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February 17, 2016

MEMORANDUM

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

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

SUBJECT: State Nuclear Safety Inspector's January through April 2015 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
David Sorensen, Senior Health Policy Advisor
Kenneth Albert, Director, Maine Center for Disease Control and Prevention
Paul Mercer, Commissioner, Department of Environmental Protection
Timothy Schneider, Maine Public Advocate
Lieutenant Scott Ireland, Special Services Unit, Maine State Police
Nancy Beardsley, Director, Division of Environmental Health
Jay Hyland, PE, Manager, Radiation Control Program

State Nuclear Safety Inspector Office
Maine CDC – DHHS

January 2015 Monthly Report to the Legislature

Executive Summary

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, including the State's ongoing environmental radiation surveillance and provides updates on the national effort to license and construct a consolidated interim storage facility and/or a permanent geologic repository for the disposal of spent nuclear fuel. Maine's goal is to move the ISFSI waste stored at Maine Yankee to one of these facilities. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local:

- Senator Susan Collins responded to Dr. Donald Hudson, Chair of Maine Yankee's Community Advisory Panel, expressing her appreciation of the Panel's support for her efforts in Congress in promoting the establishment of a pilot interim storage facility for spent nuclear fuel from 13 permanently shutdown nuclear power sites in the country. She affirmed her strong support for the Blue Ribbon Commission's recommendations and the Administration's strategy to develop interim storage facilities. She vowed to work with other Senators on the Senate Appropriations Subcommittee to approve consolidated interim storage facilities with priority given to shutdown reactors, like Maine Yankee.

National:

- The Department of Energy (DOE) filed with the New Mexico Environment Department a request for hearing and answer to the administrative order requiring compliance and civil penalties issued to DOE, the Waste Isolation Pilot Plant (WIPP), and the Los Alamos National Laboratory on December 6, 2014 for the radioactive release that occurred on February 14, 2014, from a ruptured radioactive waste drum. DOE challenged New Mexico's fines and formally denied many of the violations including the safety and maintenance problems at WIPP.
- The Commissioners of Andrews County, Texas adopted a resolution that favored establishing a consolidated interim storage facility in Andrews County for spent nuclear fuel and high-level waste. The resolution called upon the State of Texas and its Congressional delegation to work towards creating such a facility and securing appropriate federal incentives for siting and constructing a storage facility.
- The Nuclear Regulatory Commission (NRC) published the final two volumes of their Safety Evaluation Report (SER), which completed their safety review of the DOE's Yucca Mountain license application. Volume 2 covered repository safety before permanent closure while Volume 5 covered proposed conditions on the construction authorization. The staff concluded that DOE's application met NRC requirements.

Introduction

As part of the Department of Health and Human Services' long standing oversight of Maine Yankee's nuclear activities under Title 22, Maine Revised Statutes (MRS) §666 (2), legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the ISFSI facility located in Wiscasset, Maine.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and ongoing, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report. Past reports, historical addendum, and glossary are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

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

There were two fire-related impairments for the month. The first involved a fire detection panel that was taken out of service to support the office build out project. Compensatory measures were put into place until the panel was restored to service. The second encompassed the fire detection system in the Truck Bay area that had been taken out of service to support the office build out project. Compensatory measures were put into place. This impairment will continue until the office build out new fire system is put into service.

There were nine security incident reports logged for the month. Eight of these reports documented security system issues due to transient environmental conditions. Compensatory measures were put into place until the systems were restored. The ninth was due to a loss of offsite internet connectivity with a vendor. Compensatory measures were put into place until the system was restored.

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

- 1st CR: Documented that a procedure did not get updated based on a regulation change. The regulatory change increased the frequency that personnel with classified clearances need to receive a refresher briefing. All personnel with classified clearances were checked and briefed as required and the procedure was revised to reflect the new requirement.
- 2nd CR: Documented the findings of a self-assessment that was performed on snow removal activities. Corrective actions were assigned and completed to improve the process.
- 3rd CR: Documented a small oil spill in the Maintenance Building. The oil was coming from a flammables locker and was due to an oil pan leaking. The spill was cleaned up and was not reported since it did not meet the Department of Environmental Protection's (DEP) reporting threshold.
- 4th CR: Documented the loss of offsite internet connectivity with a vendor. Compensatory measures were put in place until the system was restored.
- 5th CR: Documented that the filler hose on the bulk diesel tank was moist and appeared to be weeping. The fitting was tightened to stop the leak. The hose was replaced after several attempts to stop the weepage.
- 6th CR: Documented a small hydraulic leak on the main gate hydraulic cylinder. The small leak was attributed to extreme low temperatures and did not repeat.
- 7th CR: Documented that a tractor, during snow removal activities, contacted a detection system cover. The cover was chipped but there was no impact on functionality. No corrective actions were necessary. The cover will be replaced during normal preventative maintenance.
- 8th CR: Documented that a pickup truck check engine light was on. The dealer could not find the problem and the light was reset.
- 9th CR: Documented that during a lockout/tagout of an electric circuit that two dampers opened unexpectedly. The electrical drawings were not clear and it was assumed that the dampers were

¹ A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Control Program's website.

- associated with a particular fan. However, these dampers were associated with the diesel generator. The circuit was re-energized to close the dampers and the drawings were updated to reflect the as-built configuration.
- 10th CR: Documented a component failure in the industrial closed circuit video system. The component was replaced with a spare and tested satisfactorily.
- 11th CR: Documented a failure to record in a video system. A video card was replaced and the unit tested satisfactorily.
- 12th CR: Documented a small oil spill from a parked vehicle. The spill was cleaned up and was not reported as it did not meet DEP's reporting threshold.
- 13th CR: Documented that one area thermoluminescent dosimeter (TLDs)² was not collected at the end of 2014. The Area TLD Program had recently been discontinued and one TLD, located in an office area in the Operation Building was not collected. The TLD was sent to the radiation protection vendor for processing.
- 14th CR: Documented that a vendor was brought onsite to perform the annual preventative maintenance on the diesel generator without a purchase order in place. A purchase order was generated to cover the work performed.
- 15th CR: Documented two equipment fluid leaks in the Maintenance Building. A utility vehicle had a small coolant leak and a man-lift had a small hydraulic leak. Both were due to extreme low temperatures. The utility vehicle was sent back to the dealer for warranty repairs. The man-lift leak stopped and will be checked again in the spring.
- 16th CR: Documented a procedure non-compliance with personnel access authorization records. The procedure stated that copies shall be kept in the Central Alarm Station as well as in the personnel files. The procedure will be updated to allow the security computer printout to serve this purpose in the Central Alarm Station.
- 17th CR: Documented that a procedure step was obstructed by a note in the latest revision. The error occurred during word processing and was corrected during a subsequent revision.
- 18th CR: Documented that a procedure did not adequately define the search requirements with regards to the vehicle barrier system. The procedure was revised to clearly define the search requirements.
- 19th CR: Documented that the neutral connections to the diesel generator automatic transfer switch were wired incorrectly. The diesel generator operates satisfactorily but can cause grounding issues during system maintenance. A work change request was generated and the neutral connections will be corrected during warm weather.
- 20th CR: Documented a security system degradation during transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 21st CR: Documented a security system degradation during environmental conditions. Compensatory measures were put into place until the system was restored.
- 22nd CR: Documented a security system degradation during environmental conditions. Compensatory measures were put into place. Further testing revealed that a component had failed. Compensatory measures remained in place until the component was replaced.
- 23rd CR: Documented that the fuel tank on a tractor was dented in. The tank most likely was slightly collapsed due to a vacuum from the vent freezing. The tank was allowed to warm up and re-shaped and was placed back in service.
- 24th CR: Documented that a procedure required a logbook of all removable media usage in certain computer systems. A logbook existed but did not document all the removable media usage. This was corrected by creating a logbook for all usage, not just by the information technology vendor.
- 25th CR: Documented that several Condition Reports coded as a Conditions Adverse to Quality had not

² Thermoluminescent dosimeters (TLDs) are very small plastic like phosphors or crystals that are placed in a small plastic cage and mounted on trees, electric utility poles, etc. to absorb any radiation that impinges on the material. For a further explanation, refer to the glossary on the Radiation Program's website.

been sent to the Quality Assurance Manager for review of the corrective actions as required by procedure. The process requirements were reviewed with the personnel involved.

Other ISFSI Related Activities

1. On January 12, Maine Yankee submitted two revisions of its Defueled Safety Analysis Report as part of its biennial update to the NRC. The first revision involved the addition of a new maintenance building on-site with the defueling analysis allowing maintenance activities to be performed in the building besides the Security and Operations Building. The second revision changed some wording in the Radiation Protection Section of the Report on how the personnel radiation monitoring method would be conducted within the applicable procedure.
2. On January 13, 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 Independent Spent Fuel Storage Installation (ISFSI). The State Inspector briefed the Group on the status of his monthly reports to the Legislature, his participation in a national interregional team that is developing recommendations from states to the Department of Energy on emergency preparedness for local communities on spent fuel shipments traversing their jurisdictions. The Group also discussed at length the State's environmental TLD data, the anomalies in the fourth quarter results, and options going forward to resolve the issue. Maine Yankee informed the Group of their periodic chemical sampling effort at the nuclear plant location on Bailey Point. They noted that one of the wells was unnoticed since it was flush with the ground and consequently not sampled. Maine Yankee stated they would resample that well this year and will correct the situation by placing a standpipe by the well. Maine Yankee also apprised the Group of its changes in their Radiation Protection Program and procedures, such as Mr. Joseph Bourassa replacing Mr. James Connell who retired, self-reading pocket dosimeters would be eliminated for routine radiation work permits, personnel TLDs would be measured once a year, environmental TLDs would be collected and measured twice a year, visitors would not be required to wear dosimetry, and radiation surveys of the cask vents would be performed once a year along with swipes of the cask outlets. Maine Yankee also mentioned the construction of a fence along Ferry Road to prevent trespassers, the construction of new offices in the Security and Office Building has commenced along with the erection of a storage shed for lawn mowers and snow blowers. Maine Yankee expressed hope that with Texas Governor Perry's support for an interim storage facility within his borders and a Republican controlled Congress there would be some movement this year to pass legislation for the construction of a pilot storage facility for shutdown sites, but noted that the House was still fixated on Yucca Mountain.

Environmental

The next quarterly reporting of the State's environmental radiation monitoring results should be available in next month's report.

Other Newsworthy Items

1. On January 7, the Yankee Companies held their quarterly conference call to brief interested stakeholders from Maine, Massachusetts, and Connecticut on the status of the Federal Energy Regulatory Commission rate case settlement on spent nuclear fuel storage issues. The General Counsel updated the attendees on Yankee Companies' Phase III litigation damage claims. The general discovery was closed with expert discovery still open until the end of March 2015 followed by a three day trial starting on June 30. He further mentioned that settlement discussions with the federal government were at an impasse as the federal government was still insisting on the three Yankee's accepting their offer of a standard settlement agreement template that would not benefit the ratepayers in the three states.

Additional updates were provided on the national level with DOE receiving funds to continue their efforts in designing and procuring spent fuel railcars, the publication of two more volumes of the five volume set of the Safety Evaluation Report on Yucca Mountain as part of the Court ordered restart of the Yucca Mountain licensing application, the DOE's de-comingling report recommending a separate repository for defense-related spent nuclear fuel and high-level waste, the prospects of some proposed federal legislation moving forward on a pilot interim storage facility for shutdown reactor sites, discussion on Texas' willingness to host an interim storage facility for spent nuclear fuel, and the challenge of the NRC's recent continued storage of spent nuclear fuel rule in federal court by the states of New York, Connecticut, and Vermont, and 29 environmental organizations.

2. On January 8, DOE filed with the New Mexico Environment Department a request for hearing and answer to the administrative order requiring compliance and assessing a civil penalty issued by the Department to DOE and the Waste Isolation Pilot Plant (WIPP) on December 6, 2014. DOE challenged New Mexico's fines and formally denied many of the violations including the safety and maintenance problems at WIPP. DOE contended that New Mexico failed to consider their good faith efforts, failed to consider the seriousness of the violation, failed to adhere to the Department's own Hazardous Waste Penalty Policy, imposed penalties that were arbitrary, capricious, and without substantial basis in law, assessment of civil penalties were excessive and did not meet New Mexico's statutory criteria, and were grossly disproportionate to other fines assessed against other permittees under the New Mexico Hazardous Waste Act. DOE further claimed that the Department's penalties unconstitutionally limits DOE's operations in direct violation of the Supremacy Clause of the Constitution and that New Mexico has no jurisdiction to regulate the disposal of radiological wastes at WIPP. The web link for the filing request can be accessed by positioning the cursor over the underlined text and following the directions.
3. On January 9, Senator Susan Collins responded to the Chair of Maine Yankee's Community Advisory Panel expressing her appreciation of the CAP's support for her efforts in Congress in promoting the establishment of a pilot interim storage facility for spent nuclear fuel from thirteen permanently shutdown nuclear power sites in the country. She stated she strongly supported the Blue Ribbon Commission's recommendation and the Administration's strategy to develop interim storage facilities. She vowed to work with other Senators on the Senate Appropriations Subcommittee to approve consolidated interim storage facilities with priority given to shutdown reactors, like Maine Yankee. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
4. On January 9, DOE filed with the New Mexico Environment Department a request for hearing and answer to the compliance order issued by the Department to DOE and the Los Alamos National Laboratory (LANL) on December 6, 2014. DOE denied the mishandling of legacy defense nuclear waste at LANL. DOE addressed the Compliance Order's 149 paragraphs by either admitting to the allegations in the original Administrative Order or stating "any allegations contrary to the plain language, meaning, or context" of a specific document were denied for the different issues cited in the Compliance Order. If a response was required DOE denied the allegation. DOE did not respond to the 18 violations citing New Mexico's legal conclusions as a basis for not responding but requested a hearing to contest the additional 12 complaints and their associated penalties. For their defense DOE contended that New Mexico failed to consider DOE's good faith efforts, failed to consider the seriousness of the violation, failed to adhere to the Department's own Hazardous Waste Penalty Policy, imposed penalties that were arbitrary, capricious, and without substantial basis in law, assessment of civil penalties were excessive and did not meet New Mexico's statutory criteria, and penalties assessed were grossly disproportionate to other fines assessed against other permittees under the New Mexico Hazardous Waste Act. The web link for the filing can be accessed by positioning the cursor over the underlined text and following the directions.

5. On January 12, DOE's Assistant Secretary for Nuclear Energy responded to the Minnesota Public Utilities Commissioner's letter that expressed the Nuclear Waste Strategy Coalition's concerns on the DOE's October report that recommended DOE dispose of some defense-related wastes in a separate repository other than one for commercial spent nuclear fuel. The Assistant Secretary reiterated the Administration's 2013 strategy document for disposing of both commercial and defense spent nuclear fuel and High-Level Waste, which advocated a consent-based approach to siting nuclear waste facilities and starting a pilot interim storage facility for shutdown reactors. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
6. On January 12-14, the Institute for Nuclear Materials Management held its 30th spent fuel management seminar. The three day seminar focused on national and international spent fuel issues. The DOE and NRC covered such topics as the Yucca Mountain licensing project, continued storage, repository options, used fuel campaigns, and regulatory perspectives. The international contingent highlighted used fuel issues such as global decommissioning, spent fuel transportation and management programs, manufacturing and technology development for storage canisters, aging management, and security safeguards. Spain, Germany, Japan, and Sweden represented the foreign delegation. The web link for the agenda can be accessed by positioning the cursor over the underlined text and following the directions. The individual presentations can be accessed at the following link: http://www.inmm.org/AM/Template.cfm?Section=30th_INMM_Spent_Fuel_Seminar&Template=/CM/ContentDisplay.cfm&ContentID=5176.
7. On January 13, the Council of State Government's Eastern Regional Conference's Northeast High-Level Radioactive Waste Transportation Task Force submitted to DOE the Interregional Team's third progress report toward the development of protocols for implementing Section 180 (c) of the Nuclear Waste Policy Act (NWPA) for training local officials in safety and emergency preparedness for spent nuclear fuel shipments. The progress report informed DOE of the states that would be participating in the Policy Implementation Exercise. The letter also identified three other documents in its transmittal, namely the principles of agreement among states on expectations regarding preparations for spent nuclear fuel shipments, state recommendations on funding state expenses in carrying out its responsibilities under the NWPA, and the states assessment and evaluation of the policy implementation exercise. The web link for the letter and attachments can be accessed by positioning the cursor over the underlined text and following the directions.
8. On January 16, the Oak Ridge National Laboratory developed a new system to test the vibration effect on spent nuclear fuel under normal transportation conditions. High burn-up fuel is potentially associated with increased corrosion, hydride precipitation, and high levels of radiation induced damage to cladding and fuel pellets, which could impact the spent fuel's dynamic performance under road or rail conditions. Dynamic testing indicated cladding fractures at or near the pellet to pellet interfaces. Understanding fuel pellet to pellet and fuel to cladding interactions will be crucial to the fuel's performance. The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.
9. On January 19, the Spanish decommissioning firm Enresa awarded a \$3.6 million contract to two engineering firms to design Spain's high-level waste storage facility. The small town of Villar de Canas was chosen out of fourteen communities to host the national facility. The facility was modelled after the HABOG plant in the Netherlands and will be expected to store wastes for up to 60 years. The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.

10. On January 20, the Commissioners of Andrews County, Texas adopted a resolution that favored establishing a consolidated interim storage facility in Andrews County for spent nuclear fuel and high-level waste. The resolution called upon the State of Texas and its Congressional delegation to work towards creating such a facility and securing appropriate federal incentives for siting and constructing a storage facility. The resolution further committed the County Judge to negotiate and enter into agreements or contracts on behalf of the County. The resolution was forwarded to the NRC and Secretary of Energy to place them on notice of their intent to host the nation's first spent nuclear fuel storage facility. The web link for the resolution can be accessed by positioning the cursor over the underlined text and following the directions.
11. On January 22, the Canadian Nuclear Waste Management Organization announced that of the six communities in Northern Ontario taking part in the first phase of the preliminary assessments four were identified for future study, the city of Elliot Lake, the town of Blind River, and the two townships of Manitouwadge and White River. The town of Spanish and the township of The North Shore were not selected. They joined Creighton in Saskatchewan, and South Bruce, Huron-Kinloss, Hornepayne, Ignace and Schreiber in Ontario. The next phase will involve more community learning and involvement, fieldwork, geological surveys, and borehole drilling. Other preliminary studies were still ongoing in seven other communities in Ontario and Saskatchewan. The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.
12. On January 22, the Nuclear Waste Technical Review Board forwarded a letter to DOE's Assistant Secretary for the Office of Environmental Management to provide feedback from the meeting held last October over the management and disposal plans for spent nuclear fuel (SNF) and high-level waste (HLW) at the DOE's Savannah River Site. Prior to the meeting the Board had provided DOE key areas of interest and commended "the presenters for explicitly addressing the Board's questions." The letter noted how impressed the Board was with DOE and its contractors at integrating operations on "the handling, storage, and processing of SNF, the removal and vitrification of HLW from underground tanks, the storage of the vitrified HLW in preparation for offsite disposal", and provided a specific example on how well coordinated the efforts were at processing SNF at H-Canyon. The Board provided recommendations for DOE's Corporate and Operations levels in the following areas:
 - Integration of Programs to Manage and Dispose of HLW and SNF,
 - SNF Storage at the L Basin Facility,
 - Processing of SNF at the H-Canyon Facility,
 - Alternatives for SNF Management, and
 - Processing of HLW AND Integration of Activities Across the DOE Complex,

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

13. On January 23, the new NRC Chairman transmitted the staff's December monthly status report on its activities relative to their resumption of the Yucca Mountain licensing proceedings as mandated by the D.C. Circuit Court of Appeals to the House Chair of the Committee on Energy and Commerce. The report noted the previous publications of Volumes 3 and 4 of the Safety Evaluation Report (SER) and informed the Committee Chair of the pending release of Volumes 2 and 5 scheduled to be published in January 2015. Since DOE refused to supplement their initial environmental impact statement (EIS) on groundwater as part of their Yucca Mountain license application, the Commission directed the staff to develop and issue a supplement to DOE's initial EIS. Over 95% of the funds expended in December were for the completion of the remaining volumes of the SER. The web link for the letter and report can be accessed by positioning the cursor over the underlined text and following the directions.

14. On January 26, Ukraine's nuclear power plant operator, Energoatom, signed an amendment to Holtec International's contract for a central used fuel storage facility, including the design and supply of spent nuclear fuel dry storage, transport, and related equipment for the Chernobyl site. Holtec will provide 94 of the storage systems with the remainder being constructed in the Ukraine. Currently, Ukraine is exporting its spent nuclear fuel to Russia. Ukraine will experience savings as the cost of construction and operation of the storage facility was expected to be four times less than the current cost to ship the spent fuel to Russia. The design capacity of the facility will be to store over 16,500 spent fuel assemblies from nine of the country's fifteen reactors to the end of their operating life. The construction of the storage facility could facilitate the renewal of economic activity and rehabilitation of the Exclusion Zone. The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.

15. On January 29, the NRC published the final two volumes of their Safety Evaluation Report, which completed their safety review of the DOE's Yucca Mountain license application. Volume 2 covered repository safety before permanent closure and included such topics as identification of hazards and initiating events, event sequences, consequence analysis, safety controls, design of structures, systems, and components important to safety, plans for retrieval and alternate storage of the radioactive wastes, and plans for decontamination and dismantlement of facilities. The NRC staff concluded that DOE's application met NRC requirements. Volume 5 covered proposed conditions on the construction authorization, including proposed conditions documented in other SER Volumes, and the staff's conclusions on probable subjects of license specifications from DOE's Safety Analysis Report. The web links for the news release and Volumes 2 and 5 can be accessed by positioning the cursor over the underlined text and following the directions.

16. On January 30, Switzerland's national radioactive waste disposal cooperative, Nagra, selected two sites for further study for hosting a deep geologic repository for high-level waste in its third and final stage. The sites were selected based on long term safety employing only scientific and technical criteria. The investigations found impermeable rock formations at an optimum depth that were stable and would protect against erosion. The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

February 2015 Monthly Report to the Legislature

Executive Summary

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, including the State's ongoing environmental radiation surveillance and provides updates on the national effort to license and construct a consolidated interim storage facility and/or a permanent geologic repository for the disposal of spent nuclear fuel. Maine's goal is to move the ISFSI waste stored at Maine Yankee to one of these facilities. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local:

- Wiscasset Selectmen decided at their bi-weekly meeting to send a letter to the federal government urging them to move the spent fuel from the Maine Yankee site. The Selectmen tasked the Town Manager to work with Maine Yankee's Public and Government Affairs Director to draft a letter.
- Maine Yankee submitted to the Nuclear Regulatory Commission (NRC) their funding status report for managing the stored spent nuclear fuel and greater than class C wastes. The report noted that about \$104 million had been accumulated as of the end of the year and projected that approximately \$9.5 million per year would be required to cover expenses for storage out to 2033.

National:

- Waste Control Specialists, the owner and operator of a low-level radioactive waste facility in Andrews County, Texas, announced their intention to submit an application to the NRC by April 2016 to license an interim consolidated storage facility with the goal of starting to store the spent fuel from commercial nuclear power plants by the end of 2020.

Introduction

As part of the Department of Health and Human Services' long standing oversight of Maine Yankee's nuclear activities under Title 22, Maine Revised Statutes (MRS) §666 (2), legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the ISFSI facility located in Wiscasset, Maine.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and ongoing, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report. Past reports, historical addendum, and glossary are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

During February, the general status of the ISFSI was normal, with several instances of spurious alarms due to environmental conditions as noted below.

There was one fire-related impairment for the month due to the ongoing impairment put in place to cover the office space build-out project. Compensatory measures were put in place until the project is completed.

There were twenty-four security-related reports logged for the month. Twenty were due to transient environmental conditions. Three involved the loss of offsite internet connectivity with a vendor. One was due to a security system degradation. In all cases, compensatory measures were put into place until the systems were restored.

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

- 1st CR: Documented that a resistor required by a fire detection panel had been misplaced during modification work associated with the office space build-out project. A compensatory measure was put in place until a new resistor was installed to return the panel to service.
- 2nd CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 3rd CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 4th CR: Documented a hydraulic hose failure on a piece of snow removal equipment. The spill on the pavement was small. The leakage was cleaned up and the equipment was taken out of service until repaired. The leak was so small that there was no need to notify the Department of Environmental Protection.
- 5th CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 6th CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 7th CR: Documented an issue with the several frequencies used on the radio system. The unit had recently been re-programmed based on changes to the Maine State Police radio system. This change caused some bleed over issues between frequencies. The radio vendor was called in and corrected the issue by re-programming the system to a different radio tower.
- 8th CR: Documented that a lock was sticking and frozen due to extreme cold weather. The lock was replaced with a spare the same day.
- 9th CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 10th CR: Documented that an emergency light was not illuminating properly during a test. The battery was replaced.
- 11th CR: Was written to track areas for improvement from a Quality Assurance surveillance. Three areas for improvement were identified and addressed.
- 12th CR: Documented that one bolt could not be re-installed in a VCC vent screen during re-installation of the screen. This was due to snow and ice buildup impacting proper alignment. An operability/functionality assessment was performed and the bolt was successfully installed after the ice and snow was removed.
- 13th CR: Documented that a door card reader and palm switch were not working properly. After troubleshooting it was determined that the latch was defective and was replaced.
- 14th CR: Documented that a key had broken off in a weapons storage locker. All locking mechanisms were replaced with an upgraded design.

¹ A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Control Program's website.

- 15th CR: Documented the loss of offsite internet connectivity with a vendor. Compensatory measures were put into place until the system was restored.
- 16th CR: Documented technical specification, radiological controls and procedural issues with vent screen snow removal. A work order and radiation work permit were used to remove inlet vent screens and remove snow from the inlet plenums to proactively ensure compliance with technical specification requirements. The radiation work permit guidance was not clear and potentially conflicted with other procedural guidance. A root cause evaluation is in progress and corrective actions are currently being developed.
- 17th CR: Documented the loss of offsite internet connectivity with a vendor. Compensatory measures were put into place until the system was restored.
- 18th CR: Documented a small coolant system leak on a piece of snow removal equipment while stored in the maintenance building. The equipment was taken out of service until repaired.
- 19th CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 20th CR: Documented a security system degradation due to transient environmental conditions. Compensatory measures were put into place until the system was restored.
- 21st CR: Documented the loss of offsite internet connectivity with a vendor. Compensatory measures were put into place until the system was restored.

Other ISFSI Related Activities

1. On February 3, Maine Yankee submitted to DEP their Groundwater Monitoring Report for Bailey Point. As part of the DEP's Resource Conservation and Recovery Act closure of the site, Maine Yankee was required to establish a 30 year groundwater program to perform periodic sampling of wells on the property to monitor for chemical contaminants. The report provided a monitoring overview and trend analysis for the three sampling events from October 2013 to September 2014. Maine Yankee informed the DEP that they were re-submitting their chemical Electronic Data Deliverable data to correct a sampling error of one of the wells and to revise seven data qualifiers on the results.
2. On February 5, Maine Yankee submitted to the NRC its annual notification of their foreign ownership, control or influence (FOCI) status. Maine Yankee noted changes in foreign interests since their last annual report that included two changes in Maine Yankee's Board of Directors. One change did not affect FOCI while the other did. Therefore, the Board's Negotiation Action Plan was enforced with a submission of a Certification of Foreign Sponsor Representative to the NRC to ensure that there would be no exertion of foreign control, dominion, or "influence over operational, safety or security matters at Maine Yankee".
3. On February 5, Maine Yankee also submitted to the NRC a periodic update of its License Termination Plan (LTP) over the two revisions that took place over 2013 and 2014. Fourteen changes were made. Some were editorial in nature. Some were made to eliminate specifics such as the number of utilities that own Maine Yankee or the number of acres of the parcel of land adjacent to the ISFSI. Others identified what activities would transpire after the removal of the spent nuclear fuel and the acreage that currently remained under the federal license. Still others updated new cost estimates for storage until 2031, decommissioning the ISFSI and terminating the license in 2033, and to reflect current practices at the site. Even though bounded by previous assessments, some also included updates to environmental impacts associated with the longer storage period. Others included the inclusion of old figures that were inadvertently removed from one of the previous revisions and now re-incorporated in the LTP.
4. On February 6, the Commissioner of the Department of Health and Human Services forwarded to the Legislature's Joint Standing Committee on Energy, Utilities, and Technology the Interim Spent Fuel Storage Facility Oversight Fund report. The annual report is a compilation of revenue, expenditures and disbursements from the Fund for state oversight of the Maine Yankee storage facility in Wiscasset.

5. On February 10, Maine Yankee submitted to the NRC their funding status report for managing the stored spent nuclear fuel and greater than class C wastes. The report noted that about \$104 million had been accumulated as of the end of the year and approximately \$9.5 million per year would be required to cover expenses for storage out to 2033. The report also mentioned that Maine Yankee has the ability to collect additional funds, if necessary, to cover expenses through their investments, power contracts, amendatory agreements, and their on-going litigations with the federal government over their breach of contract to take the spent fuel.

Environmental:

The State received the 2014 fourth quarter results in November from the field replacement of its thermoluminescent dosimeters (TLDs)² around the ISFSI and the Maine Yankee industrial site. The results from the quarterly TLD change out continued to illustrate three exposure groups: elevated, slightly elevated, and normal. The two usual high stations were stations G and K with station F joining the group this quarter. The elevated stations averaged 28.2 milliRoentgens³ (mR). Station K had one of its three elements reading higher than expected. The statistical outlier test was applied and indicated that the value could be discarded at the 95% confidence level but not at the 99% confidence level. The decision was made to keep the value as the disparity between the readings for the individual six elements for the two TLDs was not large and would have preferred rejecting a value at greater than the 99% confidence level to limit any uncertainties. With seasonal variations in the background the expectation was for a lower value compared to the previous quarter.

There were six stations in the slightly elevated group (B, E, J, L, M, and Q) with an average of 25.5 mR. Four of the six stations traded places. B went from the normal grouping to this slightly elevated group. F went from this group to the elevated grouping. O went back to the normal group while Q went from the elevated last quarter to the slightly elevated group this quarter. One of the TLDs at station M was damaged by moisture which left only the results from the remaining TLD available. Eight stations (A, C, D, H, I, N, O, and P) were in the normal group with B and O trading places as described above. The normal group averaged 22.7 mR this quarter.

The Maine Yankee industrial site TLDs averaged 22.8 mR, which is comparable to the normally expected background radiation levels of 15 to 30 mR for the coast of Maine. The industrial site TLD results exhibited the expected seasonal variations with the third quarter results being slightly higher than the previous quarter or this quarter. Some of the stations have background levels that are highly dependent upon tidal effects, and local geology. However, virtually all the stations display some seasonal fluctuations that are affected by the out gassing of the naturally occurring radioactive gas, Radon.

The four control TLDs that were stored at the State's Health and Environmental Testing Laboratory (HETL) in Augusta averaged about 10.7 mR. Although the storing of the control TLDs at HETL's pre-World War II steel vault lowers the natural background values, the 10.7 mR value for this quarter was slightly lower than the third quarter's control results of 11.2 mR. The State has noted that after two years a pattern was developing indicating that the fourth quarter TLD controls have higher measurable values contrary to expectations. However, this past fourth quarter witnessed a change, a return to normal values. There were no elevated readings for the fourth quarter as opposed to the previous two years. Currently, the State is evaluating what caused the anomalies in the previous two years. Although the cause has not been pinpointed, there was no doubt that something was impacting the TLDs. The controls were initially part of a program to better quantify

² Thermoluminescent dosimeters (TLDs) are very small plastic like phosphors or crystals that are placed in a small plastic cage and mounted on trees, electric utility poles, etc. to absorb any radiation that impinges on the material. For a further explanation, refer to the glossary on the Radiation Program's website.

³ A milliRoentgen (mR) is a measurement of radiation exposure in air. For a further explanation, refer to the glossary on the Radiation Program's website.

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, every quarter three of the seven control TLDs received for the upcoming quarter are normally returned to the State's TLD vendor, Global Dosimetry in California, for an analysis of the transportation exposures. The quarter's transit badges were not returned but rather placed in the storage vault at HETL with the other controls and returned with all the dosimeters after the field replacement. The initial set of results from the control TLD badges returned indicated an average of 5.8 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 5.8 mR was barely lower than the previous quarter's reported 5.9 mR transit badges. After two years the State was starting to see signs of a pattern developing for the different quarters. Nevertheless, it was too early to tell if the pattern was real. More time is needed to verify if the pattern continues. Besides seasonal and daily fluctuations in the background, modest increases or decreases could be attributed to an extra few days or a few days less transit.

The field control TLDs at Ferry Landing on Westport Island, the Edgecomb Fire Station and the roof of the State's Laboratory read 24.8, 25.5, and 21.0 mR, respectively. Historically, the Edgecomb Fire Station value is higher than the Westport Island location.

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 over three years ago in quantifying the levels of radioactivity that was coming from the crippled reactors. This year's first quarter results did not identify any unusual radioactive elements and were within historical ranges for both gross beta⁴ 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 17.1 to 31.0 femto-curies per cubic meter (fCi/m³)⁵. A composite of the seven bi-weekly air filter samples was used to measure the Beryllium-7's concentration of 47.4 fCi/m³.

For informational purposes, Figure 1 on page 6 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 locations for this quarter as F, G, and K.

Other Newsworthy Items:

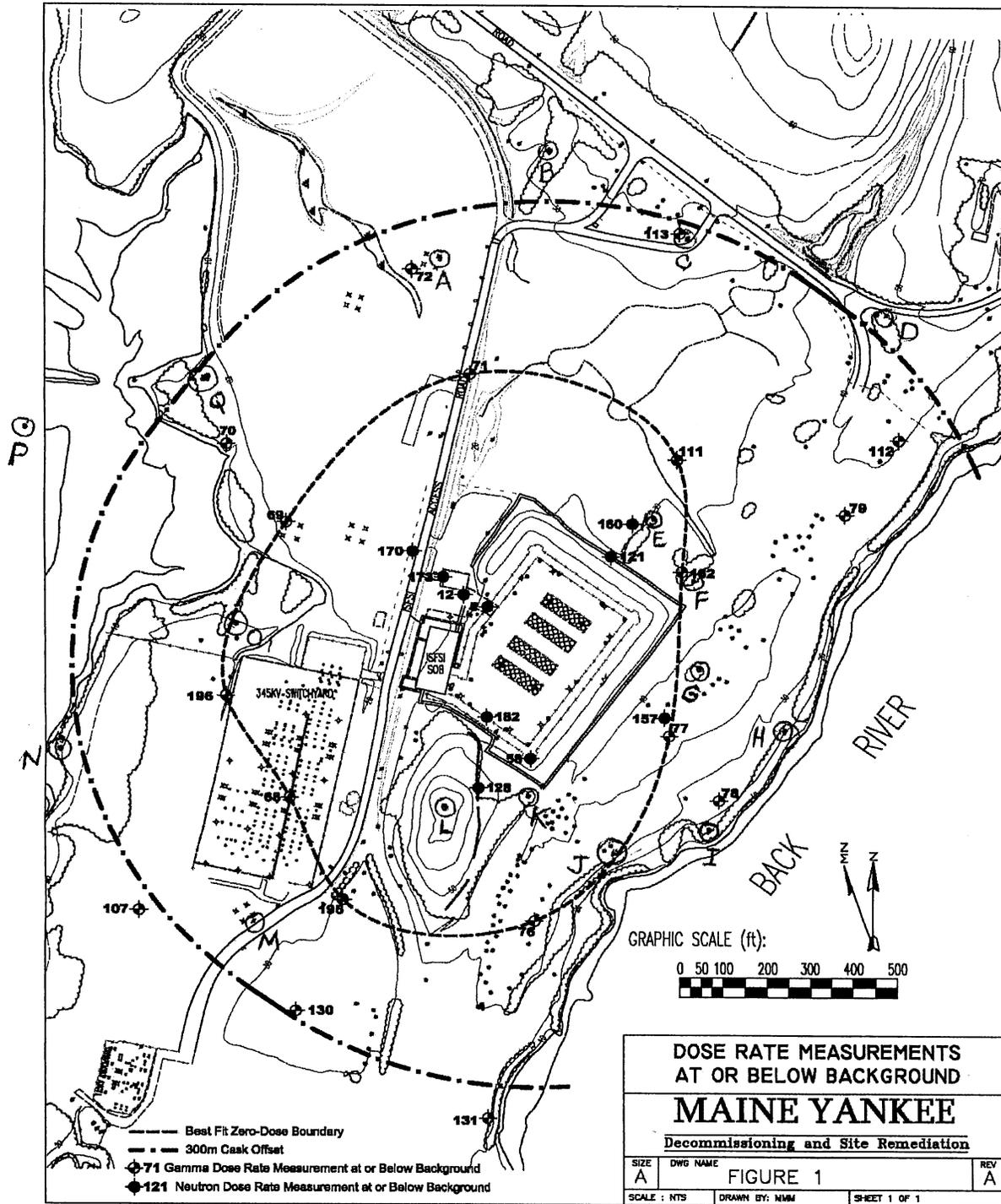
1. On February 3, Wiscasset Selectmen decided at their bi-weekly meeting to send a letter to the federal government urging them to move the spent fuel from the Maine Yankee site. The Selectmen tasked the Town Manager to work with Maine Yankee's Public and Government Affairs Director to draft the letter. The web link for the news article can be accessed by positioning the cursor over the following link: <http://www.wiscassetnewspaper.com/article/prospects-sink-gardiner-pond-land-buy/47743>.
2. On February 6, Waste Control Specialists, the operator of a low-level radioactive waste facility in Andrews County, Texas, announced their intention to submit an application to the NRC by April 2016 to license an interim consolidated storage facility with the goal of starting to store the spent fuel from commercial nuclear power plants by the end of 2020. The announcement followed last month's resolution adopted by County Commissioners favoring the establishment of a consolidated interim

⁴ Gross Beta is a simple screening technique that measures the total number of beta particles emanating from a potentially radioactive sample. Refer to the glossary on the website for further information.

⁵ 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).

storage facility in Andrews County for spent nuclear fuel and high-level waste. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.

Figure 1



3. On February 12, the National Transportation Stakeholders Forum (NTSF) held a webinar for interested stakeholders on the latest information of the recovery activities at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico since it experienced a radioactive leak on February 14, 2014. The WIPP facility is the nation's only geologic repository for the disposal of defense-related transuranic (elements heavier than uranium) wastes, principally plutonium, from the nuclear weapons era. The webinar recapped the leak incident, which was caused by one drum that experienced a reaction from incompatible waste materials and resulted in the drum rupturing. The stakeholders were also apprised of the extensive sampling performed by DOE, the state of New Mexico, and the independent monitoring performed by New Mexico's State University to identify and isolate the radioactive contaminants. The Federal Project Director elaborated on the current efforts to stabilize, decontaminate, and safety enhancements going forward to restore the underground facility and resume operations. He also noted that shipments to the facility were still suspended pending a successful resumption of operations in the spring of 2016. However, when operations resume, priority would be placed on those wastes that require minimal handling. The NTSF is the mechanism by which the DOE communicates at a national level to states and tribes about DOE radioactive waste shipments. The web link for the slide presentation can be accessed by positioning the cursor over the underlined text and following the directions.
4. On February 25, U.S. Court of Federal Claims ruled on three motions submitted by the federal government to dismiss three contentions put forward by Georgia Power Company and Southern Nuclear Operating Company on the federal government's breach of contract on spent nuclear fuel. The federal government had previously filed with the Court and contended that a) Southern Company was not a proper party to the lawsuit since the breach was with Georgia Power involved Georgia Power Company, b) Georgia Power's and Southern Company's claim for prejudgment interest was improper, and c) Georgia's and Southern's claim for damages between the time the lawsuit was filed and the time of the trial was improper. The Claims Judge granted the government's motion to dismiss Southern as a party to the lawsuit since the breach was with Georgia Power. On the prejudgment interest, the Judge felt that the issue was not ripe for ruling and denied the government's request. Lastly, the Judge granted the government's motion to prohibit the recovering of future damages and limit them only to those that were incurred. The Senior Judge issuing the Order was the same judge who ruled in favor of the three Yankees (Maine Yankee, Connecticut Yankee, and Yankee Rowe) in their litigation cases against the federal government. The web link for the Court Order can be accessed by positioning the cursor over the underlined text and following the directions.
5. On February 25, the Chair of the House Committee on Energy and Commerce along with the Chairs of the Subcommittees on Environment and Economy and Oversight and Investigations forwarded a letter to the Secretary of Energy expressing their concern over DOE's and the Defense Threat Reduction Agency's consideration to conduct activities near the Yucca Mountain site in Nevada. They further related their anxieties about the potential impacts of any planned activities that would affect the adequacy of the site and requested both agencies to discontinue any activities in the area. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
6. On February 27, the NRC Chairman transmitted to the House Committee Chair on Energy and Commerce the Commission's monthly status report on its activities relative to their resumption of the Yucca Mountain licensing proceedings as mandated by the D.C. Circuit Court of Appeals. The January status report noted the previous publications of Volumes 3 and 4 of the Safety Evaluation Report (SER) and informed the Committee Chair of the recent release of Volumes 2 and 5 of the SER. In addition, since DOE refused to supplement their initial environmental impact statement (EIS) on groundwater as part of their Yucca Mountain license application, the Commission directed the staff to develop and issue

a supplement to DOE's initial EIS. The completion of the Yucca Mountain SER took about one year and cost about \$8.14 million, which is below the original estimate of \$8.31 million. The total expended to date was about \$9.26 million leaving a balance of \$4.29 million to complete the supplemental EIS. The web links for the letter and the report can be accessed by positioning the cursor over the underlined texts and following the directions.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

March 2015 Monthly Report to the Legislature

Executive Summary

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, including the State's ongoing environmental radiation surveillance and provides updates on the national effort to license and construct a consolidated interim storage facility and/or a permanent geologic repository for the disposal of spent nuclear fuel. Maine's goal is to move the ISFSI waste stored at Maine Yankee to one of these facilities. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local:

- Maine Yankee submitted its annual Decommissioning Funding Assurance Status Report to the Nuclear Regulatory Commission (NRC). The report stated that approximately \$30 million was available at the end of December 2014 and about \$23.2 million would be required to decommission the ISFSI in 2032, when it was assumed that the Department of Energy (DOE) would remove the spent fuel and Greater Than Class C wastes.

National:

- Senators Reid and Heller from Nevada introduced legislation, S.691 Nuclear Waste Informed Consent Act, which required the consent of the affected State and local governments and Indian Tribes before the NRC could authorize the construction of a nuclear waste repository.
- The NRC announced that the staff will prepare a groundwater supplement to DOE's Yucca Mountain Environmental Impact Statement (EIS). DOE refused NRC's request to supplement their original EIS and decided instead to update its groundwater impact study.
- DOE's independent Technical Assessment Team (TAT) investigated the Waste Isolation Pilot Plant's airborne radioactive release into the environment that contaminated 21 workers with low levels of radioactivity. The TAT concluded that only one drum was involved in the release and the breach was caused by a reaction from incompatible wastes which resulted in an internal build-up of gasses that forced the drum's lid to open and releasing the radioactive gasses.
- President Obama signed a memorandum revising a 1985 policy signed by President Reagan giving DOE authority to develop a separate repository for defense-related nuclear wastes since some defense wastes was less radioactive, cooler and easier to handle than commercial wastes.
- A Bipartisan Senate Coalition introduced the "Nuclear Waste Administration Act of 2015," which mirrored legislation initially proposed by former New Mexico Senator Bingaman back in 2013. The provisions of the proposed Act included:
 - a) an independent government agency
 - b) a consent-based process
 - c) a linkage between the siting of storage facilities and a repository
 - d) a new working capital fund, and
 - e) allowing the Energy Secretary to dispose of defense-related wastes.

Introduction

As part of the Department of Health and Human Services' long standing oversight of Maine Yankee's nuclear activities under Title 22, Maine Revised Statutes (MRS) §666 (2), legislation was enacted in the second regular session of the 123rd and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the ISFSI facility located in Wiscasset, Maine.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and ongoing, there may be some months when very little will be reported under that category. It is recommended for reviewers to examine previous reports to ensure connectivity with the information presented as it would be cumbersome to continuously repeat prior information in every report. Past reports, historical addendum, and glossary are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

During March the general status of the ISFSI was normal, with one instance of spurious alarms due to environmental conditions.

There was one fire-related impairment for the month and it was the ongoing fire impairment put in place to cover the office build-out project. Compensatory measures were put in place and will continue until the project is completed in July.

There were two security-related reports logged for the month and they were both due to environmental conditions. Compensatory measures were put into place until the conditions cleared.

There were 18 condition reports¹ (CR) for the month and they are described below.

- 1st CR: Documented a degraded security system due to environmental conditions. Compensatory measures were put into place until the conditions cleared.
- 2nd CR: Documented that unescorted access background check documents were misplaced and most likely discarded. The vendor was contacted and forwarded copies of the documents.
- 3rd CR: Documented a water leak into a temporary construction trailer. The cause was due to ice buildup and was subsequently removed.
- 4th CR: Documented a water leak into the front gatehouse. The cause was excessive snowmelt around the foundation. The water was mopped up and the snow cleared.
- 5th CR: Documented that a channel on the radio system was not working properly. The problem was found to be an antenna and cable that were degraded. The antenna and cable were replaced.
- 6th CR: Documented that one of two state police radio channels was not working properly when contacting the Lincoln County Communications Center and Maine State Police (MSP). After troubleshooting the issue it was determined to be due to the MSP moving the frequency onto a secondary radio system. MSP indicated that the frequency would be moved back to their base system in the near future. This frequency is not required to meet communications requirements with the MSP.
- 7th CR: Documented a housekeeping issue in an office area. The office was cleaned up to meet housekeeping expectations.
- 8th CR: Documented that a personal vehicle was damaged in the parking lot from another vehicle door opening. The issue was resolved between the individuals involved.
- 9th CR: Documented a self-assessment done to review and incorporate NRC guidance on suspicious

¹ A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Control Program's website.

- aircraft. The new guidance was incorporated into a site procedure and shared with the staff.
- 10th CR: Documented that a MSP telephone number did not work during a periodic test. After discussing with the State Police, the problem was the telephone at the MSP office. The telephone was replaced and tested satisfactorily.
- 11th CR: Documented that a sole source justification was not completed for a purchase order for contracted services as required by procedure. The sole source justification was developed and placed in the purchase order file.
- 12th CR: Documented that a fire extinguisher on a vendor's forklift had expired. The fire extinguisher was replaced.
- 13th CR: Documented that a construction worker onsite for the office build-out project had exhibited behavior which may have violated the company's policy on fitness for duty. The individual was assessed and voluntarily left the site permanently.
- 14th CR: Documented that workers received a shock while operating a gas powered vacuum while attempting to pick up snow. The work was stopped and the vacuum was tagged out to prohibit further usage.
- 15th CR: Documented some errors in the fourth quarter 2014 environmental TLD data sheets. The vendor had filled in data from a previous quarter and this was caught during a review by the Radiation Protection Manager. The vendor was contacted to correct the data.
- 16th CR: Documented that a space heater was replaced as part of the office build-out project without the breaker being locked and tagged out. The circuit was checked and found to be de-energized. Therefore, no hazard existed, but the breaker was not locked and tagged as required by procedure. The individual was coached and counseled and a process change was made such that all electrical work for the project was documented at the start of each shift and could not be changed without Maine Yankee approval.
- 17th CR: Documented that hardhats are recommended to be changed out after five years of use and several hardhats at the site exceeded this recommendation. The hardhats were taken out of service and a process was put in place to check Personal Protective Equipment on a yearly basis.
- 18th CR: Documented that a concrete dam with overflow piping had become degraded at the small pond near Maine Yankee's entrance. Planning was in progress to replace the dam.

Other ISFSI Related Activities

1. On March 3, Maine Yankee submitted its annual Decommissioning Funding Assurance Status Report to NRC. The report stated that about \$23.2 million would be required to decommission the ISFSI in 2032, when it is assumed that the DOE will remove the spent fuel and Greater Than Class C wastes. According to the report approximately \$30 million was available at the end of December 2014. The funds are segregated from the balance of the Nuclear Decommissioning Trust that is used primarily for the ongoing management of the storage facility.

Environmental:

No quarterly information is available this month.

Other Newsworthy Items:

1. On March 3, after performing new geological studies near Creighton, Saskatchewan and Schreiber, Ontario, Canada's Nuclear Waste Management Organization concluded that the geology of each locality was unsuitable for hosting a repository for spent nuclear fuel. Nine other communities in Ontario were still undergoing further studies and evaluations. The web link for the announcement can be accessed by positioning the cursor over the underlined text and following the directions.

2. On March 4, the DOE's Principal Deputy Assistant Secretary for Nuclear Energy responded to the House Chair's February 25 letter on DOE's and the Defense Threat Reduction Agency's (DTRA) intent to plan activities at the proposed Yucca Mountain repository site. The Deputy Assistant confirmed that DOE and the DFTA were not proposing any activities at the Yucca Mountain site. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
3. On March 10, Senators Reid and Heller from Nevada introduced legislation that would require the consent of the affected State and local governments and Indian Tribes before the NRC could authorize the construction of a nuclear waste repository. The Senate bill, S.691 Nuclear Waste Informed Consent Act, would provide a state, municipality, or tribe new veto powers over storing waste at the Yucca Mountain site or any future proposed site. The Senators stated that the proposed bill would allow the will of the people to be reflected through a statewide public referendum. A companion bill was introduced in the House by two of Nevada's four Representatives. The web link for the proposed legislation can be accessed by positioning the cursor over the underlined text and following the directions.
4. On March 12, NRC announced that the staff would prepare a groundwater supplement to Yucca Mountain's Environmental Impact Statement (EIS). The DOE refused and decided to update its groundwater impact study instead of supplementing their original EIS. The supplement will focus on a key aquifer and how both radiological and chemical contaminants could impact the aquifer. It will also provide additional information on the impacts from surface discharges of groundwater, the cumulative amount of radiological as well as chemical contaminants that enter the aquifer from the repository, the amount reasonably expected to remain over time, and estimated amounts of contaminants deposited at or near the surface and their potential impacts. The web link for the news release can be accessed by positioning the cursor over the underlined text and following the directions.
5. On March 17, DOE's independent Technical Assessment Team (TAT) investigating the Waste Isolation Pilot Plant's radioactive waste drum breach in the Plant's underground repository that released airborne radioactive material into the environment and contaminated 21 workers with low levels of radioactivity. The TAT concluded that only one drum was involved in the release and the breach was caused by a reaction from incompatible wastes that resulted in an internal build-up of gasses that forced the drum's lid to open thereby releasing the radioactive gases. The combination of nitrate salt residues, kitty litter, and a neutralizing agent resulted in a reactive mixture. The TAT was led by scientists from the Savannah River National Laboratory and included scientists from other National Laboratories such as Lawrence Livermore, Oak Ridge, Pacific Northwest, Sandia, and Idaho. The web links for the TAT's summary and Report can be accessed by positioning the cursor over the underlined texts and following the directions.
6. On March 24, President Obama signed a memorandum revising President Reagan's 1985 policy giving DOE authority to develop a separate repository for defense-related nuclear wastes. The justification for de-commingling commercial and defense wastes was predicated on some defense wastes being less radioactive, cooler and easier to handle than commercial wastes, which would mean a simpler design and less challenging licensing or transportation issues. The Energy Secretary outlined the new strategy, which provided a historical perspective on circumstances that led to the initial policy of comingling commercial and defense wastes along with DOE's role, listed advantages on the disposal of defense-related wastes over commercial spent fuel, and promoted a concurrent path moving forward on storage and disposal of commercial nuclear wastes. In conjunction with the new strategy DOE also released a report, entitled, "Report on Separate Disposal of Defense High-Level Radioactive Waste" that explained the logic for the policy change. The web links for the memorandum, DOE's Fact Sheet and the Report can be accessed by positioning the cursor over the underlined texts and following the directions.

7. On March 24, a Bipartisan Senate Coalition introduced the “Nuclear Waste Administration Act of 2015” which mirrored legislation initially proposed by former New Mexico Senator Bingaman back in 2013. The provisions of the proposed Act included:
- a) An independent government agency with an Administrator appointed by the President and confirmed by the Senate.
 - b) A consent-based process for establishing a pilot storage facility for shutdown and decommissioned reactor sites, other temporary storage facilities for non-priority spent fuel, and a repository.
 - c) A linkage between the siting of storage facilities and a repository such that storage facilities can continue to be sited up to ten years after the enactment of the legislation and further storage facilities can only be sited as long as a repository site has been selected for evaluation.
 - d) A new working capital fund from fees assessed to nuclear utilities and made immediately available to the new agency without further Congressional appropriation.
 - e) Allowing the Energy Secretary to determine how best to dispose of defense-related wastes and provides for the new agency to manage those wastes separately by siting, constructing, and operating those facilities.

The web links for the proposed senate news release and the proposed legislation can be accessed by positioning the cursor over the underlined texts and following the directions.

8. On March 25, the NRC Chair forwarded to the House Chair of Energy and Commerce the Commission’s monthly status report on its activities on the Yucca Mountain licensing proceedings as mandated by the D.C. Circuit Court of Appeals. The February status report noted the completion of the five volumes of the Safety Evaluation Report (SER). The Commission approved other SER activities going forward such as records retention and the development of a lessons learned report, and making their Licensing Support Documents publicly available. In addition, the Commission approved a revised schedule and cost estimate for completing a supplement to DOE’s initial environmental impact statement. The staff projected 12 to 15 months to complete the supplement at a cost of about \$2 million. Most of the \$175,569 expended during February was for the completion of the SER. Of the \$13.55 million available \$9.4 million has been expended leaving a balance going forward of about \$4.1 million. The web links for the letter and the report can be accessed by positioning the cursor over the underlined texts and following the directions.
9. On March 27, in a surprise development Senator Harry Reid from Nevada announced that he would not seek re-election in 2016. His congressional career started in the House in 1982 and then in the Senate in 1986. Prior to January 2015 Senator Reid had been the Senate Majority Leader since 2007. As such he was instrumental in forestalling and blocking any funding to move the Yucca Mountain licensing application forward. Senator Reid is currently the Senate Minority Leader.

State Nuclear Safety Inspector Office
Maine CDC – DHHS

April 2015 Monthly Report to the Legislature

Executive Summary

The report covers activities at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility, including the State's ongoing environmental radiation surveillance and provides updates on the national effort to license and construct a consolidated interim storage facility and/or a permanent geologic repository for the disposal of spent nuclear fuel. Maine's goal is to move the ISFSI waste stored at Maine Yankee to one of these facilities. The report's highlights assist readers to focus on the significant activities that took place both locally and nationally during the month.

Local:

- Maine Yankee notified the Department of Environmental Protection (DEP) that no chemical contamination was found when it invoked its Soil Management Plan for underground drainage and paving around the Maintenance Building, the installation of windows on the north side of the Security and Operations Building, and the replacement of a security system foundation.

National:

- The Governor of New Mexico forwarded a letter to Energy Secretary Moniz notifying him of her support for the local communities of Carlsbad and Hobbs in Eddy and Lea Counties that wish to locate and site a consolidated interim storage facility for spent nuclear fuel in southeastern New Mexico.
- The Department of Energy (DOE) published its Waste Isolation Pilot Plant (WIPP) Radiological Release Phase II Investigation Report regarding last year's Valentine's Day incident where one waste drum was breached and slightly contaminated 21 workers and some low levels of radioactivity was released from the underground salt dome to the environs.
- The Governor of New Mexico and the DOE Secretary announced the terms of a \$73 million settlement on the State's claims against DOE and its contractors for the two incidents at the WIPP facility that took place in February of 2014, a truck fire and a radioactive release. Instead of paying \$54 million in fines, DOE will provide support for a variety of mutually beneficial and crucial projects that will protect local communities and better safeguard transportation routes in the State and around DOE sites.
- Holtec International and the Eddy-Lea Energy Alliance announced the signing of an agreement for plans to design, license, construct and operate an interim spent fuel, underground storage facility for 3,600 dry casks near the cities of Carlsbad and Hobbs, New Mexico. Holtec expects to apply for a NRC license within a year and projected the storage facility could be receiving spent nuclear fuel in as little as four to five years.

Introduction

As part of the Department of Health and Human Services' long standing oversight of Maine Yankee's nuclear activities under Title 22, Maine Revised Statutes (MRS) §666 (2), legislation was enacted in the second regular session of the 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 ISFSI facility located in Wiscasset, Maine.

The State Inspector's individual activities for the past month are highlighted under certain broad categories, as illustrated below. Since some activities are periodic and 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, historical addendum, and glossary are available from the Radiation Control Program's web site at the following link: www.maineradiationcontrol.org and by clicking on the nuclear safety link in the left hand margin.

Independent Spent Fuel Storage Installation (ISFSI)

During April, 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. This is the ongoing impairment that has been implemented to cover the office build-out project. Fire rounds were put into place each shift as a compensatory measure. The project is scheduled to complete in late July.

There were two security incident reports logged for the month. The first report documented that a security system did not alarm as anticipated during personnel transit. The system was tested and found to be operating satisfactorily. The second documented the semi-annual performance testing of a security system.

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

- 1st CR: Documented that an individual received a slight shock when touching the exit keycard reader at the gatehouse. The grounding wires were replaced and tightened and rubber strips were installed on the edges of the enclosure.
- 2nd CR: Documented that a culvert running under a roadway in the entrance area had collapsed. The area is currently blocked off and the culvert area will be repaired or modified to eliminate the culvert.
- 3rd CR: Documented that an exterior light pole was intermittently going on and off at night. This CR remains open for troubleshooting and may need a bulb and/or a ballast replacement.
- 4th CR: Documented a non-reportable oil spill from a concrete truck onto the pavement. The truck left the site and the minor leakage was cleaned up.
- 5th CR: Documented as a tracking CR for a self-assessment completed on a surveillance procedure. The procedure will be updated to reflect the recommendations in the assessment, including changing the frequency of various routine surveillances.
- 6th CR: Documented that a security system did not alarm as anticipated during a personnel transit. The system was tested and found to be operating satisfactorily.
- 7th CR: Documented that an emergency light battery pack surveillance did not check one battery pack as required. The procedure form was not clear on the location and the office build-out project was believed to have removed this light. The procedure will be clarified on emergency light locations going forward.
- 8th CR: Documented that a procedure data log was missing for one day in March. The shift log for that day indicated the data log was completed but the form was not in the file. A memo was written to document the missing form in the records system.
- 9th CR: Documented an inconsistency between the Security Plan and a procedure regarding issuing keys. Interim guidance was provided to shift personnel and the procedure will be updated to provide consistency with the Security Plan.
- 10th CR: Documented that a surveillance procedure had not been updated to reflect changes in the Radiation Protection Program. The procedure is slated for cancellation which will close this CR.

¹ A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Control Program's website.

- 11th CR: Documented that an Emergency Action Limit contained in an Emergency Plan implementing procedure lacked a baseline level to establish the 100 times threshold for airborne contamination. This CR is currently under review with the Licensing Engineer and the Radiation Protection Manager.
- 12th CR: Documented that two teenage trespassers entered the front entrance area and threw rocks at a porcupine, then left the property. The Local Law Enforcement Agency was contacted but was unable to locate the individuals. The event was not deemed suspicious.
- 13th CR: Documented that several Emergency Plan implementing procedures were inconsistent in specifying a Technical Specification requirement after an off-normal, natural phenomena, or accident event. This CR will remain open until the procedures are updated to reference the Technical Specification.
- 14th CR: Documented that water had been leaking into the truck bay through a buried conduit after a heavy rainstorm. The conduit was sealed.
- 15th CR: Documented a small non-reportable oil spill from a vendor's forklift. The spill was cleaned up and the forklift was returned to the rental company.
- 16th CR: Documented that a ground fault alarm had occurred on a fire panel. An existing fire impairment was modified to put compensatory measures into place until the vendor repaired the system.
- 17th CR: Documented that a utility vehicle had stopped working due to a bolt in the clutch backing out. The vehicle was sent back to the vendor for repairs.
- 18th CR: Documented that the Offsite Dose Calculation Manual (ODCM) change number 36 did not contain revision bars in the margin to identify changes. The change bars were added and distribution of the document is in progress. This was identified by the State Inspector.
- 19th CR: Documented that the vendor working on the office build-out project was performing hot work without a fire watch present. The work was stopped until a fire watch was put into place. The personnel involved were counseled on the requirements prior to restarting the job.
- 20th CR: Documented that the NRC called the site to request participation in a conference call involving Region 2 licensees. After discussion, the NRC indicated this call was in error since the conference call did not apply to Maine Yankee.

Other ISFSI Related Activities

1. On April 8, the legislatively mandated group, representing the Department of Environmental Protection (DEP), the State Police, the Public Advocate, the Department of Health and Human Services' Radiation Control Program and Maine Yankee, met for its quarterly meeting to discuss the State's and Maine Yankee's activities pertinent to the oversight of the Independent Spent Fuel Storage Installation (ISFSI). The State Inspector briefed the Group on the status of his monthly and annual reports to the Legislature, his participation in a national interregional team that is developing recommendations from states to the Department of Energy (DOE) on emergency preparedness for local communities on spent fuel shipments traversing their jurisdictions which includes a policy implementation exercise to assist the states on deciding on a funding protocol to recommend to DOE. The Group also discussed the State's environmental radiation data, the anomalies in the fourth quarter results, and options going forward to resolve the issue. Further discussions also centered on the Department of Health and Human Services' annual report to the Legislature, the anticipated move of the Radiation Control Program to DEP, and the Governor's recently introduced legislation to support Small Modular Reactors by waiving the statewide referendum requirement for reactors below 500 megawatts. Maine Yankee informed the Group of their periodic chemical sampling effort at the decommissioned industrial location on Bailey Point. They noted that they will be making recommendations soon to DEP on what wells should be closed out. Maine Yankee also apprised the Group of its changes in their Radiation Protection Program and procedures, such as Mr. Joseph Bourassa replacing Mr. James Connell who retired and the Nuclear Regulatory Commission's proposed ISFSI security rule and potential changes to the basis of the threat, which could take another four or five years before it is finalized. Maine Yankee also mentioned their

plans to upgrade their security cameras, the construction of a fence along Ferry Road to prevent trespassers, the installation of security cameras in Iberdrola's (Central Maine Power's owner) switchyard adjacent to the ISFSI, and the ongoing construction of new offices in the Security and Office Building. Maine Yankee anticipated that any nuclear waste bills introduced in Congress would probably not move forward until after the next presidential election. They also related that it annually costs ratepayers approximately \$10 million to operate the ISFSI.

2. On April 20, Maine Yankee submitted to the NRC its Individual Monitoring Form 5 Report for 2014. The report provided the occupational dose for last year for all those who work at the storage facility in Wiscasset. The Form 5 records the external and internal radiation exposures of the workers at the site. Since the spent fuel canisters are sealed there were no internal exposures to report.
3. On April 22, Maine Yankee notified the Department of Environmental Protection (DEP) that, according to their Environmental Covenant with DEP, Maine Yankee invoked its Soil Management Plan on three occasions last year. The first site preparation and excavation activity involved the underground drainage and paving around the Maintenance Building. The second concerned the installation of windows on the north side of the Security and Operations Building. The last one included the replacement of a security system foundation. In all three instances soil samples were taken and analyzed. No chemical contamination was found.
4. On April 29, Maine Yankee submitted their annual reports for radioactive effluent releases, radiological environmental monitoring, and changes to their Off-Site Dose Calculation Manual (ODCM). There were no planned or unplanned gaseous or liquid releases from the storage casks. Therefore, no assessment of the radiation dose to the most likely exposed person was required. Since there were no effluent releases from the casks, Maine Yankee was only required to monitor the direct radiation exposure from the facility, which it does with passive devices, called thermoluminescent dosimeters (TLDs)². The environmental monitoring report explained that Maine Yankee has nine TLD stations in the vicinity of the ISFSI and one control station at the Wiscasset Fire Station. All nine stations were comparable to or in some cases slightly higher than the control station. However, there was one station that was noticeably higher than the other eight ISFSI stations. This location has been consistently high since March, 2005. Due to its distance from the bermed area, the higher values were assumed to be due to its line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 0.99 mrem³ at its highest TLD location, which was much lower when compared to the Environmental Protection Agency's annual public limit of 25 mrem. Most of the changes to the ODCM were editorial in nature with the key exception being the change in the sampling frequency from quarterly to semi-annually for the TLDs.

Environmental:

The quarterly information will be available in next month's report.

Other Newsworthy Items:

1. On April 1, the Finnish Waste Management Company, Posiva, announced they were starting to build a massive reinforced concrete plug for testing waste encapsulation at its proposed final repository near Olkiluoto. The full-scale test plug will be about 20 feet wide by 20 feet long. Sensors will be placed in

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

³ A mrem or millirem is a conventional unit that is based on how much of the radiation energy is absorbed by the human body multiplied by a quality factor that is a measure of its relative hazard. For a further explanation, refer to the glossary on the Radiation Program's website.

the demonstration tunnel to pressure test the wedge-shaped plug to see if water is capable of flowing between the plug and the bedrock. The underground facility is known as Onkalo, which means "cave." The web link for the news article can be accessed by positioning the cursor over the underlined text and following the directions.

2. On April 7, Nevada Senator Heller sent a letter to Energy Secretary Moniz beseeching him to allow one technical specialist from Nevada to join the bipartisan congressional visit scheduled for April 9 to Yucca Mountain. The Senator emphasized the importance of receiving a technical briefing from Nevada's perspective and that input would subscribe to the Subcommittee Chairman's goal to dialogue with state, local, and tribal stakeholders. This was especially important considering that the Executive Director of Nevada's Agency for Nuclear Projects was refused earlier by the Subcommittee Chairman stating that there was no more room. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
3. On April 8, the three Yankee Companies held their quarterly conference call to brief interested stakeholders from the states of Maine, Massachusetts, and Connecticut on the status of the Federal Energy Regulatory Commission rate case settlement on spent nuclear fuel storage issues. The General Counsel updated the attendees on Yankee Companies' Phase III litigation damage claims for the period 2009 through 2012. The general and expert discoveries were closed and now waiting for the three day trial to start on June 30. Updates were provided on the status of the Yucca Mountain Licensing Application such as the completion of the NRC's five Volume Safety Evaluation Report (SER) on Yucca Mountain, the NRC staff recommendation to not issue a construction authorization since DOE had not procured the land and water rights to the proposed repository, the NRC would complete the supplemental environmental impact statement that DOE refused to do, and NRC projected that \$330 million would be required to complete the entire licensing process. Additional updates were provided such as the President's recent memorandum establishing a national policy to dispose of defense-related wastes into a separate repository as opposed to comingling with civilian spent nuclear fuel in one repository, Nevada Senator Reid's retirement announcement, the introduction of Senator Reid's Nuclear Waste Informed Consent Bill that would require the consent of affected state and local governments before NRC could authorize the construction of a nuclear waste repository, the introduction of comprehensive nuclear waste reform bill that would implement many of the recommendations from the Blue Ribbon Commission, the announcement by Waste Control Specialists, operators of a low-level waste facility in Texas, to build a private interim storage facility for spent nuclear fuel, and the NRC's intent to finalize a security rule for ISFSI's by 2019 that could encompass a dose based approach for Maine Yankee as opposed to its current design basis threat and could result in an expansion of its existing 985 foot controlled area boundary. Some discussion centered on the Council of State Governments eastern Regional Conference 's Northeast High-Level Radioactive Waste Transportation Task Force's involvement in DOE's grant process for state funding on emergency response needs on spent fuel shipments within their borders and with Connecticut and Pennsylvania both evaluating barge options for transporting the spent nuclear fuel. Finally, it was mentioned that the National Academy of Sciences was providing the NRC with a proposal on a pilot study to evaluate the cancer risk around six nuclear plants in the U.S. with two of them being from the Northeast, Connecticut Yankee and Millstone. The NRC was expected to decide on the 2½ year Pilot Study proposal by June.
4. On April 10, the Governor of New Mexico forwarded a letter to Energy Secretary Moniz notifying him of her support for the local communities of Carlsbad and Hobbs and Eddy and Lea counties that wish to locate and site a consolidated interim storage facility for spent nuclear fuel in southeastern New Mexico. The letter followed last month's announcement by Waste Control Specialists to locate and operate an interim storage facility near the Texas and New Mexico border. The two proposed sites would be about 35 miles from each other. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.

5. On April 14, the Chair and Ranking Member of the House Committee on Energy and Commerce sent a letter to the Secretary of Energy expressing their concerns on President Obama's recent determination to develop a separate repository for defense-related spent fuel and high-level wastes. They listed the six critical factors that were initially employed to justify the comingling of commercial and defense wastes during President Reagan's tenure. They then provided a list of ten questions for the Energy Secretary to respond to. The questions revolved around the use of federal monies for defense related activities at Yucca Mountain to how quickly a geological repository for civilian nuclear waste could be constructed under the best of circumstances to the use of deep borehole technology for disposal to cost estimates for shared and separate repositories to the technical and legal basis for changing the policy. The web link for the letter can be accessed by positioning the cursor over the underlined text and following the directions.
6. On April 16, the DOE published the Waste Isolation Pilot Plant's (WIPP) Radiological Release Phase II Investigation Report relating to last year's Valentine's Day incident where one waste drum was breached and slightly contaminated 21 workers and some radioactivity was released from the underground salt dome to the environs. The WIPP facility was investigated along with the Los Alamos National Laboratory where the waste drum originated. Based on radiological, chemical, and fire forensic analyses the breaching of the drum was caused by a reaction between the nitrate salts and the kitty litter that was used as an organic absorbent. The reaction pressurized the drum which compromised the locking ring and raised the drum lid. A continuous air monitor detected the release and alarmed. The alarm activated an automatic shift to direct the underground ventilation through the high efficiency particulate filters. However, a small portion of the release leaked around the ventilation dampers and was exhausted to the outside air. The Phase I Report, which was released in April of 2014, focused on the immediate response to the radiological event. The web link for the report can be accessed by positioning the cursor over the underlined text and following the directions.
7. On April 23, the NRC's Deputy Director for the Yucca Mountain Directorate put on a webinar to provide an overview of the Yucca Mountain License Application. The Deputy Director provided a timeline from DOE's license application submission in June 2008 through the NRC's staff completion of their Safety Evaluation Report (SER) in January 2015. When the NRC docketed DOE's submission it contained 16 three ring binders for its license application, over 40 environmental reports to support its Environmental Impact Statements (EIS), and 196 key documents to support its license application. The NRC's SER was 1800 pages with Volumes 2 and 3 being the largest of the five Volume set. The SER concluded that DOE met most of the regulatory requirements, except for land and water rights and a supplemental EIS. The NRC staff recommended that the construction authorization not be issued due to the exceptions noted. Even with the NRC undertaking the completion of the supplement to DOE's EIS, about 300 contentions from 19 parties need to be adjudicated and the Commission must complete its review before it makes its final decision. The web link for the presentation can be accessed by positioning the cursor over the underlined text and following the directions.
8. On April 29, the Nuclear Waste Strategy Coalition held its annual meeting in D.C. to discuss nuclear waste management policy issues. Of the several topics on the agenda some were dedicated to how to move forward. Three were noteworthy. One dealt with the recent announcement by Waste Control Specialists (WCS) of Andrews County, Texas to construct, license, and operate a consolidated interim storage facility. WCS has scheduled April 2016 to file a license application with the NRC. Assuming that the NRC license review will take three years, WCS was planning on beginning construction of the storage facility in September 2019 with the goal of accepting spent fuel shipments by December 2020. The facility will be constructed in eight phases with the first phase dedicated for the storage of spent fuel from 10 decommissioned reactor sites. The second presented the Bipartisan Policy Center's (BPC) five public meetings and their efforts at bringing together diverse groups to take action on nuclear waste. The Northeast issues revolved around stranded fuel and stopping the generation of waste. The South's issues focused on defense high-level waste and reprocessing. The Midwest's concerns were on

transportation infrastructure and worries over stranded fuel. The West concentrated on just moving the fuel and the San Onofre Community Engagement Panel whereas the Pacific Northwest's issues centered on DOE priorities and a defense-only repository. The BPC also listed what they saw as common ground in the meetings, namely barriers to taking action, addressing nuclear waste means different things to different people, and suggested actions in moving forward. The third topic was on leveraging host communities to support consent based siting of consolidated interim storage. The presenter noted that the Wharton School's Risk and Decision Process Center has a well-documented procedure for consent-based siting that already exists and has proven successful in siting industrial facilities. The presentation also outlined how host communities have key roles in building and restoring trust, where those sources of credibility existed, and what common values stakeholders shared. The web link for the [agenda](#) and the presentations by [WCS](#), [BPC](#), and [consent-based siting](#) can be accessed by positioning the cursor over each of the underlined texts and following the directions.

9. On April 29, Holtec International and the Eddy-Lea Energy Alliance announced the signing of an agreement for plans to design, license, construct and operate an interim spent fuel storage facility near the cities of Carlsbad and Hobbs, New Mexico. The facility will employ Holtec's underground HI-STORM UMAX design for the planned 3600 dry casks. Holtec expects to apply for a NRC license within a year and projected the storage facility could be receiving spent nuclear fuel in as little as four to five years. The web link for the [news article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
10. On April 30, the Governor of New Mexico and the DOE Secretary announced the terms of a \$73 million settlement on the State's claims against DOE and its contractors for the two incidents at the WIPP facility that took place in February 2014, a truck fire and a radioactive release. Instead of paying fines DOE will provide support for a variety of mutually beneficial and crucial projects that will protect local communities and better safeguard transportation routes in the State and around DOE sites. The projects included \$34 million to improve roads around the WIPP site, \$12 million to improve routes in and around Los Alamos, \$10 million to upgrade critical water infrastructure in and around Los Alamos, \$9.5 million to better manage storm water flows around the Los Alamos National Laboratory site, \$5 million to build an emergency operations center in Carlsbad and provide enhanced training for emergency responders and mine rescue teams, and \$2.75 million to fund an independent triennial compliance and operational review. The settlement resolved the two compliance orders issued by the State in December of last year over the two incidents and waived the imposition of \$54,350,899 in penalties. The web link for the [agreement](#) can be accessed by positioning the cursor over the underlined text and following the directions.
11. On April 30, the Nuclear Waste Strategy Coalition issued a call to action to key congressional leaders for the federal government to meet its legal obligations and address nuclear waste policy in the United States. The message focused on three key elements. The first involved funding the appropriate oversight agencies to complete the Yucca Mountain License Application. The second centered on promoting and constructing a consolidated spent nuclear fuel storage facility with priority given to shutdown reactor sites. The final one was multifaceted by prompting DOE to engage host communities, certify rail cars, and prepare the transportation infrastructure for a national spent fuel shipping campaign. The web link for the [message](#) can be accessed by positioning the cursor over the underlined text and following the directions.
12. In April, the Nuclear Waste Technical Review Board published a paper on "Deep Borehole Disposal of Spent Nuclear Fuel and High-Level Waste." The paper described the borehole concept as drilling a hole down to 16,400 feet and placing spent nuclear and high-level wastes in the bottom 6500 feet of the shaft and then sealing the upper 9900 feet. The waste packages could be placed individually or up to 400 or more packages depending on the length of the waste containers. This is contrasted with a mined repository at a depth of 1600 feet. The potential advantages included low permeability of the host rock

at such depths thereby increasing the travel times to reach the surface and lower solubility and mobility of some of the longer lived radioactive elements, such as plutonium. However, there are several technical challenges. The drilling technology to such great depths is only in its infancy and plagued with deformed walls. The casing and sealing technologies pose significant challenges, since an inadequate seal could provide a conduit for water. Other problems included consolidation and repackaging of wastes, problems with the placement of waste packages, retrieval of emplaced wastes, the complexity of characterizing the rock at such depths, and the role of multiple barriers. The web link for the paper can be accessed by positioning the cursor over the underlined text and following the directions.