tractor type tires operated on pavement.
- 11th CR: Documented the failure of one of the building exhaust fans. The fan's motor was replaced.

Other ISFSI Related Activities

1. On July 12, 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 on funding state grants for spent nuclear fuel shipments, the status of the State's Confirmatory Summary Report on the Maine Yankee decommissioning, and the State's recent neutron survey at the storage facility. Maine Yankee briefed the Group on the new building that was constructed in the old staff

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.

building parking lot. The maintenance building will allow for the construction of more office space in the Security and Operations Building. Maine Yankee noted that it had received from NRC a license amendment for the new name of its Security Plan and an exemption request to its emergency planning. Maine Yankee also informed the oversight group that it had installed a new vehicle barrier at the ISFSI and was planning a comprehensive assessment of all its security equipment next year. In addition, they mentioned the NRC's nearly 600 page waste confidence report that discussed indefinite storage of the used nuclear fuel. NRC's evaluation assumed that every 100 years the storage facilities would require complete replacement of the concrete storage casks, as well as the concrete pads the casks rest on. It was also contemplated that some repackaging of the used fuel canisters that are housed inside the concrete casks may be necessary. This would be accomplished by constructing a dry transfer building at the site to facilitate the handling and transfer of the used fuel.

2. On July 15, the NRC issued Maine Yankee its exemption request from foreign ownership, control, or domination. Maine Yankee is partially indirectly owned by foreign corporations amounting to 74% of Maine Yankee. The foreign ownership breakdown is 38% from Spain, 24% from the United Kingdom, and 12% from Canada. In reviewing the request, the NRC came to the conclusion that the spent fuel storage facility in Wiscasset was not a production or utilization facility as defined under the Atomic Energy Act of 1954 as amended. Consequently, ISFSI's such as Maine Yankee can be exempted since they do not fall under the exclusive prohibition of the Atomic Energy Act and are not capable of producing or using special nuclear material such as plutonium, uranium-233, and either enriched uranium-233 or uranium-235. Since the restrictions apply only to financial ownership and do not involve technical or operational requirements, the NRC concluded the exemption would pose no risk to the public's health or safety.

Environmental

The surveillance results will be reported in the August, 2013, monthly report.

Other Newsworthy Items

1. On July 5, Nevada's Representative Titus introduced three amendments to the House's Appropriations Bill. Three amendments were introduced to negate the provisions in the Appropriations Bill that would have allotted funds to support the geological repository program at Yucca Mountain in Nevada, to help affected local governments, and to support the Yucca Mountain licensing proceedings enacted by the Nuclear Regulatory Commission. In addition, one of the amendments deleted one of the provisions of the Appropriations Bill that would have prevented any closure of the Yucca Mountain proceedings. The third amendment prevented the use of any funds for the Yucca Mountain Project. The web link for the [amendments](#) can be accessed by positioning the cursor over the underlined text and following the directions. (The reviewer is referred to the hyperlink for "comments" in the second newsworthy item below for specificity on the proposed legislative context of the amendments.)
2. On July 9, the Nuclear Energy Institute sent a letter to the Chair and Ranking Member of the House's Subcommittee on Energy and Water Development in support of the House's Appropriations Bill that would provide \$25 million to continue the review of the Yucca Mountain license application. The letter was in response to Nevada's Representative Titus's three amendments to the Appropriations Bill. NEI provided their position on the three amendments. The web link for the [letter](#) and [comments](#) can be accessed by positioning the cursor over the underlined text and following the directions.
3. On July 9, Nevada's Representative Heck introduced an amendment to the House's Appropriations Bill that would redirect the \$25 million appropriation to continue the Nuclear Regulatory Commission's

licensing proceedings on Yucca Mountain to the High Energy Physics Program at the Department of Energy's Office of Science. The Program would develop accelerator technology that would reduce the toxicity of the used nuclear fuel by transforming the long lived radioactive elements into shorter ones. The web link for the Representative's [statement](#) can be accessed by positioning the cursor over the underlined text and following the directions.

4. On July 9, the State participated in a National Transportation Stakeholders Forum webinar introducing a new website solely devoted as an information exchange on used nuclear fuel. The participants were trained on how to use the site, how to find documents, how to access international programs and their experiences, and even how to save and edit documents. The Oak Ridge National Laboratory developed the website and named it CURIE for Centralized Used Fuel Resource for Information Exchange.
5. On July 10, Germany passed a new law on repository selection for the disposal of used nuclear fuel by restarting from scratch. The action was taken after the Gorleben site, which has been explored for over three decades, was politically contested. However, the site would remain as an option. A 33 member commission will be set up with representation from four sectors of German society. The membership would be comprised of eight scientists, eight from the general public, eight from the German Parliament, eight from the state governments, and one Chairperson. The commission was tasked with recommending changes to their Site Selection Act, especially those involving the process, public participation, and site selection and exclusion criteria by no later than July, 2016. The German government's experience appeared very similar to the U.S. undertaking with Yucca Mountain. The web link for the [news release](#) can be accessed by positioning the cursor over the underlined text and following the directions.
6. On July 10, the Plymouth Zoning Board rejected an appeal by opponents to stop the construction of a dry cask storage facility on the property of the Pilgrim Nuclear Power Plant in Massachusetts. Although the owners of the Pilgrim station, the town of Plymouth and the opponents agree that the used fuel in the spent fuel pool must be loaded into dry casks, the opponents contended that the Zoning Board should overturn the initial permit issued to construct the storage facility because the storage site required a special permit subject to public hearings.
7. On July 11, the State participated in the Nuclear Waste Strategy Coalition's bi-weekly update of the Department of Energy's activities on their 2021 pilot storage facility, the recently released NRC's waste confidence draft documents, the status of the two cases before the D.C. Circuit Court of Appeals (the mandamus case to compel the NRC to reopen the Yucca Mountain licensing proceedings and the Nuclear Waste Fund case to stop the imposition of the nuclear generating fee), the current status of the Senate's proposed legislation to enact some of the recommendations from the President's Blue Ribbon Commission on used nuclear fuel, and the House's potential bill to affirm Yucca Mountain as the nation's sole repository.
8. On July 22, DOE's Assistant Secretary for Nuclear Energy responded to the Chair of the House's Environment and the Economy Subcommittee June 28 letter in which the Chair requested any information on activities of the DOE's Office of Nuclear Energy initiated in response to the Administration's strategy document for the management and disposal of nuclear waste. The Assistant Secretary summarized the major activities commencing with the closure of the Yucca Mountain Project in 2010 through the Administration's 2013 issuance of its strategy document to manage the nation's nuclear waste. Since specifics were requested by the Subcommittee Chair, the DOE response included three tables summarizing the programs, solicitations, or activities undertaken to support the Administration's strategy. The tables further illustrate the deliverables and their associated estimated completion dates, the resources expended to date and the source of those funds along with DOE's legal authority to perform these tasks. The web link for the [letter](#) and [tables](#) can be accessed by positioning the cursor over the underlined text and following the directions.

9. On July 25, the State participated in the Nuclear Waste Strategy Coalition's (NWSC) bi-weekly update. The purpose of the call was solely to discuss the NWSC's draft comments to the Senate's proposed legislation, the Nuclear Waste Administration Act of 2013. Even though there were some improvements from the earlier discussion draft circulated in April, the proposed bill needed additional improvements in certain areas to create a supportable process for managing the nation's nuclear waste. Recommendations were made in seven major areas. They encompassed the reaffirmation of Yucca Mountain as the law of the land; the opposition to the requirement that nuclear utilities have to settle their lawsuits before having access to future storage facilities; expressing disappointment in the proposition of a separate agency with a single administrator as opposed to a federal corporation as recommended by the Blue Ribbon Commission along with the number of Board members overseeing the new agency and who should appoint them; commending the bill's provision to create a Working Capital Fund (WCF) for payments into the fund but failing to transfer the accrued interest and corpus of the present Fund into the WCF; maintaining flexibility in the consent-based siting process; and the importance of establishing a permanent repository as quickly as possible so as to not deter communities from hosting storage facilities with a repository target date as far off as the year 2048.
10. On July 30, the U.S. Senate Committee on Energy and Natural Resources held a hearing to move forward a bill, Nuclear Waste Administration Act of 2013, that would permanently secure the disposal of the nation's nuclear waste backlogged at operating and shutdown reactor sites. The bill would implement some of the key recommendations from the President's Blue Ribbon Commission such as a new agency, a consent-based process for siting nuclear waste storage and disposal facilities, and a new working capital fund for the proposed waste facilities. The bipartisan bill established an aggressive timeline of ten years to operate a consolidated interim storage facility with the caveat that progress towards developing a geologic repository was maintained. If not, then the new Agency Head would be compelled to not site any further interim storage sites until a repository site was selected for evaluation. The web link for the [news release](#) can be accessed by positioning the cursor over the underlined text and following the directions. At the end of the news section additional links on the proposed legislation are also provided. In addition, the following testimonies from the [National Conference of State Legislatures](#), [Energy Communities Alliance](#), the [Nuclear Waste Strategy Coalition](#), and [Energy Secretary Moniz](#) are all accessible through the underlined hyperlinks. Each organization's testimony provided additional information on their varied positions as to why they embraced certain facets of the bill and opposed others. Furthermore, additional links to testimonies from other panel speakers are available on the [Committee's website](#) by scrolling down and clicking on the speaker's name.
11. On July 30, the U.S. Nuclear Waste Technical Review Board forwarded a letter to the DOE's Assistant Secretary in response to the DOE's April 16 presentation in Richland Washington on researching and developing deep borehole disposal of used nuclear fuel. The Board made three recommendations to the DOE. The first recommendation was to ensure that the research should be sequenced from bench scale testing to in place tests in the proposed environment to a full scale pilot test. The second recommendation centered on the DOE employing international collaborations with Switzerland and Sweden, which have underground laboratories, to better characterize the host rock at great depths. Finally, the Board recommended that the DOE assess the repackaging of used nuclear fuel into smaller packages and the facilities that would be required to support such an undertaking. The Board reiterated its concern that borehole concept is in its infancy and nearly 600 deep boreholes would be required to dispose of the used nuclear fuel presently in dry and wet storage across the country. Because of this the Board advocated for a mined geologic repository. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
12. On July 31, the House Subcommittee on Environment and the Economy held a hearing to examine the statutory and feasibility of the technical and economic support for DOE's strategy on managing the nation's used nuclear fuel, and the status of the current activities implementing this strategy. Energy

Secretary Moniz testified in behalf of DOE and reiterated the Administration's position that Yucca Mountain was not a workable option. He based his response on science and public acceptance. Dr. Moniz believed that science may demonstrate that Yucca Mountain may be acceptable, but the public's trust was shattered when Yucca Mountain was singled out to be the only repository and thereby fostering opposition to this day. Several representatives were very skeptical that starting over from scratch with a consent-based approach would solve the nation's dilemma. They gave as examples Yucca Mountain where local support for the repository was very high whereas the State and outlying counties were not. Another example was the federally licensed interim storage facility on the reservation of the Goshute Indians in Utah. Again local support was very high but the rest of the State opposed it, eventually forcing the company to request its license be terminated. Finally the Low-Level Waste Policy Act (LLWA) was cited as another example. The LLWA was enacted by Congress in 1980 for states to form regional compacts using a consent-based approach to dispose of their low-level waste. After 33 years only two facilities exist nationally and 34 states have no access to their higher concentrations of low-level waste. If the low-level waste compacts with much lower concentrations of radioactivity were any indication of public sentiment, then public acceptance of high-level waste and used nuclear fuel would fare even less. The web links for the Subcommittee's [background memorandum](#) and [preliminary transcript](#) can be accessed by positioning the cursor over the underlined text and following the directions.

13. In July the American Nuclear Society's Radwaste Solutions journal published an article, entitled, "Consent-Based Siting: What Have We Learned?" The article was written by a senior professional staff person at the U.S. Nuclear Waste Technical Review Board and reflect the author's opinions not necessarily those of the Board. The article was very insightful as it provided a historical perspective on consent based siting along with consent approaches from eight foreign countries besides the U.S. experience with the Waste Isolation Pilot Plant in New Mexico. The U.S. historical perspective provided three examples of past consent approaches starting with the Interagency Review Group's recommendations to and accepted by President Jimmy Carter in 1980. It tendered a consultation and concurrence approach. That approach was changed to consultation and cooperation by the 1982 Nuclear Waste Policy Act (NWPA) and aborted by the mandate for Yucca Mountain with the 1987 amending of the NWPA. The consent process for Sweden, Finland and Canada were examples of approaches that stood out and increased public acceptance. The lessons learned over the past 50 years indicated that a) "any siting process that ignored the views, values, and preferences of a potential host community was unlikely to succeed" and b) it "strongly suggested that consent-based processes which included volunteers would not necessarily culminate in a durable selection of a site." The author offered three design conditions that could increase the likelihood of success.

- o Advancing a persuasive and technically defensible case for the safety of a country's disposal concept prior to seeking a community's consent could increase the chances of its acceptance.
- o Institutional continuity and culture likely influence whether bonds of trust are formed between waste managers and potential host communities.
- o Any consent-based process will likely struggle with the issue of how power will be distributed between the federal government on the one hand and state and local governments on the other.

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

State Nuclear Safety Inspector Office
Maine CDC – DHHS

August 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 nationally.

National:

- The U.S. Court of Appeals for the District of Columbia issued an Order directing the Nuclear Regulatory Commission (NRC) to resume its review of the Department of Energy's construction license application for a repository at Yucca Mountain in Nevada. The Order was a result of a writ of mandamus filed by petitioners from the states of South Carolina and Washington, Aiken County South Carolina, three business leaders from the Tri-City area near Hanford, Washington, the National Association of Regulatory Utility Commissioners, and Nye County, Nevada. The petitioners had maintained that the NRC could not unilaterally and lawfully cease the licensing process for Yucca Mountain without being in direct violation of the Nuclear Waste Policy Act. Two of the three judges viewed the disregard for the law as raising significant questions about the extent of the Executive's authority.
- The NRC unanimously approved the staff's proposed Waste Confidence Rule and draft Generic Environmental Impact Statement (GEIS) for publication and public comment. The NRC's 2010 Waste Confidence Rule was vacated by the D.C. Circuit in June, 2012, and remanded it back to the NRC to address environmental concerns should a geologic waste repository not be available for the disposal of spent nuclear fuel. The NRC's 2010 Rule had assumed that a repository would be available when needed. The NRC's Rule was challenged in the Courts by the states of Connecticut, New York, Vermont, Massachusetts and numerous environmental organizations. The Court deemed the presumption as not meeting the requirements of the National Environmental Policy Act (NEPA). Subsequent to the Court's Order, in September, 2012, the Commission ordered the NRC staff to propose a new rule and issue an Environmental Impact Statement to address the NEPA concerns raised by the Court.
- In response to the Court's writ of mandamus the NRC issued an Order seeking input from the participants in the adjudicatory proceeding on the resumption of the Yucca Mountain licensing review and how the NRC should continue with the licensing process to ensure the most efficient use of its remaining \$11 million in appropriated funds. In the meantime the Commission directed its staff to gather pertinent budgeting information during the 30 day comment period ending on September 30th.

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

There were no fire or security related impairments for the month. However, there were three security events logged. Two involved transient environmental conditions and one was related to a short term communication loss with the remote alarm monitoring facility.

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

- 1st CR: Documented the need to update the safety program document to remain consistent with the Occupational Safety and Health Administration.
- 2nd CR: Documented an equipment failure in the atmospheric monitor.
- 3rd CR: Documented that the key inventory was not updated to reflect a recent key addition.
- 4th CR: Was written to document a worm digger on Maine Yankee property. The digger immediately left when he saw the Security Officer. The local law enforcement agency was not contacted.
- 5th CR: Was written to initiate a tracking CR as a follow-up to items from an internal self-assessment.
- 6th CR: Documented the repeated failure stalling of the man-lift. A service technician was called in to repair the unit.
- 7th CR: Was written to initiate a tracking CR as a follow-up to items from a Radiation Protection Program assessment.
- 8th CR: Was written to document a small hydraulic leak on the man-lift.
- 9th CR: Documented the man-lift stalling in the roadway while moving it to the repair location.
- 10th CR: Documented a battery surveillance not meeting the acceptance criteria. The batteries were replaced.

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.

- 11th CR: Documented a call from the Nuclear Regulatory Commission which was intended for only operating plants.
- 12th CR: Was written to document some ceiling panels support frames not installed per code. The issue was corrected upon discovery.

Other ISFSI Related Activities

1. On August 15, the Nuclear Regulatory Commission (NRC) issued a letter to Maine Yankee revising an earlier response to a Maine Yankee exemption request that was granted on specific requirements of NRC's revised 2011 Emergency Planning Final Rule, which was based on an operating nuclear power plant and not a stand-alone ISFSI. The NRC had initially concluded that Maine Yankee's "compliance with the Emergency Plan requirements in effect before the effective date of the Emergency Plan Final Rule provided "an adequate basis for an acceptable state of emergency preparedness," and that Maine Yankee's Emergency Plan in combination with arrangements made with offsite response agencies provided "reasonable assurance that adequate protective measures could and would be taken in the event of a radiological emergency" at the site. This reissuance is for administrative purposes only in order to capture the publication of the environment assessment with no significant impact in the Federal Register.
2. On August 28, Maine Yankee sent the NRC revision 3 of their ISFSI Physical Security Plan. The revision reflected the change of the title of the document. There were no other changes. Since the Plan is considered safeguards information it was not available for public disclosure.
3. On August 28, Maine Yankee submitted a request to the NRC to rescind their June, 2012, Confirmatory Order requiring Maine Yankee to undertake negation actions regarding foreign ownership, control, or domination (FOCD). Since the NRC had exempted Maine Yankee of the FOCD requirements in July, 2013, Maine Yankee reasoned that the Confirmatory Order no longer had a regulatory, safety, or security basis. In addition, Maine Yankee will maintain its negation plan that it implemented in December, 2011, to address and preclude any FOCD issues.

Environmental

The State received the 2013 second quarter results in August 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 26.1 milliRoentgens² (mR). It should be noted that one of the six elements of station K had to be rejected as the reading on the element was 39.4 mrems. A statistical test was performed to verify that it was an outlier and was proved to be so.

There were four stations in the slightly elevated group (F, J, L, and Q) with an average of 23.2 mR. Some stations continue to trade places due to background variations. Two remained and two others traded places from the previous quarter. For example, stations E and O that were in the slightly elevated group last quarter returned to the normal group this quarter. Station F went from the elevated group down to the slightly elevated group and station J went from the normal group to the slightly elevated grouping. These deviations will be tracked over the next several quarters to see if a pattern develops. There were eleven stations (A, B, C, D, E, H, I, M, N, O, and P) in the normal group as opposed to the previous quarter's ten and they averaged 20.5 mR.

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

The Maine Yankee industrial site TLDs averaged 20.0 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 10.4 mR. Although the storing of the control TLDs at HETL's pre-World War II steel vault lowers the natural background values, the 10.4 mR value for this quarter was slightly lower than last quarter's control results of 11.4 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 ongoing. Although we have not pinpointed the cause of the fluctuations yet, there was no doubt that something was 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 June 10th three of the seven control TLDs received for the second 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 5.5 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 5.5 mR was slightly higher than last quarter's reported 4.8 mR transit badges. Besides seasonal and daily fluctuations in the background, small increases or decreases could be attributed to an extra few days of or a few days less transit.

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 20.9, 22.1, and 18.7 mR, respectively.

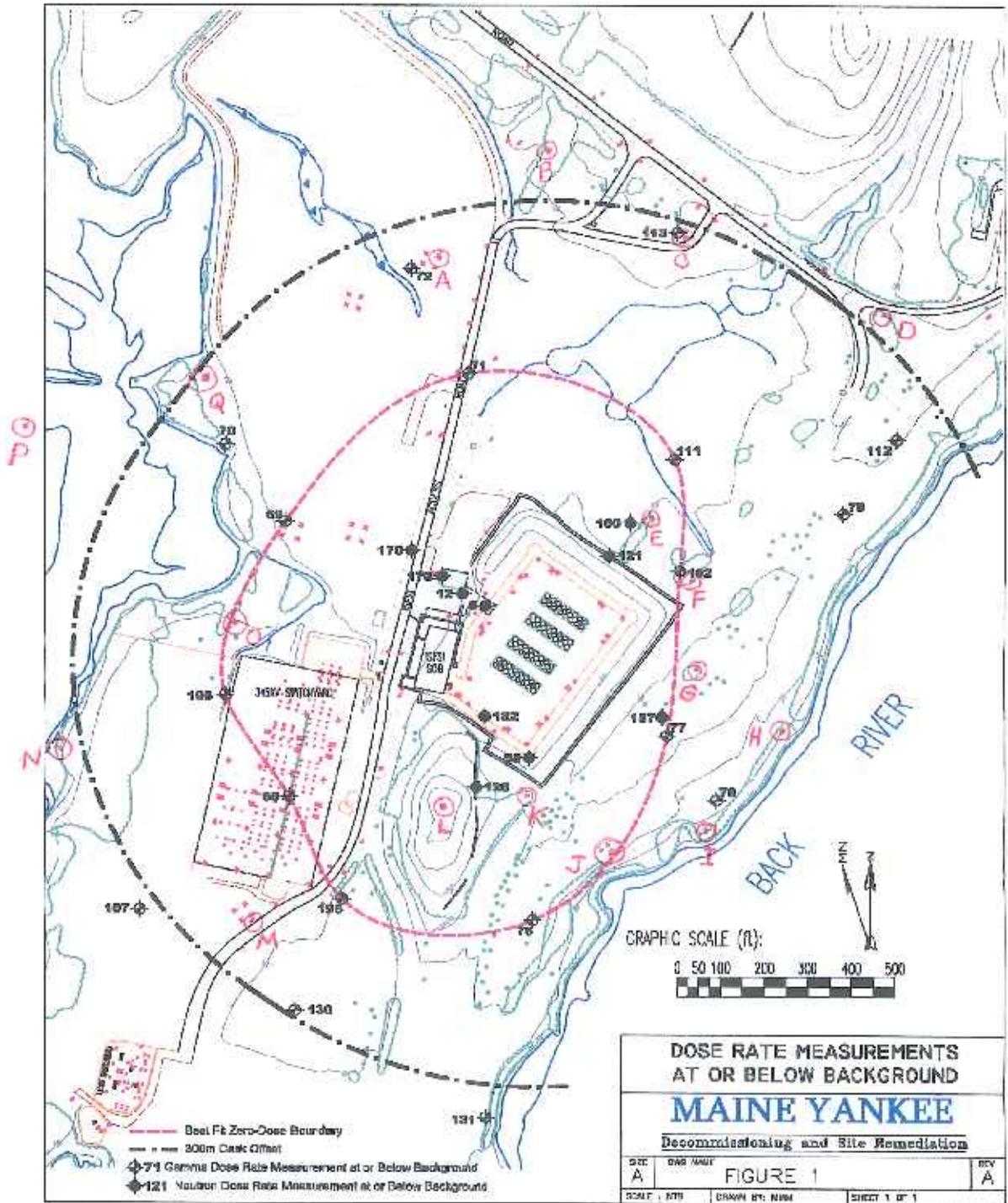
As noted in earlier reports, the State maintains an environmental air sampler on the roof of HETL for local or national events. The air sampler was extremely instrumental during the Fukushima event in Japan two years ago as in quantifying the levels of radioactivity that was coming from the cripple reactors. This year's second 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 13.1 to 34.1 femto-curies per cubic meter (fCi/m³)⁴. A composite of the five bi-weekly air filter samples was used to measure the Beryllium-7's concentration of 109 fCi/m³.

For informational purposes Figure 1 on page 5 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.

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

1. On August 2, the Center for Strategic and International Studies issued a commentary on "Finding a Solution to America's Nuclear Waste Problem". The commentary provided a perspective on the amount of tonnage of nuclear waste generated within the U.S. It illustrated that our energy, environment and national security policies were at stake and being undermined by our inability to resolve this issue. It also noted that several other countries were now ahead of us. For example, Finland has a repository that will begin operation in 2020. France has a site that is expected to open in 2025 and Sweden has a site that is undergoing their license review process. The commentary then focused on the key elements of a proposed Senate bill, which centered on a new nuclear waste agency, a consent-based process, linkage between storage facilities and a repository, and dedicated funding for disposition of the waste. The commentary advocated for a national waste policy that would result "in more immediate progress". The web link for the [commentary](#) can be accessed by positioning the cursor over the underlined text and following the directions.
2. On August 7, the State Inspector participated in a national webinar on the Environmental Protection Agency's draft protective action guidelines (PAGs) for radiological preparedness. The webinar was intended to clarify the use of PAGs for all radiological incidents, including terrorism at nuclear facilities and ISFSIs. It also incorporated guidance for long-term site restoration and lowered the projected thyroid radiation dose for the administration of Potassium Iodide (KI).
3. In August, the U.S. Nuclear Waste Technical Review Board submitted to Congress and the Secretary of Energy a 92 page report entitled, "Review of U.S. Department of Energy Activities to Preserve Records Created by the Yucca Mountain Repository Project". The Board identified six findings and had six recommendations. Although documents appeared to be easily retrievable, e-mail correspondence supporting the Yucca Mountain required extra time and effort to retrieve the information. Public access was available but only through a Freedom of Information Act request. The current system was unable to load and execute most analytical software and retrieving records from the National Archives and Records Administration could be cumbersome. It was uncertain how physical objects such as videotapes, well logs and maps would be preserved for extended periods. The six recommendations focused on sustaining resources to preserve and retrieve documents and physical material. The web link for the [report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On August 13, the U.S. Court of Appeals for the District of Columbia issued an Order directing the NRC to resume its review of a construction license application for a repository at Yucca Mountain in Nevada. The Order was a result of a writ of mandamus filed by petitioners from the states of South Carolina and Washington, Aiken County South Carolina, three business leaders from the Tri-City area near Hanford, Washington, the National Association of Regulatory Utility Commissioners, and Nye County, Nevada. The petitioners had maintained that the NRC could not unilaterally and lawfully cease the licensing process for Yucca Mountain without being in direct violation of the Nuclear Waste Policy Act. Two of the three judges viewed the disregard for the law as raising significant questions about the extent of the Executive's authority. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On August 13, the Director of Nuclear Energy Programs for the Energy Communities Alliance (ECA) presented a perspective on the role of local governments and the future of nuclear waste management and disposal at the National Conference of State Legislators Legislative Summit. The presentation listed the current, positive efforts to address nuclear waste management such as consent-based siting process, public comments considered in the Senate's proposed nuclear waste legislation, the Administration's strategy, federal, state and local governments viewed as equal partners, and affected communities decide on what terms they will host a nuclear facility. The presenter also catalogued a number of challenges

still remaining such as timeline and sense of urgency, trust, future of Yucca Mountain, defining a consent-based process, minimizing political influence, and resources for education, outreach, and feasibility studies. The responsibility of local governments was also outlined and included education and outreach to the community and industry as well as to state, regional, and federal decision-makers, negotiating on behalf of the potential host community, protecting public and environmental health and safety, and securing a viable economic future. The Director also defined consent agreements as being negotiated and reached between local, state and federal governments, must be legally enforceable, and "reflect the terms and conditions under which a community will host a facility. The ECA went on to list its priorities and recommendations, and the lessons learned from the Waste Isolation Pilot Project geologic repository in Carlsbad, New Mexico. The final lesson learned was from Yucca Mountain where local government and community support alone will not guarantee success and that state support is crucial to the process. The ECA is a national, non-profit organization of local governments adjacent to and impacted by DOE nuclear activities. The web link for the [presentation](#) can be accessed by positioning the cursor over the underlined text and following the directions.

6. On August 14, the NRC held a public teleconference to discuss the status of their Waste Confidence Generic Environmental Impact Statement (GEIS) and rulemaking. The NRC staff related that the Commission had unanimously approved the proposed Waste Confidence rule and draft GEIS for publication and public comment. The staff discussed the availability of the draft GEIS and proposed rule. The public questioned the locations of the regional public meetings. Some questioned whether they could phone in during the meetings, while others wondered if the meetings would be webcast. Some questioned the format and agenda of the meetings and others asked if they could use presentation materials. The web link for the [summary](#) can be accessed by positioning the cursor over the underlined text and following the directions.
7. On August 14, the law firm, Van Ness Feldman, provided a commentary on the recent U.S. D.C. Court of Appeals ruling that the NRC was "simply flouting the law" by terminating the licensing application review of the Yucca Mountain Project. Besides providing some background, the article highlighted the main points of the Court's Order and offered some possible legal steps the NRC could undertake. Although the Court's decision was a strong warning on federal agencies nullifying a statutory mandate, they concluded that the Court's decision would not resolve the ongoing saga of the Yucca Mountain Project, but could provide an impetus for the Senate's proposed legislation, the Nuclear Waste Administration Act of 2013, to move forward. The web link for the [commentary](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On August 20, the U.S. Nuclear Waste Technical Review Board issued a summary report, entitled "Deep Borehole Disposal of Spent Nuclear Fuel and High-Level Waste". The report provided a conceptual model of the disposal technique, which required a borehole to be drilled in crystalline rock, such as granite, to a depth of roughly 16,500 feet. The spent fuel would be placed in the lower 6,500 feet with the upper 10,000 feet of the borehole sealed. The potential advantages for this technique included deeper isolation from the biosphere, low permeability of the host rock to radioactive contaminant migration, and the potential availability of multiple disposal sites near nuclear power facilities with suitable geologies that would reduce the need for spent fuel shipments. The report did raise eight technical challenges associated with this disposal technique. They included drilling technology, casing and sealing technology, consolidation and repackaging of the waste, problems with emplacement of the waste packages, effective borehole seals, retrieval of the waste packages, complexity of characterizing the host rock at such depths, and the role of multiple barriers. The web link for the [borehole concept](#) can be accessed by positioning the cursor over the underlined text and following the directions.
9. On August 23, the Chair of the House's Committee on Energy and Commerce and the Chair of the Subcommittee on Environment and the Economy sent a letter to the NRC Chairman requesting her

presence at a Subcommittee hearing to provide an update on the Commission's actions to implement the Court's Order. The Chairs requested that the NRC Chair also provide the Subcommittee with what actions the NRC has initiated in response to the Court Order and a schedule for releasing the five Safety Evaluation Reports on Yucca Mountain. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.

10. On August 23, Nye County, Nevada filed a motion with the Commission for recusal of NRC Chairman, Allison MacFarlane, from the resumption of the licensing proceedings on Yucca Mountain. Nye County questioned the impartiality of the Chairman based on her publications and previous statements on the inappropriateness of the Yucca Mountain site as a location for a nuclear repository and her critical position of the Department of Energy's modeling and factual support of the Yucca Mountain license application. The web link for the [motion](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On August 23, the State of Nevada filed a motion with the NRC on how the Commission should act relative to a possible restart of the Yucca Mountain licensing proceeding. The motion requested the Licensing Network that once held all the pertinent documents to be recreated, any hearings should be conducted in Las Vegas, and the original administrative law judges should be reappointed to the restarted proceeding. The web link for the [motion](#) can be accessed by positioning the cursor over the underlined text and following the directions.
12. On August 23, Nye County, Nevada filed a motion with the NRC requesting that the NRC immediately lift the suspension of the Yucca Mountain licensing proceedings, revise and reinstitute the discovery schedule suspended by the NRC, and issue an Atomic Safety and Licensing Board order directing the immediate release of the NRC Safety Evaluation Reports. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
13. On August 26, the Chair of the House's Committee on Energy and Commerce and the Chair of the Subcommittee on Environment and the Economy sent a letter to Energy Secretary Moniz expressing their sentiment that the Department of Energy (DOE) fully support the recent D.C. Circuit Court of Appeals' decision for the NRC to resume the Yucca Mountain licensing proceeding. The Chairs requested that the DOE provide "monthly reports detailing actions and expenditures in support" of NRC's review. The Chairs also requested that the DOE provide information on recent actions in support of the Court's Order and a detailed description of all the available resources to support the NRC's licensing review. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
14. On August 27, the New England Council's Committee on Energy and Environment provided an overview on the U.S. Court of Appeals for the D.C. Circuit's Order mandating the NRC resume the Yucca Mountain licensing proceeding. The update provided a historical perspective on the Nuclear Waste Policy Act that was enacted in 1983 and its mandates. The overview also provided an analysis of the Court's decision and the constitutional principles governing the President, the Executive Branch of the government, and independent agencies such as the NRC. The update also provided some insight on the "two constitutional principles that give the Executive authority, in certain circumstances, to decline to follow a statutory mandate". The analysis went on to illustrate how neither of the two applied in this situation. The conclusion highlighted the recommendations of the President's Blue Ribbon Commission on America's Nuclear Future. The web link for the [update](#) can be accessed by positioning the cursor over the underlined text and following the directions.
15. On August 27, the Mississippi Energy Institute, a not-for-profit group, "formally urged the state's senate to consider establishing a dedicated management center to provide interim storage for used nuclear fuel" with a future possibility of recycling and even disposal as Mississippi's geology includes salt domes.

16. On August 30, the NRC issued an Order seeking input from participants in the adjudicatory proceeding on the resumption of the Yucca Mountain licensing review and how the NRC should continue with the licensing process to ensure the most efficient use of its remaining \$11 million. In the meantime the Commission directed its staff to gather pertinent budgeting information during the 30 day comment period ending on September 30th. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
17. On August 30, the Nuclear Energy Institute (NEI) filed a response with the NRC to Nevada's and Nye County, Nevada's motions for the restart of the Yucca Mountain licensing activities. NEI maintained that the remaining funds should be directed at completing the NRC's Safety Evaluation Report (SER). After the publication of the SER volumes, any remaining funds should be used to resume the Yucca Mountain licensing activities. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
18. On August 30, the State of Nevada filed a response with the NRC on Nye County's motion for the recusal of the NRC Chair, Allison Macfarlane. Nevada contended that the Nye County motion relied on the use of an improper recusal/disqualification standard and none of the Chairman's statements cited by Nye County as warranting disqualification. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

September 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:

- Maine Yankee briefed its Community Advisory Panel on Spent Nuclear Fuel Storage and Removal at its annual meeting on new construction at the site of a new vehicle barrier gate at the ISFSI and a storage and maintenance building to allow for more office space in its Security and Operations Building. In addition, they also related their efforts at canister relicensing with the renewal of their transportation certificate until 2017, the submittal of their 40 year storage license renewal application in 2018, their involvement in extended storage issues such as the potential for chloride induced stress corrosion cracking of the stainless steel canisters in a marine environment, and their chemical sampling of 25 groundwater wells every five years. The State Inspector updated the Panel on his major activities, which, besides his annual and monthly reports to the Legislature, included the final draft of the Confirmatory Summary Report on the State's decommissioning findings, his participation in a national ad hoc group advocating funding allocations for states and tribes for spent nuclear shipment training and emergency response, neutron radiation measurements in the vicinity of the storage casks, observation of a U.S. Navy emergency exercise of a mock spent fuel shipment derailment that took place in Fort Wayne, Indiana, and explained how he identified two anomalies associated with the State's environmental radiation surveillance results of the ISFSI. Maine Yankee also honored Marge Kilkelly for her 15 years of service as the former Chair of the Panel. She is currently Senator Angus King's Senior Policy Advisor.

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

National:

- Holtec International announced that their III-STAR 180 spent nuclear fuel transport cask withstood the impact of a missile travelling at 600 miles per hour with no breach of the containment boundary. The test was carried out as part of Switzerland's nuclear regulatory certification process and simulated the impact of an aircraft crashing on a storage cask.
- The NRC Chairman denied Nye County, Nevada's motion for the NRC Chair to recuse herself of any Yucca Mountain proceedings based on her previous public statements opposing the Yucca Mountain Project. The Chair found no basis requiring her disqualification from the licensing proceeding.

- The NRC issued a news release requesting comments on its published draft report of its Waste Confidence Generic Environmental Impact Statement (GEIS). The draft GEIS was NRC's response to the U.S. Court of Appeals June, 2012, ruling that vacated the NRC's 2010 Waste Confidence decision and cited three deficiencies that the NRC had to address. According to the Court Order the NRC must "examine the potential environmental impacts that could occur as a result of the continued storage of spent nuclear fuel" at operating or shutdown reactor sites. As part of its determination the GEIS had to address indefinite storage of the spent fuel with no geologic repository available for the disposal of spent nuclear fuel. The assessment also included an evaluation of spent fuel pool leaks and fires. The draft report assumed that every 100 years the storage facilities would require complete replacement including the storage casks and the pads the casks rest on. The report also envisioned the construction and utilization of a dry transfer system (DTS) to move the fuel as needed for inspection or repackaging. The DTS would also be replaced every 100 years. The conclusions of the draft report indicated that the environmental impacts, including the impacts from postulated accidents would be small for indefinite storage as well as for spent fuel pool leaks and fires. Small was defined as environmental effects that were not detectable or so minor that they would neither destabilize nor noticeably alter any important attribute of the resource.
- The Chair of the U.S. Nuclear Waste Technical Review Board forwarded a letter to the Chair of the House Subcommittee on Energy and Water Development responding to a question the Committee posed to him during his testimony on April 11th - "What do international and U.S. experiences tell us about consent-based siting?" The Chairman related how the Board had followed other national waste management programs, in particular those of Sweden and France, and provided five observations.
 - "Successful waste-management programs are being implemented by private, hybrid, and public organizations.
 - Successful implementing organizations emphasize a single-minded commitment to long-term safety, including, but not limited to, complying with the requirements of the regulatory authorities.
 - Successful implementing organizations place a high value on sustaining public trust and confidence and accord a high priority on doing so in their everyday choices.
 - Successful implementing organizations establish processes by which they respond to new information and circumstances.
 - Successful implementing organizations appreciate that disposing of High-Level Waste and Spent Nuclear Fuel presents operational challenges and, therefore, develop prototypes and techniques to address ahead of time those challenges."

The letter went on to highlight three other attributes. They are how an organization functions was more important than its structure, organizational culture drove organizational behavior, and how an organization addresses technical issues was important for repository development.

- The State of Nevada filed a petition for rehearing en banc (before all the judges on the Appeals Court) on the Court of Appeals' August 13 ruling that the NRC's suspension of the Yucca Mountain licensing proceeding violated the Nuclear Waste Policy Act and ordered the NRC to restart the licensing process. Nevada contended that the Court's initial ruling commanded a useless thing and, therefore, the rehearing should be granted and the initial Order overturned.
- 81 members of the House of Representatives, 50 republicans and 31 democrats, sent a letter to the NRC Chairman requesting that the Chair follow through on her commitment to make a final determination on Yucca Mountain, if ordered to do so by the courts. The Representatives also expressed their bipartisan support for the NRC to focus its resources on completing the Yucca Mountain Safety Evaluation Report.

- Twenty organizations, most of them participants in the adjudicatory proceeding on the Yucca Mountain license application, submitted their responses to the NRC's invitation on how it should continue the Yucca licensing process to ensure the most efficient use of its remaining \$11 million in appropriated funds. Except for the Department of Energy (DOE) deferring to the NRC, all of the participants unanimously agreed that the Commission should issue the staff's five volume, Safety Evaluation Report. Some of the respondents recommended reconstituting the Licensing Support Network for document reviews while more were against it. Several suggested the licensing hearings be held in Las Vegas while others preferred funding to complete the licensing review. Two organizations advocated for the Commission to restore the funds that were used to terminate the initial proceeding while some promoted the same panel of judges to rehear the case. Besides the DOE and NRC eight counties in Nevada, three states and one county, two tribes, and four organizations responded.

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

There were three fire-related impairments. The first was due to various alarms being out of service due to a computer hardware issue. Compensatory measures were instituted and the computer component was replaced. The remaining two impairments occurred during a planned maintenance to upgrade an electrical transformer inside the Security and Operations Building. The first resulted in a fire suppression system for the document vault being taken out of service. The second involved a Fire Detection Panel taken out of service. Both were restored later that same day.

There was one security-related impairment for the month. It involved the computer hardware issue noted above. Compensatory measures were put into place until the system was restored. In addition, there were twelve security events logged for the month, eleven of which were transient environmental conditions and one was related to the computer hardware issue.

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

- 1st CR: Documented water intrusion into the Security and Operations Building following a heavy rain storm. The ground was re-graded and the leakage path was sealed.
- 2nd CR: Documented the use of an incorrect revision of a procedure. The procedure set was verified to be correct and the staff was briefed on correct revision use.
- 3rd CR: Documented the failure of an emergency exit light battery pack during testing. The battery pack was immediately replaced.
- 4th CR: Was written to document finding a wounded bird on the property. The State Game warden was called in and removed the Canadian Goose.
- 5th CR: Was written to document a computer hardware issue that was noted above under the first fire impairment. The component was replaced and returned to service.
- 6th CR: Documented a fire panel trouble alarm after the electrical transformer replacement. An investigation identified some incorrect labeling. The labeling was immediately corrected.
- 7th CR: Was written to document that the License Termination Plan (LTP) requires periodic revisions and submittals. The LTP was revised to reflect the facility's current status. The revision will be submitted per established requirements.
- 8th CR: Documented that a vendor was identified as not maintaining or training to the current revision of the procedure set. The vendor's procedure set was updated and training accomplished on the current set of procedures.
- 9th CR: Documented, via a self-assessment, that no requirement existed within the commitment tracking database for annual requalification training. All personnel were verified to be qualified in their positions. A requirement was added to the database to ensure all personnel qualifications remain current.
- 10th CR: Documented problems with the man-lift failing to rotate. The equipment vendor was dispatched to the site. The unit was repaired and tested satisfactorily.
- 11th CR: Was written to document the failure of recording equipment during a planned maintenance. The equipment was replaced from stock the same day.

Other ISFSI Related Activities

1. On September 9, Maine Yankee submitted its annual special nuclear material report to the NRC. The report identified and quantified those special materials within the used nuclear fuel that are fissionable, such as Uranium-235 and Plutonium-239.
2. On September 26, the Maine Yankee Community Advisory Panel on Spent Nuclear Fuel Storage and Removal held its annual meeting. Maine Yankee updated the Panel on the new construction of a storage and maintenance building to allow for more office space in the Security and Operations Building and a new vehicle barrier gate at the ISFSI. Maine Yankee mentioned their involvement in activities and issues revolving around extended storage of spent nuclear fuel. They also related their efforts at canister relicensing with the renewal of the transportation certificate until 2017 and the proposed 2018 submittal of their 40 year storage license renewal application. Additional information was provided on the NRC's proposed new security rules, their NRC exemption from foreign ownership, control and domination, and the chemical groundwater sampling program. The State Inspector updated the Panel on his major activities since the last meeting, which included his annual and monthly reports to the Legislature, the final draft of the Confirmatory Summary Report on the State's decommissioning findings, his participation in a national ad hoc group advocating funding allocations for states and tribes for spent nuclear shipment training and emergency response, state measurements of the neutron radiation in the

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.

vicinity of the storage casks, and observed a U.S. Navy mock emergency exercise of a spent fuel shipment derailment that took place in Fort Wayne, Indiana. The State Inspector also explained how he identified two anomalies associated with the State's environmental radiation surveillance results of the ISFSI. In addition, Maine Yankee provided a national perspective that included Congress, the Administration, NRC activities, and the DOE litigation and the Federal Energy Regulatory Commission approved filings. Maine Yankee also honored Marge Kilkelly for her 15 years of service as the former Chair of the Panel. She is currently Senator Angus King's Senior Policy Advisor.

3. In September the State Inspector renewed his general employee training to maintain his unescorted access to the storage facility.

Environmental

There is no new information to report.

Other Newsworthy Items

1. On September 3, the Nuclear Waste Strategy Coalition (NWSC) submitted a letter to the five NRC Commissioners on their August 30 invitation on how the NRC should proceed with the restart of the Yucca licensing review. The NWSC emphasized the timely completion of the NRC staff's Safety Evaluation Report, the reimbursement of Nuclear Waste Fund monies appropriated by Congress for the licensing review but were used instead to shut down the project without congressional authorization, and the pursuit of funding to complete the Yucca Mountain licensing review. 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.
2. On September 4, the Nevada Governor's Agency for Nuclear Projects presented an update on Yucca Mountain and State activities to the Las Vegas City Council. The focus of the presentation was on the safety and business cases against Yucca Mountain. The safety case was predicated on four attributes that spent nuclear fuel is dangerous, the site is unsuitable, the repository design is flawed, and the transportation impacts are unacceptable. The site's unsuitability was based on corrosive water chemistry, precipitation and infiltration, earthquakes, volcanoes and erosion. The main objection to the repository design was the installation of titanium drip shields in 100 years. The unacceptable transportation impacts were due to the truck or rail shipments passing through city of Las Vegas and potentially impacting 135,000 individuals. The business case was based on the estimated construction and operating costs of \$90-\$100 billion while terminating the Yucca Mountain Project and developing another site could save \$13-\$28 billion. The web link for the [presentation](#) can be accessed by positioning the cursor over the underlined text and following the directions.
3. On September 4, Holtec International announced that their III-STAR 180 transport cask withstood the impact of a missile travelling at 600 miles per hour with no breach of the containment boundary. The test was carried out as part of Switzerland's nuclear regulatory certification process and simulated the impact of an aircraft crashing on a storage cask. The web link for the [announcement](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On September 4, the quarterly conference call of the Federal Energy Regulatory Commission (FERC) rate case settlement briefed participants on spent fuel storage issues. The briefing included a status update of the three Yankee companies (Maine Yankee, Connecticut Yankee, and Yankee Atomic) Phase

I, II, and III lawsuits. In the first lawsuit the U.S. Court of Appeals unanimously awarded the three Yankee Companies nearly \$160 million for the federal government's failure to take the used nuclear fuel. On May 1st each of the three Yankee Companies filed their plans on how the damage awards would be distributed. All three Public Utilities Commissions in Connecticut, Maine, and Massachusetts supported the Yankees filings before FERC. In the Phase II lawsuits, covering the period from 2003-2008, the parties were waiting for the Federal Court of Claims to issue its decision. The three Yankees filed their Phase III lawsuits for the period from 2009-2012 in mid-August and the government was expected to ask for an extension at the filing deadline in early October. The states were also briefed on the Senate's Nuclear Waste Administration Act of 2013. The proposed legislation would address the Blue Ribbon Commission's recommendations for a consent-based siting process, a new nuclear waste agency, and establish a pilot program for the priority removal of spent nuclear fuel from decommissioned reactor sites. The recent Court ruling that mandated the resumption of the NRC's Yucca Mountain license proceeding was also discussed. However, Congress was at a standstill on appropriating funds to complete the Yucca Mountain Project with the House in favor of Yucca Mountain and the Senate favoring the Blue Ribbon Commission's recommendations.

5. On September 5, the U.S. Nuclear Waste Technical Review Board (NWTRB) announced they will hold a technical workshop in November to discuss the impacts of dry storage canister designs on the future handling, storage, transportation and geologic disposal of spent nuclear fuel. The NWTRB expressed concern over repackaging spent nuclear fuel into certified transportation canisters and/or into smaller disposal containers for direct disposal into a repository. Repackaging would have significant implications on the waste management system, such as extensive handling operations, radiation exposure to workers, and at decommissioned reactor sites the need to construct another spent fuel pool or a dry transfer facility. The web link for the [announcement](#) can be accessed by positioning the cursor over the underlined text and following the directions.
6. On September 5, the NRC issued a news release on its schedule for twelve nationwide meetings on its proposed waste confidence rule and environmental impact study. The proposed rule was developed in response to the Court of Appeals ruling that struck down the NRC's updated 2010 environmental regulation on the availability of a repository beyond a reactor's licensed life. The web link for the news [release](#) can be accessed by positioning the cursor over the underlined text and following the directions.
7. On September 5, Nye County, Nevada filed a request with the NRC for a leave to reply to the State of Nevada's opposition to its motion for recusal/disqualification of the NRC Chairman Macfarlane. Nye County contended that State of Nevada's response to their recusal motion was replete with errors and created a new recusal standard. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On September 6, NRC Chairman Macfarlane responded to the Chair of the House's Energy and Commerce Committee August 23 letter in which the House Chair requested a response to two questions in preparation for the upcoming House Subcommittee hearing on the NRC's actions to implement the U.S. Court of Appeals decision for the NRC to resume the Yucca Mountain licensing proceeding. The NRC Chair outlined the Commission's intent to update the House Committee on a monthly basis. The NRC responses noted their August 30 Order inviting participants in the licensing process to comment on how the NRC should continue the licensing proceeding, directing the NRC staff to collect budgeting information, and will issue a schedule on the completion of the Safety Evaluation Report on Yucca Mountain pending feedback from the licensing participants. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
9. On September 6, the House Committee on Energy and Commerce issued a memorandum in preparation for an upcoming Subcommittee hearing on the next steps to implementing the Nuclear Waste Policy Act. The memorandum provided a brief historical perspective on the nation's Nuclear Waste Policy

Act, its framework, and recent congressional and presidential actions leading to the current state of affairs. The memorandum identified two principal witnesses, the Chair of the NRC and the Assistant Secretary for DOE. Some of the issues for discussion included what actions DOE and NRC have taken to comply with the recent court ruling mandating the restart of the Yucca Mountain licensing proceeding, what was NRC's schedule for completing the Safety Evaluation Report, and will DOE and NRC request the necessary funding to comply with the Court's decision? The web link for the [memorandum](#) can be accessed by positioning the cursor over the underlined text and following the directions.

10. On September 9, the NRC Chairman denied Nye County, Nevada's motion for the NRC Chair to recuse herself of any Yucca Mountain proceedings based on previous public statements opposing the Yucca Mountain Project. The Chair found no basis requiring her disqualification from the licensing proceeding. Although she denied the motion, the Chair did allow Nye County leave to reply to the State of Nevada's opposition. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On September 10, the German technical support group, GRS, will conduct a three year research and development project on the migration of radioactive elements in a salt repository. The research will validate and refine the U.S. computer code, TOUGH2 (Transport of Unsaturated Groundwater and Heat), which was used for modeling the transport of radioactive elements in solutions and gases in rock. GRS planned on using the data from the Morsleben Repository for radioactive waste to test the code.
12. On September 10, the NRC Chair and DOE's Assistant Secretary for Nuclear Energy testified before the House Subcommittee on Environment and the Economy on their respective agency positions relative to the recent Court of Appeals ruling that the NRC resume the Yucca Mountain licensing process. Prior to their testimonies Representative Waxman, the ranking member from California, read a prepared statement calling to task the fixation of the Subcommittee with Yucca Mountain and that the Court's decision did not resolve such issues as public opposition to Yucca Mountain, consent-based siting process, or a new organization to manage the nation's stockpile. NRC Chairman Macfarlane testified to the Commission's actions pursuant to the Court's decision. She mentioned the Commission Order requesting participants' views on the how the NRC should resume the Yucca licensing process while directing the NRC staff to collect appropriate budgetary information on the remaining licensing activities. She reaffirmed the Commission's commitment to provide monthly status reports to the Committee. Assistant Secretary Lyons related that DOE will comment on how the NRC should move forward with the Yucca Mountain licensing proceeding. Dr. Lyons reaffirmed the Administration's position to develop a pilot interim storage facility for shutdown reactor sites, a larger interim storage facility and a geologic disposal facility. The web link for the [hearing](#) can be accessed by positioning the cursor over the underlined text and following the directions. Additional links are available at the [hearing website](#) for Representative Waxman's opening statement and NRC's and DOE's testimonies.
13. On September 12, the UK government launched a public consultation on how to organize a process that would lead to the selection of a site for a geologic repository for high-level radioactive waste. The Consultation was initiated after a failed attempt with two communities that initially had expressed interest in hosting a repository. After the three month consultation the public comments will be analyzed and the UK government will re-start the site selection process in 2014.
14. On September 12, the NRC issued a news release requesting comments on its published draft report of its Waste Confidence Generic Environmental Impact Statement (GEIS). The draft GEIS was NRC's response to the U.S. Court of Appeals June, 2012, ruling that vacated the NRC's 2010 Waste Confidence decision and cited three deficiencies that the NRC had to address. According to the Court Order the NRC must "examine the potential environmental impacts that could occur as a result of the continued storage of spent nuclear fuel" at operating or shutdown reactor sites. As part of its

determination the GEIS had to address indefinite storage of the spent fuel with no geologic repository available for the disposal of spent nuclear fuel. The assessment also included an evaluation of spent fuel pool leaks and fires. The draft report assumed that every 100 years the storage facilities would require complete replacement including the storage casks and the pads the casks rest on. The report also envisioned the construction and utilization of a dry transfer system (DTS) to move the fuel as needed for inspection or repackaging. The DTS would also be replaced every 100 years. The conclusions of the draft report indicated that the environmental impacts, including the impacts from postulated accidents would be small for indefinite storage as well as for spent fuel pool leaks and fires. Small was defined as environmental effects that were not detectable or so minor that they would neither destabilize nor noticeably alter any important attribute of the resource. The 585 page report is available from the NRC as NUREG-2157. The web link for the [news release](#) can be accessed by positioning the cursor over the underlined text and following the directions.

15. On September 16, the Chair of the U.S. NWTRB forwarded a letter to the Chair of the House Subcommittee on Energy and Water Development responding to a question posed to him during his testimony back on April 11. The question posed by lawmakers was "What do international and U.S. experiences tell us about consent-based siting?" The NWTRB Chair related how the Board had followed other national waste management programs and in particular those of Sweden and France. He listed five observations.

- "Successful waste-management programs are being implemented by private, hybrid, and public organizations.
- Successful implementing organizations emphasize a single-minded commitment to long-term safety, including, but not limited to, complying with the requirements of the regulatory authorities.
- Successful implementing organizations place a high value on sustaining public trust and confidence and accord a high priority on doing so in their everyday choices.
- Successful implementing organizations establish processes by which they respond to new information and circumstances.
- Successful implementing organizations appreciate that disposing of High-Level Waste and Spent Nuclear Fuel presents operational challenges and, therefore, develop prototypes and techniques to address ahead of time those challenges."

The letter went on to highlight and expand on three other attributes. They are "how an organization functions is more important than its structure", "organizational culture drives organizational behavior", and "how an organization addresses technical issues is important for repository development". The letter concluded with "some final thoughts on international differences". The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.

16. On September 25, the Environmental Protection Agency (EPA) highlighted their role in nuclear waste management at the Stakeholders for Nuclear Waste Reform's monthly meeting held in Washington, D.C. The presentation focused on two key EPA initiatives, public input on EPA's radiation regulations on nuclear facilities and updating waste disposal standards in response to the Blue Ribbon Commission's (BRC) recommendations. Since EPA has the authority to set national radiation safety standards, the current "standards are 36 years old and do not reflect current dosimetry, technologies, and practices." The BRC provided guidance on crucial technical and policy issues for the EPA to set new standards. The web link for the [presentation](#) can be accessed by positioning the cursor over the underlined text and following the directions.

17. On September 25, White Pine County, Nevada weighed in on NRC's invitation to continue the Yucca Mountain licensing process. The County reaffirmed its desire to resolve its admitted contentions. However, lacking additional appropriations from Congress, White Pine County stated it would run out of funds to pursue or participate in the process on October 15, 2013. The County advocated for funding for all parties to effectively participate in the process, for the issuance of the NRC's Safety Evaluation

Report on the Yucca Mountain Project, to schedule a case management conference for the purpose of restarting the licensing process, for the NRC to employ existing document archival systems instead of reconstituting the costly and awkward Licensing Support Network, and that the restarted proceedings be held in Las Vegas, Nevada. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.

18. On September 26, the State of Nevada filed a petition for rehearing en banc (before all the judges on the Appeals Court) with the Court of Appeals on their August 13 ruling that the NRC's suspension of the Yucca Mountain licensing proceeding violated the Nuclear Waste Policy Act and ordered the NRC to restart the licensing process. Nevada contended that the Court's initial ruling commanded a useless thing and, therefore, the rehearing should be granted and the initial mandamus overturned. The web link for the [petition](#) can be accessed by positioning the cursor over the underlined text and following the directions.
19. On September 26, Lincoln County, Nevada responded to the Commission's August order by and expressing their views on how the NRC should continue the licensing process and reaffirming its intent to participate in 23 of the 299 admitted contentions. Lincoln County suggested that the NRC lift all suspensions of the licensing proceeding, issue the final un-redacted version of the staff's Safety Evaluation Report, and schedule a conference in Las Vegas to restart the licensing process. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
20. On September 27, the U.S. Court of Appeals for the District of Columbia Circuit issued an Order compelling the NRC to submit a combined response to Nye County's petition for expedited review and emergency motion for preliminary injunction. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
21. On September 27, 81 members of the House of Representatives, 50 republicans and 31 democrats, sent a letter to the NRC Chairman requesting that the Chair follow through on her commitment to make a final determination on Yucca Mountain, if ordered to do so by the courts. The Representatives also expressed their bipartisan support for the NRC to focus its resources on completing the Safety Evaluation Report. The web link for the [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
22. On September 30, the Department of Energy (DOE) responded to the NRC's August 30 Order inviting participants in the Yucca Mountain licensing proceedings to weigh in on how the Commission should continue with the licensing process in light of the Appeals Court Order to resume the licensing process. The DOE stated it would comply with the law and estimated that it had \$15.4 million in unobligated funds to support the NRC licensing process. DOE also estimated that it had \$11.4 million in obligated funds that would have to be de-obligated to support the licensing activities. However, the agency deferred to the Commission on how best to proceed forward in its resumption of the Yucca Mountain proceedings. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
23. On September 30, the State of Nevada filed its response to the NRC's August 30 Order on how it should proceed with the Yucca Mountain license proceeding. Since Nevada filed with the Court of Appeals for rehearing before the entire Court, Nevada suggested that the Commission postpone the restart of the licensing proceeding until such time as the Court denies the rehearing or renders a decision on the rehearing. Nevada acknowledged, if the licensing process must move forward, then they recommended that the Licensing Support Network be reconstituted, the Safety Evaluation Report be completed, rule on any motion before the Commission relevant to the licensing proceeding prior to its suspension, appoint the same panel of judges initially on the Board, and any proceedings before the Board should be held in

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

24. On September 30, the Timbisha Shoshone Tribe's responded to the NRC's invitation on the restart of the Yucca Mountain proceedings. The Tribe concurred with the State of Nevada's filing with the Commission and resubmitted its motion that the Commission officially recognize the Tribal Council as the legal representative of the Timbisha Shoshone Tribe. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
25. On September 30, Churchill County, Esmeralda County, Landauer County, and Mineral County (the Four Nevada Counties) accepted the NRC's invitation to comment on the restart of the Yucca Mountain licensing proceeding. They recommended that the NRC immediate lift the suspension on the Yucca Mountain licensing proceeding, assign the previous three judge panel to the proceeding, issue an order for the immediate release of the NRC staff's Safety Evaluation Report as the first priority for the expenditure of funds, the Licensing Support Network not be reinstated, add all documents to the NRC's ADAMS archival system, and for the NRC to request sufficient funds from Congress to complete the licensing process. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
26. On September 30, the Nuclear Energy Institute (NEI) filed their response to the NRC's invitation to comment on how they should restart the Yucca Mountain licensing process. NEI recommended the NRC complete and publicize the staff's Safety Evaluation Report, generate a detailed list and timeline of all the remaining activities to complete the licensing process, estimate the necessary resources to complete the listed activities, and seek funding from Congress to complete the licensing process. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
27. On September 30, the Prairie Island Indian Community responded to the NRC's August 30 Order with eight suggestions such as lifting the suspension on the Yucca Mountain licensing proceeding, reconvening the three judge panel, ordering the NRC staff to release and publicize the Safety Evaluation Report, scheduling a case management conference, delaying the reinstatement of the Licensing Support Network, making all documents available on the NRC's ADAMS System, and submitting a budget request to Congress to complete the licensing proceeding. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
28. On September 30, Eureka County, Nevada submitted its response to the NRC's Order. The County advocated in order of their priority for holding a conference in Las Vegas, ensuring the conference was webcast with viewers participating remotely, restoring the Licensing Support Network, and completing the Safety Evaluation Report if funds remained. Eureka County also supported the State of Nevada's contention that the licensing process should be postponed until the D.C. Circuit rules on the State's motion for re-hearing before the entire Appeals Court Bench. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
29. On September 30, the NRC staff also responded to the Commission's August 30 Order. The Staff noted that the Commission could not reach a decision until the completion of staff's safety and environmental reviews, formal discovery, litigation on admitted and any new contentions, and the Commission's review of contested and uncontested issues. The staff recommended completing the Safety Evaluation Report (SER), the Environmental Impact Statement (EIS) Supplement and suspending the legal hearings until the SER and Supplemental EIS (SEIS) were completed and reviewed by the staff. Their concerns were that the SER and SEIS were discreet activities that could be completed in a timely fashion with the available funds remaining while averting additional loss of key personnel. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.

30. On September 30, Nye County, Nevada, the states of South Carolina and Washington, Aiken County, South Carolina and the National Association of Regulatory Utilities Commissioners filed their consolidated response to the NRC's August 30 Order and other parties submittals. The participants requested that the NRC immediately issue the Safety Evaluation Reports, authorize the Atomic Safety and Licensing Board to proceed with the license review, preserve scarce funds by not imposing costly procedural and administrative burdens, such as reinstating the Licensing Support Network, and restore funds expended that were improperly spent on terminating the Yucca Mountain proceeding. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
31. On September 30, the American Nuclear Society (ANS) responded to the Commission's appeal for comments on the resumption of the Yucca Mountain licensing proceeding. ANS offered two recommendations. The first recommended the completion of Volume 3 of the NRC staff's Safety Evaluation Report. The second suggestion was the establishment of a budget to complete the licensing project and to include that into a submittal to the White House for their Fiscal Year 2015 budget. The web link for the [response](#) can be accessed by positioning the cursor over the underlined text and following the directions.
32. On September 30, the NRC filed with the U.S. Court of Appeals for the D.C. Circuit its motion for an extension of time to respond to the writ of mandamus and emergency motion for preliminary injunction filed by Nye County, Nevada. Nye County sought the Court's review of the NRC Chair's decision not to recuse herself from the Yucca Mountain license application and to prevent the NRC Chair from taking any action on the Yucca Mountain licensing process until the Court has decided the petitioner's merits. The NRC maintained that the Court's expedited schedule was based on incorrect assumptions and rebuffed the petitioner's assertion that emergency relief was necessary. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
33. On September 30, the U.S. Court of Appeals for the D.C. Circuit issued an Order mandating that the petitioners (Aiken County, South Carolina, the states of Washington and South Carolina, the business leaders from the Tri-City area near Hanford, Washington, Nye County, Nevada, and the National Association of Regulatory Utility Commissioners) respond to the State of Nevada's petition for rehearing en banc on the Court's August 13th Order to compel the NRC to restart the Yucca Mountain licensing process. The web link for the [Order](#) can be accessed by positioning the cursor over the underlined text and following the directions.
34. In the September-October issue of Radwaste Solutions, there was an article entitled, 'A Regional Approach to HLW (High-Level Waste), Spent Fuel, and TRU (Transuranic) Waste Disposal in New Mexico'. The author attempted to address the question of "what would it take to develop a spent fuel/high-level waste storage or disposal facility in southeastern New Mexico?" The article provided some historical perspective on the evolution of selected disposal sites with a primary emphasis on the Waste Isolation Pilot Plant (WIPP) in New Mexico. The article listed six physical and geologic characteristics that would make disposal in salt deposits very attractive. It elaborated on the Eddy-Lea Counties Energy Alliance and what issues the Alliance would face, such as compliance with applicable environmental requirements, licensing, recovery of spent nuclear fuel, operational health and safety, security and transportation. The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.