MAINE STATE LEGISLATURE

Maine Center for Disease Control and Prevention

An Office of the Department of Health and Human Services

Paul R. LePage, Governor Mary C. Mayhew, Commissioner

2014 Report to the Legislature-

on the

State Nuclear Safety Inspector's Oversight Activities

of the

Independent Spent Fuel Storage Installation (ISFSI)

at the

Maine Yankee Site in Wiscasset, Maine

Prepared for
Joint Standing Committee on
Energy, Utilities, and Technology
Pursuant to 22 MRS §666(2)

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

Paul R. LePage, Governor Mary C. Mayhew, Commissioner

Department of Health and Human Services
Commissioner's Office
221 State Street
11 State House Station
Augusta, Maine 04333-0011
Tel. (207) 287-3707
Fax (207) 287-3005; TTY (800) 606-0215

September 15, 2015

MEMORANDUM

TO: Senator Michael D. Thibodeau, President of the Senate
Representative Mark Eves, Speaker of the House,
Senator David Woodsome, Co-Chair of the Joint Standing Committee on Energy, Utilities and Technology
Representative Mark Dion, Co-Chair of the Joint Standing Committee on Energy, Utilities and Technology

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

SUBJECT: 2014 Report to the Legislature on the State Nuclear Safety Inspector's Oversight Activities of the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) in Wiscasset, Maine

Legislation enacted in the spring of 2008 requires the State Nuclear Safety Inspector, in cooperation with the Director of the Division of Environmental Health in the Maine Center for Disease Control and Prevention, to prepare an annual report of the State Inspector's activities to the Legislature. The report must be submitted annually to the Legislature with oversight from the Joint Standing Committee on Energy, Utilities and Technology by the 1st of July. The report focuses on activities at the site and includes highlights of the national debate on storing and disposing the used nuclear fuel.

The enclosed report provides 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: Holly Lusk, Senior Health Policy Advisor, Governor's Office
Kenneth Albert, Esq., Director and Chief Operating Officer, Maine Center for Disease Control
Patricia W. Aho, Commissioner, Department of Environmental Protection
Timothy Schneider, Maine Public Advocate
Lieutenant Scott Ireland, Special Services Unit, Maine State Police

Table of Contents

Tables

Figures

Appendices

Executive Summary

The following report details the State Nuclear Safety Inspector's oversight activities for the calendar year 2014 performed at Maine Yankee's Independent Spent Fuel Storage Installation (ISFSI) in Wiscasset and nationally. The State Nuclear Safety Inspector's oversight role includes the following tasks:

- Reviews daily the operational and security reports from the on-site security staff;
- Performs environmental surveillance of the Maine Yankee environs to include field measurements of the local radiation levels;
- Participates in the biennial Nuclear Regulatory Commission inspection of the facility;
- Participates in the ISFSI's annual emergency plan exercise;
- Reports activities monthly and annually to the Legislature;
- Provides an annual accounting to the Legislature of the funds received and disbursed out of the Interim Spent Fuel Storage Facility Oversight Fund;
- Interfaces with various state agencies also performing oversight functions at the ISFSI;
- Reviews and comments, if appropriate, on Maine Yankee submittals to the Nuclear Regulatory Commission;
- Participates in regional and national organizations involved in the Yucca Mountain project in Nevada and the development of a national transportation network for moving used nuclear fuel to consolidated interim storage sites; and
- Investigates and monitors websites to keep abreast of national developments on spent nuclear waste management and research.

The Maine Yankee plant was decommissioned over an eight year period from 1997 to 2005. Because the Department of Energy was unable to fulfill its contractual obligations to accept the spent nuclear fuel by January 1998, Maine Yankee was compelled to construct an ISFSI in Wiscasset to store the high level waste in casks until a consolidated interim facility is constructed to store the waste, or a national repository becomes available to dispose of the used nuclear fuel.

The storage of the high level waste in Wiscasset is an important issue to the State. It creates an undue burden to the local community and State by not being able to reuse or redevelop prime, coastal real estate. Moreover, it sets up a potential terrorist target that could result in future unintended consequences. Furthermore, the Administration's decision to withdraw the Department of Energy's license application before the Nuclear Regulatory Commission effectively terminated the Yucca Mountain repository and potentially imposed on our citizens a de facto high-level waste dump site in Maine.

There was very little movement on the national scene this year to move the spent nuclear fuel stored at Maine Yankee or other reactor sites throughout the country to an interim storage or disposal facility. Congress was still deadlocked over the management of spent fuel with the House supporting the resumption of the Yucca Mountain Project and the Senate focused on developing consolidated interim storage facilities.

There were some national highlights during the year. The Administration ceased charging nuclear utilities for a non-existent nuclear waste management program at the Court's prompting. The NRC published its long awaited Continued Storage Rule that allowed storage of spent nuclear fuel at reactor sites forever. The public's trust for geologic disposal was shaken with the first ever radioactive release from an underground repository that housed waste material from the nuclear weapons era. Finally, the NRC published its long awaited Volume 3 of the Yucca Mountain Safety Evaluation Report that concluded the proposed repository would meet its safety standards.

1.0 Introduction

1.1 Historical Perspective

The State had one nuclear power plant, called the Maine Yankee Atomic Power plant, and it was located in Wiscasset, Maine. It operated from the fall of 1972 to December 1996. The Maine Yankee Plant was initially rated at about 825 megawatts electric or 2440 megawatts thermal and by the end of its life the Maine Yankee plant was producing slightly over 900 megawatts electric.

At the time of its last shutdown in December 1996, the plant owners were facing some major issues, principally cable separation and the aftermath of the Nuclear Regulatory Commission's (NRC) Independent Safety Assessment Team (ISAT) findings pertaining to plant safety systems. The State was a participant in the ISAT process. In 1997 the plant owners decided that the likelihood of the nuclear plant operating at a profit was non-existent in light of Maine's electric restructuring act passed that same year. With the availability of cheaper power from Canada, the plant was no longer considered economically viable. In May 1997 Maine Yankee announced that it would either sell or close the plant if there were no buyers. Even though there was a serious assessment performed by Philadelphia Electric Company to purchase the Maine Yankee plant, in July 1997 both parties could not come to an agreement and in August 1997 the Board of Directors voted to shut down the plant permanently and commence the immediate dismantlement of the nuclear facility. The planning process for the site's decommissioning began shortly after the official closure and the decommissioning lasted nearly eight years.

When the Nuclear Waste Policy Act (NWPA) was enacted in 1982, Congress assumed that a national repository would be available by 1998 for the disposal of the spent fuel. The NWPA mandated the Department of Energy (DOE) to take title and possession of the nation's spent nuclear fuel in 1998. Since the high level waste repository at Yucca Mountain in Nevada had experienced significant licensing and construction delays, DOE was unable to take title and possession of the nation's spent fuel and consequently breached its legal contracts with all the nation's nuclear power utilities.

Early during the Maine Yankee decommissioning it became evident that at DOE's current pace the Yucca Mountain repository would not open at its plan projected start date of 2010. DOE's inaction prompted Maine Yankee to construct an Independent Spent Fuel Storage Installation (ISFSI) during decommissioning to store the 1434 spent fuel assemblies that were previously housed in the spent fuel pool in the plant, into 60 storage casks on-site. Another four casks contain some of the more radioactive components of the reactor internals that were cut up during decommissioning, since their radioactive concentrations were too high to dispose of at a low level radioactive waste facility. These are expected to be shipped along with the spent fuel to a deep geologic repository when one becomes available sometime in the future.

Consequently, Maine Yankee filed a lawsuit against the federal government to recoup its ISFSI costs. However, Court precedent dictated that damage awards can only cover costs that have been incurred. Maine Yankee was, therefore, relegated to periodic filings to recover their costs for the construction and operation of the ISFSI. The initial lawsuit covered the period from 1998 through 2002 and after 14 years of litigation, the Courts' awarded Maine Yankee $81.7 million. The second lawsuit covered the years through 2008. Again the Court decided in Maine Yankee's favor and awarded it $35.7 million. Maine Yankee filed a third lawsuit for the years through 2012 and was in the discovery process at the end of 2014. Maine Yankee has stated that it will continue its periodic filings until such time the spent nuclear fuel is removed from the Wiscasset site.

Although President Bush recommended to Congress and Congress approved the Yucca facility as the nation's federal repository for spent nuclear fuel in 2002, the DOE did not submit a license application until June 2008, which was accepted for review by the NRC in September 2008. Since then, the Obama Administration and Energy Secretary Chu had advocated for the termination of the Yucca Mountain site as they no longer considered it a viable option. Thus, in March 2010, without any technical or safety merits, the DOE submitted a motion to the NRC's Atomic Safety and Licensing Board to withdraw its Yucca Mountain license application. Energy Secretary Chu then assembled a Blue Ribbon Commission of experts to review alternative strategies for managing the nation's nuclear waste. The Commission issued a report in January 2012 that provided a blueprint on how the nation should manage its spent nuclear fuel. The Report contained eight essential key elements and proposed six legislative changes to affect its recommendations. Of the eight recommendations two would be critical in moving the used nuclear fuel from the Wiscasset facility. The first is the construction of one or more consolidated interim storage facilities. The second is the provision that decommissioned sites would receive first priority in the movement of their stranded spent fuel.

In January 2013, the Department of Energy issued its strategy for the management and disposal of spent nuclear fuel and high-level radioactive waste. Their document incorporated some of the Blue Ribbon Commission's key principles such as a consent-based process and a storage and disposal framework that would include a pilot interim storage facility, a larger full-scale storage facility, and a geologic disposal repository with priority given to shut-down reactor sites. However, congressional legislation would be required to enact portions of the Administration's integrated strategy. This has proven difficult as Congress is at an impasse with the House fixated on the Nuclear Waste Policy Act and the Yucca Mountain Project while the Senate is more focused on moving beyond Yucca Mountain and enacting new legislation that would embody some of the Blue Ribbon Commission's key recommendations. Even with this stalemate there are some willing communities seeking to host spent nuclear fuel facilities, such as Carlsbad, New Mexico and the State of Texas. Despite State opposition Nye County in Nevada has reaffirmed their commitment to host the Yucca Mountain repository.

It became apparent that the Courts would have to weigh in and decide on the merits of lawsuits brought against the federal government. In August 2013, the U.S. Court of Appeals for the District of Columbia Circuit issued its long awaited decision and ruled in favor of the writ of mandamus ordering the Nuclear Regulatory Commission to resume the terminated Yucca Mountain Licensing Process. In November the Appeals Court followed suit and issued an Order for the Energy Department to cease collecting the Nuclear Waste Fund fee until such time Yucca Mountain is revived or Congress authorizes an alternative waste management plan.

1.2 Law

With the spent fuel at Maine Yankee likely to be stored in Wiscasset for decades to come, in March 2008, in the second regular session of the 123rd Legislature, the Legislature enacted and the Governor signed into law the establishment of the State Nuclear Safety Inspector Office within the Department of Health and Human Services to provide independent oversight of the Maine Yankee ISFSI. The law also mandated that an Oversight Group, comprised of various state agencies, Maine Yankee and an independent expert in radiological and nuclear engineering, meet on a quarterly basis to discuss the protection of public health and safety at the ISFSI site and be involved in national activities that would hasten the timely removal of the spent nuclear fuel from the site. The law went into effect June 29, 2008. After much discussion, the Oversight Group chose not to hire an independent expert since the Group collectively possessed the necessary expertise.

2.0 State Nuclear Safety Inspector Activities

The following sections contain the State Nuclear Safety Inspector's activities for the 2014 calendar year under certain broad categories covering the ISFSI, environmental surveillance around the Maine Yankee site, remnant of the State's decommissioning efforts, regional and national activities, and noteworthy items on the national repository situation.

2.1 Independent Spent Fuel Storage Installation (ISFSI)

2.1.1 Annual Inspection

The NRC has recently adopted a biennial inspection frequency when it comes to stand alone ISFSIs. On April 16, two NRC Inspectors from Region I inspected Maine Yankee's storage facility in Wiscasset. One inspector concentrated on the security program at the facility while the other focused on the remaining programs such as radiation protection, emergency preparedness, maintenance, fire protection, training, environmental monitoring, quality assurance, surveillances and corrective action programs. Because of his familiarity with the remaining programs, the State Inspector spent the majority of the inspection time with the NRC security inspector observing interviews and activities. There were no security findings. As for the remaining programs, the self-identified issues with the Emergency Implementing Procedures not being submitted to the NRC in a timely fashion since 2008 and the omission of the 2013 independent assessment of the Emergency Preparedness Program were discussed with the NRC inspector, who verified that none of the procedure changes were significant or decreased the effectiveness of the emergency preparedness program and that appropriate corrective actions were taken to address the issues. Both failures represented violations of such minor significance that they did not require any formal enforcement action. The NRC Inspector's conclusion after reviewing all the programs was there were no findings of significance. In May, the NRC issued its reports summarizing its inspection activities.

2.1.2 Annual Drills and Exercises

On an annual basis Maine Yankee is required to perform an emergency plan drill, a radiological drill, a medical drill and a fire drill.

On May 14, Maine Yankee held its annual fire and medical drill. The scenario involved a fire in the Storage/Maintenance Building with a security force worker unconscious due to smoke inhalation. The Wiscasset and Westport Island Fire Departments responded along with the Wiscasset Ambulance and the Wiscasset Police Department. Fire hoses were run from the west hydrant and fire attack teams were deployed in full gear.

In preparation for its annual emergency exercise, Maine Yankee conducted its annual emergency plan training to state officials at the Maine Emergency Management Agency on October 1. The overview consisted of the site's status and spent fuel considerations, emergency classifications, activation of the Maine Yankee emergency response organization, functions performed at the ISFSI control center, and the offsite interface with appropriate local, state and federal organizations.

On October 15, Maine Yankee held its annual Emergency Plan exercise. The exercise scenario involved three armed intruders with rifles that shot at a cask with only minor damage to the concrete. Several law enforcement agencies were contacted and responded. They included the State Police's tactical team, the Lincoln County Sheriff's Office, and the Wiscasset Police Department. Additional participants included the State Nuclear Safety Inspector and the Lincoln County Emergency Management Agency with their Command and Control Trailer. After firing on the cask the intruders barricaded themselves in the new Maintenance Building. The State

Police attempted to negotiate with the intruders. When the intruders resisted, they were neutralized. The debriefing afterwards noted some communication issues, principally, how best to integrate the various communication resources between onsite security, the State Police and the Lincoln County Emergency Management Agency for optimum interaction.

2.1.3 Daily ISFSI Operations Pass-Ons

The on-shift Security Supervisor forwards the ISFSI Pass-On, essentially three times daily, to the State Inspector. The Pass-On provides an overview per shift of the ISFSI status, the cask monitoring status, procedures/surveillances/work in progress, equipment out of service, alarm issues, and team information. It is from these daily reports that the information is collected for condition reports, fire or security related impairments, security event logs and spurious alarms and discussed with the ISFSI Manager prior to its disclosure in the State Inspector's monthly reports to the Legislature.

2.1.4 Maine Yankee Reports to the Nuclear Regulatory Commission (NRC)

In March Maine Yankee forwarded a letter to the NRC submitting its Funding Status Report for Managing Irradiated Fuel and GTCC Waste at its Wiscasset facility/site. At the end of 2013, the amount of funds available in the Nuclear Decommissioning Trust to manage the storage facility totaled $116.9 million. The Report also projected that $185.3 million would be needed from 2014 through 2033 to secure and manage the storage site. In addition, the Report also elaborated on what measures Maine Yankee has available to obtain additional funds to cover projected costs. These included their power contracts with the different owners of Maine Yankee, the proceeds from the successful litigation against the federal government for its failure to remove the spent nuclear fuel, and an assumed rate of return on the Trust Fund of 4.5% after fees and taxes.

Also in March, Maine Yankee also submitted to the NRC its Decommissioning Funding Assurance Status Report as of December 31, 2013. Besides the $25.6 million accumulated to decommission the ISFSI after the spent nuclear fuel is removed, the decommissioning funding required for the ISFSI was estimated at $22.7 million. To date no decommissioning funds have been expended. Although Maine Yankee currently has sufficient funds to cover the estimated decommissioning costs, Maine Yankee has the means, as noted above to cover any additional funds should the need arise.

Finally, in March Maine Yankee submitted its annual individual monitoring report. The report contained the individual dose of each person monitored at the facility for 2013 with the dose broken down by skin, lens of the eye, organ (if appropriate), extremities, and whole body as well as the total dose for the body and organ (if appropriate). None of the security force or contract workers had radiation doses in excess of the NRC's allowable annual limit of 5,000 mrems. In reality, all the individuals received less than 100 mrems for the year.

In April, Maine Yankee submitted its annual reports for radioactive effluent releases and radiological environmental monitoring along with its 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. However, there were two small radioactive sources that were shipped off-site for disposal at a low-level radioactive waste facility. One was a glass vial of Krypton-85 and the other was a Cesium-137 disk source. The total radioactivity shipped was 18 micro-curies. 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)[1]. The environmental monitoring report explains the TLD findings. There are 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 of the ISFSI, the higher values are assumed to be due to its line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 1.15 mrem[2] for the first three quarters at its highest TLD location. Since the fourth quarter TLD was damaged by water and ice, the dose for the fourth quarter was inferred by calculating the four year average of the fourth quarter doses at this location, which turned out to be 0.16 mrem. Consequently, the estimated annual dose was 1.31 mrem from the storing of the casks at the Wiscasset facility. The key changes to the ODCM were the addition of the storage and maintenance building to one of the figures in the manual and the title change from 'Site Boundary' to "Licensed Area Boundary" to one of the Appendices.

In September Maine Yankee submitted its annual Special Nuclear Material (SNM) Report to the Department of Energy and the NRC. The report represents the material accountability for fissionable material, such as Uranium-233, Uranium-235, Plutonium-238, and Plutonium-239 on U.S. Government owned or non-U.S. owned nuclear fuel between beginning and ending inventories, radioactive decay differences, if any, and receipts of or removals of SNM. The report also includes source material such as natural Uranium and Thorium, and whether the Uranium is normal, depleted, or enriched.

2.1.5 Security Plan

There were no changes to the security plan that were submitted to the NRC.

2.1.6 Interface with Other State Agencies

2.1.6.1 Interim Spent Fuel Storage Facility Oversight Group

As part of the legislation's mandate, on a quarterly basis, the State Inspector and the Manager of the Radiation Control Program, met with State Police, the Public Advocate, the Department of Environmental Protection (DEP) and Maine Yankee to discuss oversight activities at the ISFSI. The quarterly meeting dates were January 29, April 23, July 22 and October 14. At the meetings Maine Yankee provided a status of their activities followed by the State Inspector's update of his past, current and planned near term activities. Discussions also centered on the Group's annual and financial reports to the Legislature, national and congressional efforts on spent fuel waste management, especially centralized interim storage at some away facility outside of New England as opposed to on-site storage, the Federal Energy Regulatory Commission rate case settlement cases pending before the federal Appeals Court, the screening criteria and disposal of over 1,000 decommissioning samples and environmental surveillance at the facility with disparities with some of the data. Other topics included the State Police's tactical team periodic participation in Maine Yankee's annual emergency exercises,

[1] Thermoluminescent Dosimeters (TLD) are very small plastic-like phosphors or crystals that are placed in a small plastic cage and mounted on trees, telephone poles, etc. to absorb any radiation that impinges on the material. Special readers are then used to heat the plastic to release the energy that was stored when the radiation was absorbed by the plastic. The energy released is in the form of invisible light that is counted by the TLD reader. The intensity of the light emitted from the crystals is directly proportional to the amount of radiation that the TLD phosphor was exposed to.

[2] A mrem is a conventional unit of dose that describes how much radiation energy was absorbed by a person's body with modifiers applied for the different types of particles or rays.

Maine Yankee's construction of a maintenance building on-site, the participation of local residents in a national forum held in Boston on the barriers of moving spent fuel, the distribution of $81.7 million from the U.S. Treasury to the ratepayers and Efficiency Maine, Maine Yankee's periodic chemical sampling of 21 wells on-site for the extent of contaminants as part of DEP's Resource Conservation and Recovery Act mandates, Maine Yankee's efforts to upgrade its security capabilities over the next couple of years, the status of its litigation in the federal courts, and that of Texas becoming the lead state in establishing an interim storage facility with New Mexico on hold pending the recovery from the underground radioactive leak at its Waste Isolation Pilot Project.

2.1.6.2 Department of Environmental Protection

In January, Maine Yankee submitted its fall 2013 chemical data for its groundwater monitoring sampling. Maine Yankee has a thirty agreement with DEP to periodically monitor the groundwater at the former industrial site for chemical contamination.

Also in January, Maine Yankee notified the DEP that they had performed their annual inspection of the site as per their Environmental Covenant. Maine Yankee informed DEP that it had constructed a storage and maintenance building in 2013. The Soil Management Plan of the Environmental Covenant was cited seven times in 2013. Three of the seven times involved the construction of the new building with a septic tank and water line. Two of the occasions were for the foundations and trenches for electric cables for the new vehicle barrier gate. The remaining two events were for repairs to a sewer line break and a foundation removal by Central Maine Power in their 345kV Switch Yard.

In June, Maine Yankee electronically submitted their chemical data for the ground water sampling performed in April to DEP. The data was supplied as part of an agreement with DEP to perform periodic sampling of ground water wells on-site to demonstrate compliance with DEP's hazardous waste regulations.

In December, Maine Yankee submitted its ground water sampling results for the chemical contaminant monitoring performed at its decommissioned industrial site in Wiscasset. The results were electronically transmitted to DEP's environmental database. The next round of chemical sampling will be performed in 2019.

2.1.6.3 State Radiation Control Program

In May, Maine Yankee met with State Radiation Control Program Officials to discuss security-related issues and the State's need to know. Both parties agreed that the State Nuclear Safety Inspector, as the State Liaison Officer's official designee, has the authority for access to security sensitive and safeguards information in the normal process of performing his official duties. The State Liaison Officer serves as the principal communications liaison between the NRC and the State.

In October, Maine Yankee submitted its response to the Radiation Control Program's 2013 Low Level Radioactive Waste Survey. Maine Yankee informed the State that it had made one low level waste shipment. The shipment contained 18 micro-curies and weighed less than half a pound. Maine Yankee disposed of two radioactive sources. One was a Krypton-85 source that was used during the plant's operating days for calibrating the primary vent stack monitor. The second one was a Cesium-137 source that was used for calibrating radiation survey meters.

2.1.7 ISFSI Topics

2.1.7.1 ISFSI Status

The status of the ISFSI was normal for the whole year.

2.1.7.2 Security Related Events/Impairments/Incident Reports

Although there were no spurious alarms due to environmental conditions, there was one security-related impairment for the year. It occurred in March and concerned seven security events being logged all on the same day. All seven events involved transient environmental conditions.

There were 44 security events logged (SEL) which was lower than the previous year's 70, 145 in 2013 and 142 in 2012. Of the 44 events logged 34 were related to transient environmental conditions. Of the 10 remaining, one was due to two security system issues, two were related to a fire door not properly latching, one was due to a security-related system that was corrected by enhancing the vendor's procedure, one included a security-related computer, three involved a loss of internet connection with a vendor, and one a was due to an equipment malfunction.

In October, Maine Yankee renamed its SEL tracking system to security incident reports (SIR). Except for the name change, there were no fundamental changes or differences in thresholds between the two tracking systems. From October through December 16 SIRs were logged in. Of the 16, six were related to transient environmental conditions. Of the remaining ten, one documented the compensatory measures that were put in place for preplanned maintenance, another involved a computer system locking up and not allowing the operator to log in, one concerned a vendor not contacting the site when system operation was restored, three were due to offsite internet connectivity issues, another was due to a detection system equipment issue, one was due to hunters trespassing as noted below, one was due to compensatory measures required to swap out a computer system, and the last documented the issue regarding a locked thumb drive, which occurred when the computer system was being swapped out.

The year (2014) continued to be a low year as compared to earlier years for the number of instances that prompted follow-up action with the Local Law Enforcement Agencies (LLEA). There were four instances in 2014 as compared to three in 2013 to 15 in 2012, six in 2011 versus 15 in 2010 and only two in 2009. The four suspicious instances of vehicles and/or persons occurred in January, August, November, and December. On the first instance the security staff observed worm diggers trespassing on Maine Yankee property to gain access to the mud flats in Bailey Cove. The LLEA and Marine Patrol (MP) were notified and responded. The worm diggers were counseled by the LLEA and MP and left the mud flats. According to the LLEA and MP the diggers were accessing the mud flats from the higher ground on Maine Yankee as opposed to walking the ice covered shoreline. The NRC operations Center was notified of the incident.

The second involved a trespass event. A vehicle pulled onto the access road and took pictures of the facility. The LLEA were contacted and provided with the license plate number. Since this was not considered a suspicious activity, the NRC and the State were not notified. The third incident involved hunters trespassing onto Maine Yankee property. The LLEA were notified and responded. The individuals were apprehended as they exited the property and counseled.

In the final instance a vehicle drove into the Gatehouse, an individual exited the car and took pictures of the facility. The vehicle then left the property. The LLEA were contacted but were unable to apprehend the individual. Courtesy notifications were made to the NRC, State of Maine's Nuclear Safety Inspector, and Maine Yankee upper management.

2.1.7.3 Fire Related Events/Impairments

There were eight fire-related impairments reported in 2014 as compared to ten in 2013, six in 2012, and eleven in 2011. Two occurred in January. The first was due to paper records being removed from the storage vault in preparation for removing the vault. The paper records were temporarily stored in the truck bay until they were moved to the new storage building the following month. Periodic fire rounds were instituted until the papers were removed. The second happened during the demolition of the records vault and cracked some fire rated sheetrock.

The third impairment occurred in February and involved a fire door that was not properly latching on an intermittent basis. Compensatory measures were put into place until the door was repaired a few days later. The fourth was in April and also involved a fire door that would not latch properly. Periodic fire rounds were implemented until the door was adjusted.

The next four impairments were in November. The first involved a construction project to create a new armory in which a fire wall was breached. Fire patrols were used as a compensatory measure until the project was completed. The second involved the installation of a conduit to support a new outlet in which a fire barrier was penetrated. Fire patrols were used and the impairment was cleared the same day. The third was associated with a conduit that was improperly sealed. Compensatory measures were put in place and the impairment was cleared the same day. The fourth involved other conduits that were found to be unsealed as part of an extent of condition inspection performed after the previous finding. Compensatory measures were put into place and the impairment was cleared the next day.

2.1.7.4 Condition Reports

There were 177 condition reports written in 2014 as compared to 163 in 2013, 184 in 2012, and 80 in 2011. A condition report (CR) is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. The report is generally initiated by a worker at the ISFSI facility. The report prompts management to activate a process to identify causal factors and document corrective and preventative measures stemming from the initial report. The majority of the CR's are administrative in nature. Examples of some CR's written ranged from a conduit fitting found loose to a fuse failure on a back-up power supply to a lost key card found outside the Security and Operations Building to an incorrect procedure reference in an emergency plan procedure to a hydraulic leak from a John Deere tractor to a snow blower pulley failure to a computer monitor failing to display after being rebooted to records not being scanned properly for electronic storage to an entrance sign being damaged by a truck to a sink hole found near the Back River to hunters trespassing onto Maine Yankee property to an emergency light having a dead battery.

A complete list of CR's can be found in Appendix A. It should be noted that in May, 2012 Maine Yankee consolidated several programs into the Condition Report System as

an all-purpose tracking and documentation system. This explains the sudden increase in CR's and the prevalence of multiple CR's for an issue.

2.1.7.5 Other ISFSI Related Activities

In January, Maine Yankee notified the NRC of the formation of a new intermediate holding company in the ownership chain of Central Maine Power (CMP) Company. The new holding company is Iberdrola USA Networks, Inc., a new Maine Corporation. The new ownership chain for CMP is CMP Group, Inc. Iberdrola USA Networks, Inc., Iberdrola USA Inc., to Iberdrola, S.A. of Spain. The change does not affect CMP's ownership interests in Maine Yankee. The change does not result in changes to Maine Yankee's Board of Directors or involve any transfer of control, whether directly or indirectly, of Maine Yankee's license.

In January, Maine Yankee notified the NRC of a change in the Maine Yankee Board of Directors. The resignation of one Board member from Northeast Utilities resulted in the appointment of a successor. The appointment did not impact foreign ownership, control, or influence considerations as Northeast Utilities is a domestic company.

Also in January, Maine Yankee notified the NRC of the completed merger and consolidation of Maine Public Service (MPS) and Bangor Hydro Electric Company (BHEC) on December 31, 2013. Both MPS and BHEC are subsidiaries of Bangor Hydro Electric Holdings, Inc., a wholly owned subsidiary of the Canadian firm Emera. With the merger MPS no longer exists and the successor, BHEC, has been renamed Emera Maine. Emera Maine now has a 12% interest in Maine Yankee which allows Emera Maine to appoint one member and alternate to Maine Yankee's Board of Directors. According to Maine Yankee's Negation Action Plan certifications of foreign sponsor representatives were provided to the NRC.

In February, Maine Yankee sent a letter to NRC formally announcing a change in their ISFSI Manager effective February 15 from the former Site Vice President and ISFSI Manager, Mr. James Connell, who retired from his position. The new ISFSI Manager, Mr. J. Stanley Brown, officially assumed his new duties the same day. However, since the Site Vice President also served as the Facility Security Officer, Maine Yankee notified the NRC of the appointment of the Operations Specialist, Mr. Larry Jewett, as the new Facility Security Officer. The Site Vice President position will not be currently filled.

Also In February, Maine Yankee performed their annual notification to the NRC of the status of their foreign ownership, control, or influence (FOCI). The letter listed the six FOCI changes that impacted their foreign interests' status. The first involved a change in the Board of Directors due to a resignation. The second encompassed the proposed merger of two minority shareholders, Maine Public Service (MPS) and Bangor Hydro (BH). The third notified the NRC of the establishment of an intermediate holding company in the ownership chain of Central Maine Power. The fourth involved another change in the Board of Directors due to another resignation. The fifth informed the NRC of the completion of the merger between the two minority shareholders, MPS and BH. The last dealt with the resignation of the Site Vice President and Facility Security Officer.

In April, Maine Yankee submitted to the NRC its biennial report on any changes, tests, or experiments at the ISFSI. According to Maine Yankee, no changes were made to the

storage facility, the spent fuel cask design, or procedures that required an evaluation in accordance with NRC regulations.

In April, Maine Yankee submitted to the NRC its fourth revision to its Emergency Plan. The changes were mostly editorial and involved changing "Owner Controlled Area" to "Controlled Area" to be consistent with the ISFSI regulations, clarified the location of the radiation controls checkpoint within the Security and Operations Building (SOB), changed training wording from "during the calendar year" to "annually", removed a reference to a records vault from the SOB, and added a new appendix listing the implementing procedures to the Emergency Plan.

In April, Maine Yankee also submitted its revisions to its Emergency Plan implementing procedures to the NRC within the 30 day timeframe as required by NRC regulations. Current revisions to three procedures were presented. Maine Yankee also identified and reported to the NRC that, since 2008, they had not submitted to the NRC previous revisions to their emergency plan procedures within the 30 day requirement. Consequently, Maine Yankee also included the other three remaining implementing procedures. To ensure the Commission was aware of what changes transpired over the years, Maine Yankee provided a detailed table outlining all the changes for each procedure from their initial inception up to an including their current revisions. Most of the changes were editorial and of minor significance along with some format changes.

In July, Maine Yankee informed the NRC of changes in their Board positions. Two members resigned their positions and two new members were appointed. One of the new members was appointed from a foreign sponsor company. Based on Maine Yankee's Negation Action Plan, the new member had to certify that they would not seek or obtain access to classified information or special nuclear material, and would not circumvent Maine Yankee's protective measures on foreign ownership, control, domination or influence over operational, safety, or security matters.

In September, the NRC notified Maine Yankee that it was relaxing all of its conditions imposed in its June 24, 2012 Confirmatory Order on the requirements of foreign ownership, control, or domination (FOCD) set in motion by the merger of Northeast Utilities, a part owner of Maine Yankee, and NSTAR. The NRC staff initially assessed its lowest level violation on the FOCD issue and subsequently issued a Confirmatory Order to maintain Maine Yankee's self-imposed Negation Action Plan. Later, the NRC staff granted Maine Yankee its exemption request from the FOCD requirements, which prompted Maine Yankee to request the NRC to rescind its Confirmatory Order.

In November, Maine Yankee submitted to the NRC its revision of its Quality Assurance Program. The changes were mostly editorial or format improvements, except for some expansion of the ISFSI Manager's responsibilities.

2.2 Environmental

2.2.1 Radiological Environmental Monitoring Program (REMP) Description and Historical Perspective

Since 1970, the State has maintained an independent, radiological environmental monitoring program of the environs around Maine Yankee. Over the years, there was an extensive quarterly sampling and analysis program that included such media as salt and fresh water, milk, crabs, lobsters, fish, fruits, vegetables, and air. Since the decommissioning, the State's program has

been reduced twice to accommodate decreased revenues for sample analyses at the State's Health and Environmental Testing Laboratory.

In late December 2009, after 39 years, the State ceased its air sampling station at the Maine Yankee site. In reviewing the historical air data and taking into account the leak tightness of the spent fuel casks, it was determined that there was no technical basis to continue the air monitoring location at the old Bailey Farm House. Although the air sampling station at Maine Yankee was discontinued, the State still maintained an active air sampling station on the roof of the Health and Environmental Testing Laboratory that acted as a control for comparative purposes during Maine Yankee's operating and decommissioning years. The State's air sampler at HETL is also available for radioactive fallout situations from national or global events. That proved to be instrumental in the quantifying of the impact from the Fukushima reactor accidents in March and April, 2011.

In June 2010, the State performed another review of its Radiological Environmental Monitoring Program at the Maine Yankee site. The review determined that the quarterly surveillance sampling of freshwater at Ward's Brook in Wiscasset, and the seawater and seaweed at the Ferry Landing on Westport Island would be discontinued permanently after 40 years. Both sampling stations were originally set up to monitor gaseous and liquid releases from the Maine Yankee nuclear power plant. Since the ISFSI does not release gaseous or liquid radioactivity and adequate time had elapsed since the power plant was decommissioned in 2005 for statistical comparisons, there was no further technical justification for the continued sampling of the media at these stations.

Besides the media sampling, over the years the State has maintained a robust TLD program to measure the radiation environment. The TLDs were initially placed within a 10 to 20 mile radius of the plant to measure the background radiation levels. Later, when the plant was operating, the initial results would be used as a baseline to compare with the TLD values during the plant's operating years. Over time the number of TLDs more than doubled to over 90 TLDs to address public concerns over the clam flats in Bailey Cove after the steam generator sleeving outage in 1995-1996 and later, the construction of the ISFSI.

Although most of the REMP changes took place in prior years, in 2010 the State also implemented further reductions in the TLDs not only in the vicinity of the former nuclear power plant, but also in Bailey Cove. Of the nine remaining TLDs beyond the site's boundary six were permanently discontinued after the second quarter's field replacement. The remaining three TLDs consisted of three controls, (one locally at the Edgecomb Fire Station, one near the site at the Ferry Landing on Westport Island, and one further away on the roof of the State's Health and Environmental Testing Laboratory). At the time, this left 27 TLDs for the ISFSI and Bailey Cove. However in late December 2010, a final assessment was performed to consolidate the number of TLDS monitoring the ambient radiation levels near the ISFSI. Eight of the fourteen TLDs locations from Bailey Cove were removed from the monitoring program. Of the remaining six Bailey Cove TLDs, four were reassigned as ISFSI TLDs to ensure coverage for the sixteen points of the compass. The four new stations were identified as N, O, P, and Q. The last two Bailey Cove stations were co-located with the State's solar powered environmental radiation monitors on the Maine Yankee site. The TLD changes went into effect in the first quarter field replacement in January 2011.

2.2.2 Thermoluminescent Dosimeters (TLDs)

As outlined in the historical context and as part of its independent oversight, the State has a TLD program to measure the quarterly ambient radiation levels over the years at Maine Yankee, both

in the proximity of the ISFSI and at various locations within a five mile radius. At the beginning of the year the State's TLD program was focused on two areas - the ISFSI and its controls. The exceptions are the two co-located TLDs with the solar powered units. A future assessment on maintaining the solar powered units will be considered.

2.2.2.1 ISFSI TLDs

In October 2000, in preparation for the spent nuclear fuel to be moved from the fuel pool and stored in concrete casks at the ISFSI, the State Inspector, as part of his independent oversight, established 13 TLD locations to monitor the local radiation levels from the ISFSI. Since the spent fuel was projected to be moved in the fall of 2001, it was necessary to perform monthly TLD field replacements as opposed to quarterly in order to gather enough field data to establish a pre-operational baseline. The monthly regimen was converted to a quarterly frequency in the fall of 2004 after all of the spent nuclear fuel was transferred from the pool to the ISFSI in February 2004.

Initially, some of the state TLD locations were co-located with some of Maine Yankee's TLDs for future comparative purposes. However, Maine Yankee reconfigured its TLD locations in 2008 and only 2 remain co-located. To acquire statistical weighting for each location two TLDs were placed at each location. Each TLD has three plastic-like phosphors that capture the radiation.

As noted in the historical perspective earlier, the current seventeen locations are identified by the letters A through Q in Figure 1, (courtesy of Maine Yankee), on page 13 with Table 1 on page 14 listing the State's ISFSI results for the year. The average represents the mean of the six element phosphors and the range depicts the low and high values for the six crystals.

The ISFSI TLDs continued to demonstrate three separate groupings when it came to dose: elevated, slightly elevated and normal. Except for the first and fourth quarters, Stations G and K continued to be high due to their proximity to the ISFSI. However, Station F was in the elevated group in the first and fourth quarters. Station F is located north of the ISFSI's bermed area adjacent to the old East Access Road. In addition, stations L and Q also ended in the elevated grouping for the fourth quarter. However, as will be explained later, these may have been artificially inflated.

The results in Table 1 also clearly demonstrate the slightly elevated grouping of such Stations as E, F, and L showing signs of influence from the ISFSI as seen in Figure 1 by their short distances from the ISFSI. In addition, the data continues to validate the seasonal variation. Generally, during the fall and winter months the values normally decrease when the ground is frozen and covered with snow as it impedes the out gassing of the Radon gas from the soils. The deeper the snow cover is the more pronounced the decrease in the natural radiation levels.

Figure 1

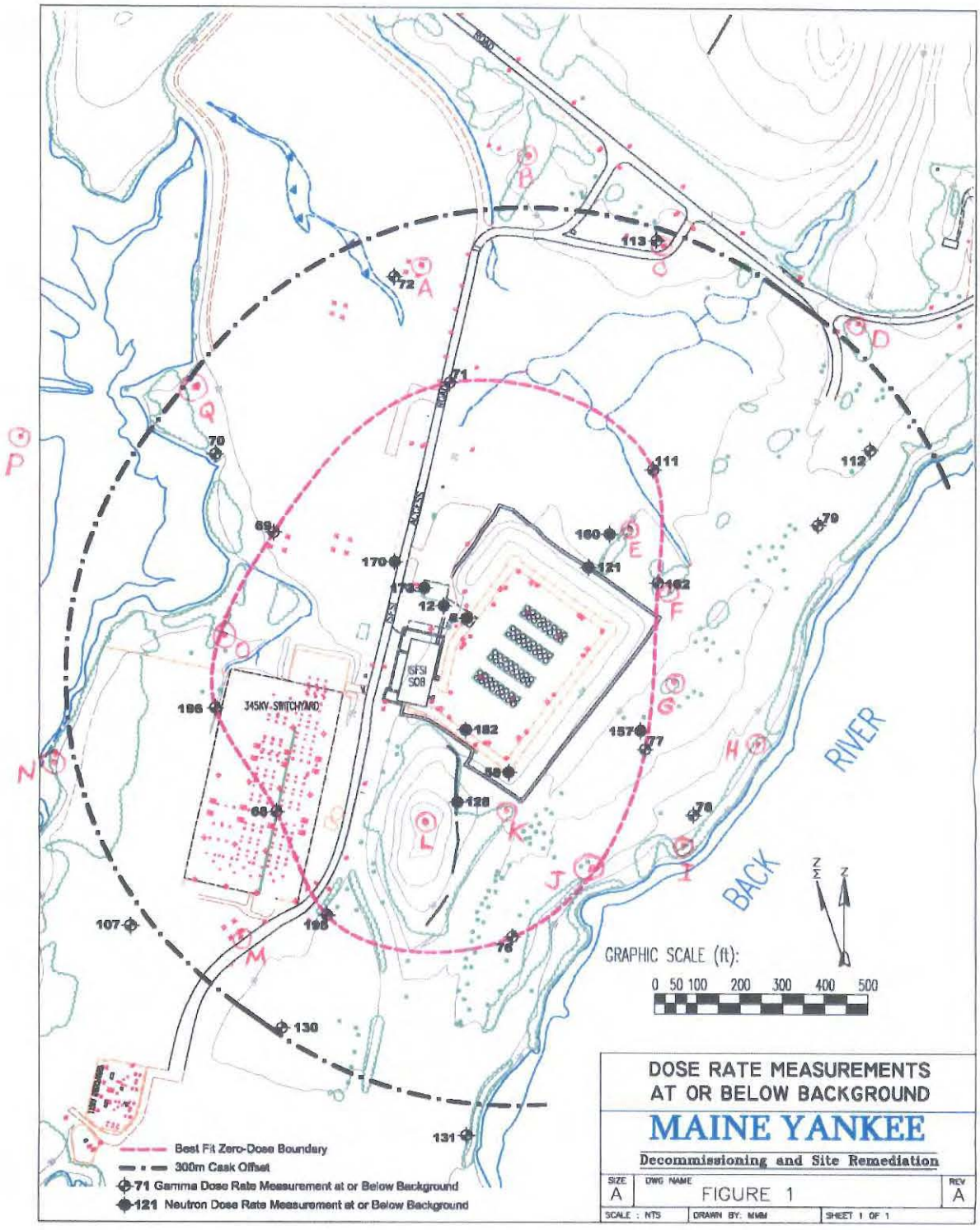
345KV SWITCHYARD
ISFSI SOB
RIVER
BACK
GRAPHIC SCALE (ft):
0 50 100 200 300 400 500
Best Fit Zero-Dose Boundary
300m Cask Offset
71 Gamma Dose Rate Measurement at or Below Background
121 Neutron Dose Rate Measurement at or Below Background
DOSE RATE MEASUREMENTS
AT OR BELOW BACKGROUND
MAINE YANKEE
Decommissioning and Site Remediation
SIZE A
DWG NAME FIGURE 1
REV A
SCALE : NTS
DRAWN BY: MMM
SHEET 1 OF 1

Table 1 – ISFSI TLD Results

TLD Stations	Quarterly Exposure Period 1st Quarter (Winter) Average (Range) (mrem)	2nd Quarter (Spring) Average (Range) (mrem)	3rd Quarter (Summer) Average (Range) (mrem)	4th Quarter (Fall) Average (Range) (mrem)
A	19.5 (18-21)	20.8 (20-22)	23.3 (22-26)	23.7 (23-25)
B	18.5 (17-20)	19.5 (18-21)	21.5 (20-24)	24.2 (21-31)**
C	19.3 (19-20)	19.5 (19-20)	22.2 (21-25)	23.2 (21-25)
D	19.5 (19-20)	20.2 (19-22)	22.5 (21-26)	23.0 (21-24)
E	20.3 (19-22)	21.7 (21-22)	24.0 (23-27)	24.2 (23-25)
F	22.3 (21-24)	22.5 (22-23)	24.8 (23-26)	28.3 (25-32)
G	24.5 (23-26)	24.3 (23-25)	28.5 (26-33)**	27.8 (27-28)
H	19.2 (18-21)	19.2 (18-20)	23.2 (21-24)	21.8 (21-23)
I	19.5 (18-21)	19.2 (19-20)	22.3 (20-24)	23.3 (22-25)
J	20.8 (19-22)	21.8 (21-23)	24.3 (22-27)	26.2 (24-29)
K	22.8 (22-24)	24.3 (24-25)	27.0 (25-29)	28.3 (26-35)**
L	21.5 (20-22)	22.5 (21-23)	24.8 (23-27)	26.0 (25-28)
M	19.5 (19-20)	20.8 (20-22)	25.2 (23-26)	26.0 (24-28)
N	18.5 (18-19)	18.8 (18-20)	22.8 (22-24)	21.5 (20-23)
O	20.8 (19-22)	21.2 (20-22)	26.0 (25-27)	24.2 (23-27)
P	18.8 (18-20)	20.0 (18-28)**	23.2 (22-24)	20.7 (20-22)
Q	20.7 (20-21)	22.5 (20-24)	27.2 (26-28)	26.7 (25-29)

** Some of the elements had results that appeared to be outliers. The vendor did not reject any data. Save for one, the State concurred that three out of the four potential outliers could not be rejected at the 99% confidence level. Even though one of the elements could have been rejected it was not. Therefore, the State accepted the vendor's results.

It should also be mentioned that the values listed in Table 1 are the total readings from the vendor. The vendor nor the State employ any corrections for exposures to the TLDs shipped from California to here and their return shipment, or storage at the State offices prior to their use in the field. Since the values over inflate the true ISFSI dose, the State embarked on a program to better quantify the transit and storage exposures that are not part of the true field exposure and correspondingly the ISFSI's impact. A minimum of three years was necessary to gather enough quarterly data to develop the statistical power for assigning correction factors. Once these variables are quantified, then the State could employ the correction factors to its results.

The preliminary findings to date indicate that the 10 day transit exposures may range from 5 to 7 mrem, which is significant when compared to the total values reported in the TLD Tables. The transit or shipping exposures alone represent upwards of 20 to 40 percent of the dose reported.

Table 2 below illustrates the transit control results for the past three years.

Table 2 – TLD Transit Controls

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2012	7.1	5.7	6.4	14.5
2013	8.5	4.8	5.5	11.9
2014	7.6	7.0	6.9	5.9

Since starting on this program, the fourth quarter results were at least twice the average of the three previous quarters. There appeared to be an obvious affect occurring in the last quarter. When queried, the TLD vendor was unable to explain the sudden increases. They reviewed the individual data and examined the crystals and could not find a reason for the additional exposure. Possible explanations contemplated included a longer transit time or storage in an area with a higher than average radiation background.

This year, the fourth quarter results were not higher as was experienced the previous two years when adjustments were computed to demonstrate the resultant skewed seasonal variations. As compared to the previous two years the fourth quarter transit badges were not returned immediately to the TLD vendor for their evaluation, but inadvertently kept in the storage vault at the State's Health and Environmental Testing Laboratory along with the other controls. Even though there was no apparent explanation for the higher values, there was also no explanation why the fourth quarter results were back to normal. Consequently, no adjustments were necessary to illustrate the expected seasonal variations.

Although it appeared a trend was developing for the fourth quarter's transit badges, we need to continue the tracking to see if this year's fourth quarter results were not an aberration but rather a persistent trend of lower values or will past higher values resurface.

Figure 2 on Page 16 illustrates the difference between the elevated Station G and a normal Station B. The Station G data, which is impacted by the ISFSI, portrays a slightly downward trend over time as would be expected from material that is experiencing radioactive decay whereas Station B, which is not influenced by the ISFSI, depicts a more stable or flat response with time and more indicative of a background station.

2.2.2.2 Bailey Cove TLDs

The Bailey Cove surveillance is a remnant of the operating days when the public had raised questions over the radiation levels in the Cove and its impact on clam and worm diggers from the extended shutdown due to the steam generator sleeving project in 1995. The number of TLD locations was reduced in January, 2008 from the initial 40 that covered both sides of Bailey Cove down to 14 and eventually down to 2 at the beginning of 2011. The TLD results for Bailey Cove for 2011 are illustrated in Table 3 on the following page.

Figure 2

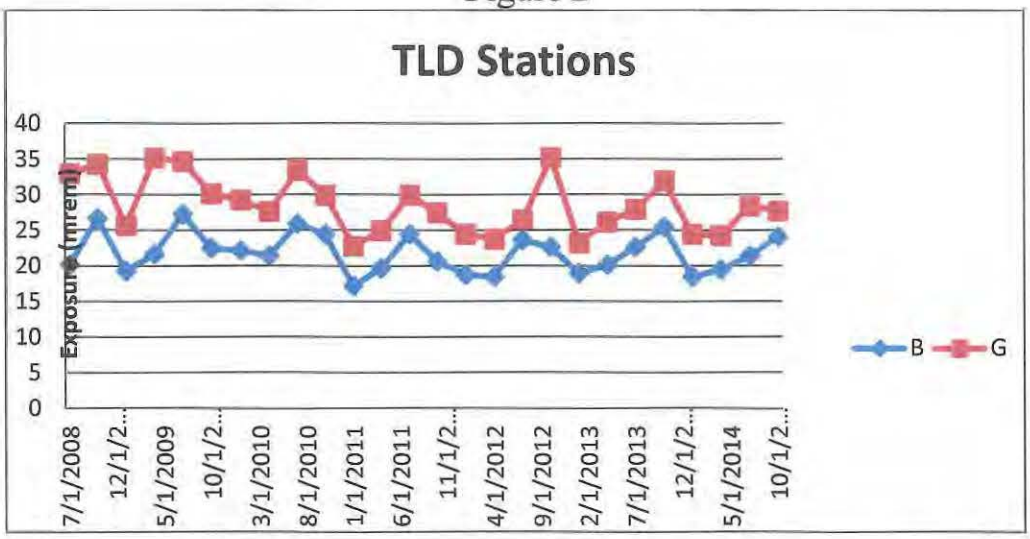

Table 3 – Bailey Cove TLD Results

TLD Stations	1st Quarter (Winter) Average (Range) (mrem)	2nd Quarter (Spring) Average (Range) (mrem)	3rd Quarter (Summer) Average (Range) (mrem)	4th Quarter (Fall) Average (Range) (mrem)
	Quarterly Exposure Period			
1	18.0 (17-19)	18.5 (18-19)	23.2 (22-24)	22.3 (21-23)
2	19.3 (18-21)	19.2 (18-20)	23.7 (23-25)	23.2 (22-25)

As with the ISFSI the Bailey Cove TLDs experienced the same seasonal fluctuations due to Radon excursions associated with weather conditions and seasonal effects such as frozen ground and snow cover. The Bailey Cove values are fairly comparable to the ISFSI results for the normal group. The background values remain typical for the coast of Maine, which can range from 13 to 25 mrem, with the lower values indicative of their proximity to the water's edge. This effect is very evident at high tide with the water acting as a shield covering the natural radioactivity from the rocks and mud flats that are under water.

2.2.2.3 Field Control TLDs

As mentioned in section 2.2.2 there are three field controls that the State utilizes for comparative purposes. All three are located off-site and beyond Maine Yankee's Controlled Area of about 290 meters (approximately 950 feet). The closest is Station 110, Ferry Landing on Westport Island, which is about 3 quarters of a mile from the ISFSI. The second control, Station 143, is located at the Edgecomb Fire Station, about three and a half miles away. The last control, Station 160, is the traditional one located on the roof of the State's Health and Environmental Testing Laboratory, more than 21 miles away.

As with the ISFSI and Bailey Cove TLDs the field controls experienced the same seasonal fluctuations due to Radon excursions associated with weather conditions and seasonal effects such as frozen ground and snow cover.

Table 4 – Field Control TLD Results

	Quarterly Exposure Period			
TLD Stations	1st Quarter (Winter) Average (Range) (mrem)	2nd Quarter (Spring) Average (Range) (mrem)	3rd Quarter (Summer) Average (Range) (mrem)	4th Quarter (Fall) Average (Range) (mrem)
110	21.0 (20-22)	21.3 (20-23)	26.2 (25-27)	24.8 (24-26)
143	21.2 (19-23)	21.3 (20-24)	26.3 (26-27)	25.5 (25-27)
160	18.8 (18-20)	17.7 (17-19)	22.3 (21-23)	21.0 (20-22)

2.2.3 REMP Air Filter Results

2.2.3.1 State's Health and Environmental Testing Laboratory Roof Sampler

Table 5 below shows the quarterly air sampling results for the year. The State's Health and Environmental Testing Laboratory analyzed the samples and employed various analytical methods to measure specific radioactive elements. All the positive results reported highlight naturally occurring background levels and ranges in units of femto-curies per cubic meter.

Beryllium-7 (Be-7)[3] is a naturally occurring "cosmogenic" radioactive element, which means it is continuously being produced by cosmic-ray interactions in the upper atmosphere. Be-7 is produced from the high-energy cosmic rays bombarding the oxygen, carbon and nitrogen molecules in the atmosphere. [4]

Table 5 – HETL Air Filter Results*

	Quarterly Sampling Period			
Positive Results	1st Quarter (fCi/m^3)[4]	2nd Quarter (fCi/m^3)	3rd Quarter (fCi/m^3)	4th Quarter (fCi/m^3)
Gross Beta** (range)	(31.3 – 52.1)	(18.4 – 31.6)	(14.0 – 26.6)	(17.1 – 31.0)
Quarterly Composite (Be-7)	77.7	71.9	73.3	47.4

* Control located on the roof of the State's Health & Environmental Testing Laboratory (HETL).

** Gross Beta is a simple screening technique that measures the total number of beta particles emanating from a potentially radioactive sample. High values would prompt further analyses to identify the radioactive species.

2.3 Maine Yankee Decommissioning

[3] Radioactive elements are usually represented by their chemical names and corresponding mass numbers, which represent the number of protons and neutrons in the nuclei of atoms.

[4] fCi/m^3 is an acronym for a femto-curie per cubic meter. It describes a concentration of how much radioactivity is present in a particular volume of air such as a cubic meter. A "femto" is a scientific prefix that is equivalent to one quadrillionth (1/1,000,000,000,000,000)

2.3.1 Background

Maine Yankee's decommissioning was completed in the fall of 2005. At that time, the State Inspector also commenced his final walk down survey of the site with a special emphasis on the transportation routes exiting the plant site, such as both half-mile east and west access routes and the two thirds of a mile of the railroad track. In addition, nine specific areas, including the dirt road, were also examined as part of the final site walk down survey. With the discovery of three localized, elevated contaminated areas on the road, further work was performed to bound the contamination. No new contamination was found and the State closed the issue in October, 2008. Even though some residual radioactivity remains, due to the localized nature of the contaminant and the restricted security access to the site, the contamination found did not present a public health hazard.

With the closure of the Dirt Road, the only remaining walk down survey left to be performed on-site was roughly a 600 foot section of the East Access Road adjacent to the ISFSI bermed area. A final survey of the road was taken in May, 2011. With the closure of the East Access Road survey the State had officially ceased all its decommissioning survey activities pertaining to the Maine Yankee nuclear power plant site.

2.3.2 Confirmatory Report

No work was performed on the Confirmatory Summary Report as the Report was placed on hold as noted in Section 2.3.3.

2.3.3 Decommissioning Samples – Unforeseen Situation

In mid-April, the State was notified that it had to move all of its stored items by the end of June as the building was sold and the new owner wanted the storage for his own use. The Inspector's storage area housed more than 150 document boxes and over 1,000 soil samples from Maine Yankee's decommissioning.

In order to dispose of the soil samples properly, it became a major undertaking for May and June 2014. The State Inspector had to discern the shipping requirements for both radiological as well as chemical contamination, establish screening criteria for disposition, identify all radioactive elements, find all the soil sample results that went back as far back as 2001 to sort out which samples were still mildly radioactive and those that were at normal background levels, weigh all samples to determine the total weight, which had to be less than 7,000 pounds as part of the State of Tennessee's receipt requirements, 10 percent of the samples had to be chemically analyzed for heavy metals such as Mercury, Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver, and the radiation exposure rate on the outside of the disposal containers had to be less than 40 micro-Roentgen per hour (as compared to a normal background level of 6-9).

It took over six weeks to find 98 percent of all the sample results. Those that we did not have results for were re-analyzed. All the samples' radioactivity was decay corrected through June 1, 2014. Screening criteria had to be established for Cobalt-60 and Cesium-137. Samples that contained Cobalt-60 were sent to a disposal facility if the decay corrected concentration was greater than its original counting uncertainty. Samples below the decay corrected concentration were disposed as dirt samples, since the likelihood of detecting any in that sample would virtually be non-existent. For Cesium-137, which is prevalent in nature due to fallout from previous nuclear weapons detonations and testing, the criteria was set at 1,000 pico-curies per kilogram. Even though values in excess of 3,000 have been found in nature, it was believe that the 1,000 level would be more defensible and conservative. Therefore, any samples with just Cesium-137 in its make-up would be discarded as dirt if the decay corrected concentrations were less than 1,000.

In the end, 328 samples were shipped for disposal on June 30. The shipment packages weighed 2695 pounds with a total radioactivity of 34.5 micro-curies. Even though the shipping packages contained 11 radioactive elements, 94% of the radioactivity was from Cesium-137. 5.5% was from Cobalt-60 with the remaining 9 radioactive elements containing only 0.5% of the radioactivity. The total cost of the project was under $10,000. Although the unforeseen happened and the effort was a great success, it did place the Inspector several months behind on his monthly reports to the Legislature with the annual report due the next day, July 1. Consequently, the Confirmatory Summary Report was placed on hold pending his getting caught up on his reports. This effectively delayed the issuance of the Report until late 2015 or may be even later.

2.4 Reports to the Legislature

2.4.1 Monthly

As mandated by legislation passed in the spring of 2008, the State Inspector is required to submit monthly reports to the Legislature on his oversight activities of Maine Yankee's Independent Spent Fuel storage Installation (ISFSI) located in Wiscasset. Since the law went into effect on June 29, 2008, the State Inspector has been providing monthly reports to a distribution that includes the President of the Senate, the Speaker of the House, the NRC at their headquarters in Rockville, Maryland and NRC's Region I in King of Prussia, Pennsylvania, Maine Yankee, the Governor's Office, the Department of Health and Human Services, the Department of Environmental Protection, the Public Advocate and the State Police's Special Services Unit. The topics covered in the monthly reports are highlighted in sections 2.1.7, 2.2, 2.3, and 2.5 of this report.

In 2012, the monthly report format and distribution method were changed. To minimize the size of the reports along with their attachments, the Inspector published the reports in electronic format that also included internet hyperlinks for each of the attachments. This provided flexibility for reviewers and greatly reduced the volume of paper used for distributing the reports. Hard copies of the reports are maintained at the Commissioner's Office and the State Inspector's Office.

After the soil sample project, the Inspector focused on the monthly reports and issued the February through August reports and started on the September report by the end of 2014. At the current rate it was assumed that the 2014 monthly reports would be completed by March 2015.

2.4.2 Annual

Under 22 MRSA §668, as enacted under Public Law, Chapter 539 the State Inspector prepares an annual accounting report of all the funds received into and all disbursements out of the Interim Spent Fuel Storage Facility Oversight Fund. The report is due the first Monday of February. In addition, the State Inspector must annually report his activities to the Department of Health and Human Services Manager of the Radiation Control Program for inclusion in the Manager's Annual Report of Oversight Activities and Funding to the Legislature. In addition to the above annual reports, the Inspector also prepares an annual report of his oversight activities that is due by July first of every year to the Legislature. The 2013 annual report was delayed and was later completed in September 2014. This 2014 report fulfills the legislative mandate for July 1, 2015.

2.5 Other Activities

2.5.1 Northeast High-Level Radioactive Waste Transportation Task Force (NEHLRWTTF)

As the State's representative the State Inspector has participated in periodic conference calls on the status of Yucca Mountain and transportation issues that could impact Maine.

In mid-May, the DOE held its fifth annual National Transportation Stakeholders Forum in Bloomington, Minnesota. The State Inspector attended the DOE Forum, which highlighted tribal perspectives on transportation and emergency response activities, resources, and jurisdictional issues, advances in transportation information systems such as smart sensors and satellite tracking applications; engaging states, tribes, and the public in transportation planning; how rail shipments are planned, executed, regulated, and improved; and a briefing on the status of the on-going recovery from the underground radioactive release from defense-related weapons waste at the Waste Isolation Pilot Plant in New Mexico.

NRC officials discussed enhancements to shipment security for spent nuclear fuel as well as the interface between storage and transportation and their associated impacts on dry storage canister designs for future handling, storage, transportation, and geologic disposal.

In addition, the Forum allowed for the five ad hoc working groups and for the four regional state transportation groups to meet and discuss their respective regional issues. The Northeast High-Level Radioactive Waste Transportation Task Force focused on two topics, discussing NWPA's Section 180 (c) working group's state recommendations and principles of agreement among states on expectations regarding preparations for NWPA shipments, and receiving updates from federal officials on transportation emergency preparedness and storage. The State Inspector provided a report to the Northeast Task Force on Maine's activities and his participation and involvement in the national working group and interregional team that will propose to the DOE the states' recommendations on future funding allocations for spent nuclear fuel shipments within their borders.

The Task Force is an affiliate of the Eastern Regional Conference of the Council of State Governments. The purpose of the Task Force is to not only develop the safest and most efficient transportation route to ship spent nuclear fuel from the Northeast, but also to provide the States with direct involvement in formulating and establishing national policy in the design of a national transportation system and development of any proposed geologic repository or consolidated interim storage facility. The Northeast Task Force is comprised of representatives from the six New England states, New York, Pennsylvania, New Jersey, and Delaware.

2.5.2 Yankee Federal Energy Regulatory Commission (FERC) Rate Case Settlement

The State participated in quarterly conference call briefings relevant to Yankee Rowe, Connecticut Yankee and Maine Yankee. The briefings provide updates to both state and private officials affected by the FERC settlements on the federal lawsuits over DOE's breach of contract to take possession of the spent fuel at Maine Yankee as mandated by the Nuclear Waste Policy Act of 1982, as amended in 1987.

Besides the lawsuits, updates are also provided of other organizational activities, both on the regional and national levels, on spent fuel issues, whether they be the Yucca Mountain repository or focusing attention on local or centralized storage, extended storage, legislation or appropriations, or efforts to implement the BRC's recommendations. These organizations include the Administration, the Energy Department, the Blue Ribbon Commission on America's Nuclear Future, the NRC, Congress, the National Conference of State Legislatures, the Nuclear

Waste Strategy Coalition, the Decommissioning Plant Coalition, the National Association of Regulatory Utility Commissioners (NARUC), the Council of State Governments, the New England Governor's Conference, the New England Council, the Coalition of Northeastern Governors, and the New England Conference of Public Utility Commissioners.

2.5.3 Nuclear Waste Strategy Coalition (NWSC)

The State is a member of the NWSC and participated in bi-weekly status briefings of the NWSC. The briefings provided updates on such national activities as congressional efforts on budgets, funding, proposed legislations, and hearings for the geologic repository at Yucca Mountain in Nevada and consolidated storage facilities for spent nuclear fuel. The updates also include on-going research activities, reports, continued storage rule, the resumption of the Yucca Mountain licensing proceedings, and disposal of defense-related nuclear wastes from federal agencies, principally NRC and DOE, along with litigations pending before the U.S. Court of Appeals over fees and recusals. Then there are the efforts of some stakeholders such as the Bipartisan Policy Center public meetings to resolve the impasse between the House and Senate, the utilities and environmental groups, and the general public's fear and skepticism over nuclear issues. Lastly, there is the Administration's strategy for the management of the back end of the nuclear fuel cycle.

The NWSC is an ad hoc organization representing the collective interests of state utility regulators, state attorneys general, consumer advocates, electric utilities and associate members on nuclear waste policy matters. NWSC's primary focus is to protect ratepayer payments into the Nuclear Waste Fund and to support the removal and ultimate disposal of spent nuclear fuel and high-level radioactive waste currently stranded at some 125 commercial, defense, research, and decommissioned sites in 39 states.

Section 2.6 Summary of Significant National Activity Regarding Spent Nuclear Fuel and High-Level Waste

There were four notable events that occurred during the year. First, the Administration stopped charging nuclear utilities for a non-existent nuclear waste management program at the Court's prompting. The NRC published its long awaited Continued Storage Rule that allowed storage of spent nuclear fuel at reactor sites indefinitely. Next, the public's trust for geologic disposal was shaken with the first ever radioactive release from an underground repository that housed waste material from the nuclear weapons era. Finally, the NRC published its long awaited Volume 3 of the Yucca Mountain Safety Evaluation Report that concluded the proposed repository would meet its safety standards. With no unity or direction as to how the nation should manage its nuclear waste stockpile, every nuclear utility is forced to store their spent nuclear fuel and high-level waste at their present location, and possibly forever.

Except for the underground release, the other prominent events were captured in the subsequent Appendices as noted below.

2.6.1 Appendices

Appendix A is a chronological list of condition reports for the year at the Maine Yankee facility. Appendix B contains the Administration's response to the U.S. Court of Appeals November 2013 ruling that DOE cease collecting the Nuclear Waste Fund fee. Although the Energy Secretary disagreed with the Court's ruling, he did submit a proposal to Congress to adjust the fee to zero. When the D.C. Circuit Court of Appeals denied DOE's request to rehear their appeal before the

full Court and Congress failed to adopt a new waste management policy, DOE was forced to set the fee to zero on May 15.

Appendix C illustrates the long awaited Federal Claims' Court ruling and awards on the second consolidated lawsuit of the three New England nuclear utilities (Maine Yankee, Yankee Atomic, and Connecticut Yankee) against the federal government's failure to take title and possession of the stored spent nuclear fuel at their facilities.

Appendix D covers the NRC Commissioners approval of their final rule on spent fuel storage and supporting generic environmental impact statement. The new Continued Storage Rule allows spent nuclear fuel storage at local reactor sites forever.

Appendix E contains NRC's notification of the completion of Volume 3 of a five volume set on the safety of the Yucca Mountain Project. Volume 3 is the most important of the five Volume set as it identified the staff's findings on DOE's proposed repository design for the Yucca Mountain site. The staff's conclusion that the design met the Commission's post closure requirements out to a million years did not deter Nevada's position any as it vowed to continue fighting any attempts to site a repository in their back yard.

Appendix F provides a timeline of the more significant individual activities that transpired in 2014 that produced an overabundance of movement on several fronts, especially with the Appeal Court's rulings that precipitated a flurry of more filings and actions, the NRC's resumption of the Yucca Mountain Licensing proceedings, the congressional attempts to establish a new national program for nuclear waste, and Texas' initial efforts to host a consolidated interim storage facility for spent nuclear fuel. For a more complete and comprehensive depiction of the highlights the reader is referred to the individual monthly reports that area available at the following website: http://www.maine.gov/dhhs/mecdc/environmental-health/rad/hp-npow.htm.

Appendix A

Condition Reports

Date	CR #	Description
1/1/2014	14-001	Latch on Flammable Storage Locker not working properly
1/1/2014	14-002	Fire Extinguisher tags inadvertently marked in the wrong month
1/2/2014	14-003	Fluid leak from John Deere tractor
1/6/2014	14-004	Portable media device found in wrong drawer
1/9/2014	14-005	Possible trespass from worm diggers of the Owner Controlled Area
1/13/2014	14-006	Medical treatment of eye
1/15/2014	14-007	Computer Monitor failed to display after a reboot
1/21/2014	14-008	Tracking of 2013 Preventative Maintenance Program assessment
1/23/2014	14-009	Lost key card was found outside the Security and Operations Building
1/30/2014	14-010	Engineer performing evaluation without appropriate qualifications
2/3/2014	14-011	Fuse failure on back-up power supply
2/4/2014	14-012	Emergency plan update - terminology issue
2/10/2014	14-013	Skid-steer alternator belt failing
2/11/2014	14-014	Error in training records for radiation protection personnel
2/12/2014	14-015	Tracking an audit issue on personal identifying information
2/13/2014	14-016	Security system issue
2/15/2014	14-017	Fire door latching problem
2/16/2014	14-018	Skid-steer hydraulic leak
2/16/2014	14-019	John Deere snow blower pulley failure
2/16/2014	14-020	Expiration of site access badge
2/18/2014	14-021	Used personal identification information in e-mails
2/18/2014	14-022	Transient environmental conditions
2/19/2014	14-023	Hydraulic leak from a plow truck
2/22/2014	14-024	Hydraulic leak from John Deere tractor
2/27/2014	14-025	Incorrect exposure rate logged for Area Monitoring TLD results
3/3/2014	14-026	Conduit fitting found loose
3/11/2014	14-027	Emergency Plan Implementing Procedures missed 30 day submittal requirements
3/11/2014	14-028	Safety training requirements not fully incorporated into site training program
3/13/2014	14-029	Annual independent Emergency-Plan review missed
3/20/2014	14-030	Incorrect procedure reference in an emergency plan procedure
3/24/2014	14-031	Tracking of 2014 Emergency Plan assessment results
3/24/2014	14-032	Conflicting data found in radiation procedure on control TLD numbers
3/26/2014	14-033	Improper procedure references
3/27/2014	14-034	Procedure revision eliminated document review process
3/27/2014	14-035	Vendor changed model of TLDs used for the first quarter
3/28/2014	14-036	Steel rod found sticking out of the ground near CMP switchyard
3/29/2014	14-037	Security system impairment
4/1/2014	14-038	Fire extinguisher inspection not completed fully
4/1/2014	14-039	Gatehouse Gate not closing properly
4/2/2014	14-040	Security system issue
4/2/2014	14-041	Firearm found stored improperly
4/6/2014	14-042	Industrial gate key found missing
4/9/2014	14-043	Security clearance process started but not completed
4/10/2014	14-044	Padlock not functioning as designed

4/10/2014	14-045	Routine activity items were not created to track culture reviews
4/13/2014	14-046	Incorrect revision number
4/14/2014	14-047	Incorrect procedure reference
4/16/2014	14-048	Computer login identification denied access
4/16/2014	14-049	Training initial qualification record not developed according to procedure
4/17/2014	14-050	Tracking observations from NRC Inspection
4/17/2014	14-051	Visitors not logged in on Radiation Work Permit
4/22/2014	14-052	Sink hole discovered near former circulating water pump house
4/22/2014	14-053	Cracked hand grip on a firearm
4/23/2014	14-054	Satellite phone test failure
4/23/2014	14-055	Transient environmental conditions
5/1/2014	14-056	Records not scanned properly for electronic storage
5/1/2014	14-057	Overdue plant access training
5/2/2014	14-058	Transient environmental conditions
5/6/2014	14-059	Misplaced weapon magazine
5/6/2014	14-060	Security vest in poor condition
5/8/2014	14-061	Maintenance building floor damaged when tool was dropped
5/11/2014	6	Trespass incident
5/11/2014	14-063	Computer coding issue
5/18/2014	14-064	TLD dropped and broken
5/19/2014	14-065	Tracking lessons learned from Fire and Medical Drill
5/21/2014	14-066	Two TLDs found frozen and permanently damaged
5/23/2014	14-067	Security–related issue with computer
5/24/2014	14-068	Pocket dosimeter not working properly
5/27/2014	14-069	Incorrect birth date in Radiation Protection records
5/28/2014	14-070	Computer's back-up power plugged into incorrectly outlet
5/29/2014	14-071	Truck damaged entrance sign
6/3/2014	14-072	Computer issue with cask monitoring trend data
6/4/2014	14-073	John Deere Gator oil spill
6/10/2014	14-074	Material left in isolation zone
6/11/2014	14-075	Transient environmental conditions
6/12/2014	14-076	Transient environmental conditions
6/12/2014	14-077	QA audit concerns on administrative controls
6/12/2014	14-078	QA audit concerns on radiation protection
6/12/2014	14-079	QA audit on improvement areas
6/13/2014	14-080	UPS truck delivery spilled some fuel spill on the access road
6/14/2014	14-081	Radiation Protection Manager not listed in Emergency Plan Directory
6/17/2014	14-082	John Deere Gator oil spill
6/17/2014	14-083	Front door hand geometry not working
6/18/2014	14-084	Faulty rifle round found in a magazine
6/19/2014	14-085	Wet candle testing tower for atmospheric monitoring damaged by winds
6/25/2014	14-086	New hydrant isolation valve was found with sand and silt
6/27/2014	14-087	Incorrect form and revision used
7/1/2014	14-088	Test well MW-414casing found sunken into the ground
7/5/2014	14-089	Safeguards document not logged correctly out of the safeguards repository
7/14/2014	14-090	Emergency light was not working properly
7/14/2014	14-091	Labelling requirements listed in radiation procedure improperly referenced
7/17/2014	14-092	Transient environmental conditions
7/31/2014	14-093	Transient environmental conditions
8/4/2014	14-094	Transient environmental conditions
8/7/2014	14-095	Moisture buildup in an industrial camera lens
8/11/2014	14-096	Failure of a door exit light
8/11/2014	14-097	Trespass event with individual taking pictures on company property

8/13/2014	14-098	John Deere Gator issue – dead battery
8/14/2014	14-099	Computer mouse not allowing access to a particular menu
8/16/2014	14-100	Moisture within an industrial camera lens
8/16/2014	14-101	Several industrial camera domes scratched or dirty
8/17/2014	14-102	Procedure non-compliance regarding the rebooting of a computer
8/17/2014	14-103	Security system intermittently malfunctioning
8/18/2014	14-104	Security system found degraded after intermittently malfunctioning
8/21/2014	14-105	Believed that a vendor came on-site to perform work without a contract
8/21/2014	14-106	System testing not performed according to procedure
8/25/2014	14-107	A fan blade broke on a ventilation unit
8/27/2014	14-108	Internet connectivity offsite found degraded
8/28/2014	14-109	Conflict found between two procedures
9/2/2014	14-110	Transient environmental conditions
9/2/2014	14-111	Housekeeping assessment was not filled out properly
9/5/2014	14-112	Back-up cell service discontinued
9/17/2014	14-113	Transient environmental conditions
9/18/2014	14-114	Transient environmental conditions
9/18/2014	14-115	Transient environmental conditions
9/18/2014	14-116	Camera video feed issue
9/23/2014	14-117	Transient environmental conditions
9/29/2014	14-118	Oil/grease leak from an overhead crane in the truck bay
9/30/2014	14-119	Data transposition error between revisions of a radiation procedure
10/1/2014	14-120	CMP planning to install security cameras in 345 kV switchyard
10/1/2014	14-121	Several individuals had not completed their annual plant access training
10/2/2014	14-122	Procedure consistency regarding frequency of backup generator surveillances
10/2/2014	14-123	Computer system locking up and not allowing operator to log in
10/2/2014	14-124	Diesel Generator failed to start during a surveillance
10/2/2014	14-125	Backup power supply breaker tripped when swapping from backup to normal
10/4/2014	14-126	Moisture found inside a cameras lens
10/6/2014	14-127	Key inventory procedure not updated with recently added key locks
10/8/2014	14-128	Loss of a video feed during a lightning storm
10/8/2014	14-129	Microwave head shorted out while removing test gear
10/8/2014	14-130	Water leak near the unisex bathroom
10/9/2014	14-131	Vent cover for an electrical panel was damaged
10/10/2014	14-132	Minor hydraulic leak from a contractor's bucket loader
10/10/2014	14-133	Transient environmental conditions
10/13/2014	14-134	Deleted procedure was not removed from one of the controlled procedure sets
10/13/2014	14-135	Unidentifiable material found near north end of diesel generator cable chase
10/15/2014	14-136	Tracking CR on lessons learned from Emergency Plan exercise
10/16/2014	14-137	Critique items from IDS foundation project
10/17/2014	14-138	omputer port blocking device removed without documenting it on a log
10/17/2014	14-139	Training on procedure revision given prior to revision being issued
10/17/2014	14-140	Daily testing was not performed on the assigned shift
10/19/2014	14-141	Small oil leak from a contractor's piece of equipment
10/20/2014	14-142	Vendor notification not provided to Maine Yankee after work was completed
10/21/2014	14-143	Camera would not stay in focus when zoomed in
10/21/2014	14-144	Missed quarterly Emergency Plan mini-drills for the third quarter
10/21/2014	14-145	Contradiction in definition found in a procedure
10/28/2014	14-146	Several unused computer ports found unblocked when they should have been
10/28/2014	14-147	Hand grip on a firearm found broken
10/30/2014	14-148	Transient environmental conditions
10/30/2014	14-149	Transient environmental conditions
11/2/2014	14-150	Moisture found inside the lens of a video camera

11/2/2014	14-151	Transient environmental conditions
11/2/2014	14-152	Offsite internet connectivity issue
11/5/2014	14-153	Vendor changed account settings and account could not be accessed
11/10/2014	14-154	Emergency light had a dead battery
11/11/2014	14-155	Transient environmental conditions
11/17/2014	14-156	Possible hunters on property
11/18/2014	14-157	Conduit penetrating a fire barrier was not properly sealed
11/19/2014	14-158	Small oil stain from vendor equipment in a paved parking lot
11/26/2014	14-159	Security system degraded due to an equipment issues in a detection system
11/26/2014	14-160	Hunters trespassed onto Maine Yankee property
11/26/2014	14-161	Offsite internet connectivity issue
11/27/2014	14-162	Maintenance building struck by a snow plow
11/28/2014	14-163	Exhaust leak on John Deere Gator
11/30/2014	14-164	Offsite internet connectivity issue
12/3/2014	14-165	Electrical breaker tripped while testing the diesel generator
12/4/2014	14-166	Transient environmental conditions
12/5/2014	14-167	Electrical outlet incorrectly labeled to a circuit
12/9/2014	14-168	Individual Qualifying Record was not completed prior to the individual performing a regulatory review
12/11/2014	14-169	Chapter 5 in License Termination Plan missing several figures
12/12/2014	14-170	TLD found attached to a tree that had fallen
12/12/2014	14-171	Several keys had broken off in some armory lockers
12/18/2014	14-172	Computer not backing up properly to a removable thumb drive
12/24/2014	14-173	Radiation Protection training materials not updated to reflect latest revisions
12/24/2014	14-174	Groundwater well not sampled as part of the Groundwater Monitoring Program
12/24/2014	14-175	Suspicious vehicle drove onto the property and took photos and left
12/30/2014	14-176	Received a 10 CFR Part 21 evaluation on a piece of equipment that was removed during the decommissioning
12/30/2014	14-177	Individual Emergency Fire Response Coordinator qualifications were past due

Appendix B - DOE's Proposed and Adjusted Nuclear Fee to Congress

The Secretary of Energy
Washington, DC 20585

January 3, 2014

The Honorable Joseph R. Biden
President of the Senate
Washington, DC 20510

Dear Mr. President:

In accordance with the November 19, 2013 decision and December 20, 2013 mandate of the United States Court of Appeals for the District of Columbia Circuit in *National Association of Regulatory Utility Commissioners v. United States Department of Energy* (Nos. 11-1066 and 11-1068; D.C. Cir. 2013), please find enclosed the Department of Energy's court-mandated proposal to adjust the current fee of 1 mill per kilowatt-hour for electricity paid by civilian nuclear power generators for disposal of their high-level radioactive waste or spent nuclear fuel to zero. 42 U.S.C. 10222(a). Please note that this proposal is not the result of and is not consistent with the determination I am required to make pursuant to the Nuclear Waste Policy Act (NWPA), as amended, 42 U.S.C. 10101 *et seq.*, regarding the adequacy of the statutorily-established fee. I have not determined, as required by the NWPA, that the fees being collected are in excess of those required to offset the costs of the program; nor have I determined that collecting no fee will "insure full cost recovery." 42 U.S.C. 10222 (a)(4). Thus, this proposal, mandated by the Court of Appeals, is not consistent with the process established in the NWPA for adjusting the fee charged to utilities.

Accordingly, the Department is submitting this proposal subject to any further judicial decision in the proceedings described above. Earlier today, the Department of Justice filed a petition for rehearing *en banc* by the full D.C. Circuit. Should the Court grant the petition, we will let you know promptly.

The NWPA provides that a proposal by the Secretary to adjust the fee shall be effective after a period of 90 days of continuous session has elapsed following the receipt of such transmittal unless during such 90-day period either House of Congress adopts a resolution disapproving the Secretary's proposed adjustment in accordance with the procedures set forth for congressional review of an energy action under section 551 of the Energy Policy and Conservation Act (42 U.S.C. 6421). The Supreme Court has found this type of one-House legislative veto provision unconstitutional. *INS v.Chadha*, 462 U.S. 919 (1983). Accordingly, the United States Court of Appeals for the Eleventh Circuit interpreted section 302(a)(4) of the NWPA, 42 U.S.C. 10222(a)(4), to require a 90-day "report and wait" congressional review period during which Congress could override "the Secretary's

proposal by ordinary legislation meeting the requirements of presentment and bicameralism." *Alabama Power Co. v. United States Department of Energy*, 307 F.3d 1300, 1307 n.7 (11th Cir. 2002). So interpreted, the statute provides that the proposed adjustment to the fee will not be effective until after the congressional review period expires.

We look forward to working with you on this matter.

Sincerely,

Ernest J. Moniz

Enclosure

cc:

The Honorable Harry Reid
Majority Leader

The Honorable Mitch McConnell
Minority Leader

The Honorable Ron Wyden
Chairman, Senate Committee on Energy and Natural Resources

The Honorable Lisa Murkowski
Ranking Member, Senate Committee on Energy and Natural Resources

The Honorable Barbara Mikulski
Chairwoman, Senate Committee on Appropriations

The Honorable Richard Shelby
Ranking Member, Senate Committee on Appropriations

U.S. Department of Energy's

Proposal to Congress to Adjust the Fee

Established by Section 302(a)(2) of the Nuclear Waste Policy Act of 1982, as amended

Consistent with the mandate issued by the United States Court of Appeals for the District of Columbia Circuit in *National Association of Regulatory Utility Commissioners v. United States Department of Energy*, (Nos. 11-1066 and 11-1068; D.C. Cir. 2013), and notwithstanding the absence of the determination required to be made pursuant to the Nuclear Waste Policy Act of 1982 (NWPA), as amended, 42 U.S.C. 10222(a)(4), I hereby propose, subject to any further judicial decision in this proceeding, including with respect to the petition for rehearing *en banc* filed on January 3, 2014, to adjust the fee, established by Section 302(a)(2) of the NWPA, 42 U.S.C. 10222(a)(2), to zero.

Ernest J. Moniz

January 3, 2014
Date