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Maine People Living Safe, Healthy and Productive Lives
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September 12, 2016

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: 2015 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: David Sorensen, Senior Health Policy Advisor, Governor's Office
Sheryl Peavey, Director and Chief Operating Officer, Maine Center for Disease Control
Paul Mercer, Commissioner, Department of Environmental Protection
Timothy Schneider, Maine Public Advocate
Lieutenant Scott Ireland, Special Services Unit, Maine State Police

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

2015 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)

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Executive Summary

The following report details the State Nuclear Safety Inspector's oversight activities for the calendar year 2015 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 Obama 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 Nuclear Regulatory Commission completed its five-volume Safety Evaluation Report and draft groundwater Environmental Impact Statement supplement on Yucca Mountain. Letters of intent were filed with the Nuclear Regulatory Commission to license consolidated storage facilities for spent nuclear fuel in Texas and New Mexico. The Department of Energy awarded a contract to design and fabricate cask and buffer railcars for spent nuclear fuel in preparation for a national shipping campaign and initiated a national dialogue on designing a consent-based siting process for nuclear waste storage and disposal facilities. Finally, Finland became the first country in the world to approve the construction of a permanent geologic repository for the disposal of spent nuclear fuel.

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 of 2008, which was accepted for review by the NRC in September of 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 of 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 adopted a biennial inspection frequency when it comes to stand alone ISFSIs. Since Maine Yankee was inspected in 2014, the next scheduled inspection will be in April of 2016.

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 20, Maine Yankee held its annual fire and medical drill. Since half the Security and Operations Building is under construction for office space the drills were performed as a tabletop exercise at the Wiscasset Fire Department (WFD). The scenario involved a diesel truck delivery to the storage tank and a lightning strike on the truck with fire engulfing the truck driver while he was pumping the diesel into the tank. Even though the driver was able to drop and roll to snuff out the fire on him, he was badly burned. Maine Yankee's security officers listed what steps they would take to summon local services to fight the fire, obtain medical services for the burned individual, and local law enforcement agencies. In addition, Maine Yankee management and state oversight agencies, such as the State Police, Maine Emergency Management Agency, Department of Environment Protection (DEP), and the State Nuclear Safety Inspector would be contacted. It was expected that DEP would be heavily involved in this situation due to the diesel spill to the soil. In turn, the WFD and the Ambulance Services detailed their actions in responding to the request for fire assistance and the injured truck driver. A couple of suggestions were made to potentially enhance the local response such as gel blankets for burn victims and relocating a fire hydrant near Central Maine Power's 354 kV switchyard to a more advantageous location.

In preparation for its annual emergency drill Maine Yankee conducted on October 7, its annual emergency plan training to state and county officials at the Maine Emergency Management Agency. 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 21, Maine Yankee held its annual Emergency Plan drill. The drill scenario was a tornado with visible debris impacting the concrete containers on the south side of the storage facility. The debris resulted in clogging two of the four inlet vents for all eight concrete casks on the south side with one cask sustaining damage from a flying tree trunk. The radiation levels in the vicinity of the damaged cask were slightly elevated. In the aftermath of the tornado, facility personnel were developing a recovery plan to ensure that the heat removal system was still functional for the eight affected casks and repairing the damaged cask.

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 January Maine Yankee submitted two revisions of its Defueled Safety Analysis Report as part of its biennial update to the NRC. The first revision involved the addition of a new maintenance building on-site with the defueling analysis allowing maintenance activities to be performed in the building besides the Security and Operations Building. The second revision changed some wording in the Radiation Protection Section of the Report on how the personnel radiation monitoring method would be conducted within the applicable procedure.

In February Maine Yankee submitted to the NRC a periodic update of its License Termination Plan (LTP) over the two revisions that took place in 2013 and 2014. Fourteen changes were made. Some were editorial in nature. Some were made to eliminate specifics such as the number of utilities that own Maine Yankee or the number of acres of the parcel of land adjacent to the ISFSI. Others identified what activities would transpire after the removal of the spent nuclear fuel and the acreage that currently remained under the federal license. Still others updated new cost estimates for storage until 2031, decommissioning the ISFSI and terminating the license in 2033, and to reflect current practices at the site. Even though bounded by previous assessments, some also included updates to environmental impacts associated with the longer storage period. Others included the inclusion of old figures that were inadvertently removed from one of the previous revisions and now re-incorporated in the LTP.

Also in February Maine Yankee submitted to the NRC their Funding Status Report for managing the stored spent nuclear fuel and greater than class C wastes. The report noted that about $104 million had been accumulated as of the end of the year and approximately $9.5 million per year would be required to cover expenses for storage out to 2033. The report also mentioned that Maine Yankee has the ability to collect additional funds, if necessary, to cover expenses through their investments, power contracts, amendatory agreements, and their on-going litigations over the federal government's breach of contract to take the spent fuel, and an assumed rate of return on the Trust Fund of 4.5% after fees and taxes.

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

In April Maine Yankee submitted to the NRC its Individual Monitoring Form 5 Report for 2014. The report provided the occupational doses for last year for all those who worked at the storage facility in Wiscasset. The Form 5 records the external and internal radiation exposures of the security workers and contractors at the site. None of the individuals received a yearly dose in

excess of 100 mrem[1]. Since the spent fuel canisters are sealed there were no internal exposures to report.

Also in April Maine Yankee submitted their annual reports for radioactive effluent releases, radiological environmental monitoring, and changes to their Off-Site Dose Calculation Manual (ODCM). There were no planned or unplanned gaseous or liquid releases from the storage casks. Therefore, no assessment of the radiation dose to the most likely exposed person was required. Since there were no effluent releases from the casks, Maine Yankee was only required to monitor the direct radiation exposure from the facility, which it does with passive devices, called thermoluminescent dosimeters (TLDs)[2]. The environmental monitoring report explained that Maine Yankee has nine TLD stations in the vicinity of the ISFSI and one control station at the Wiscasset Fire Station. All nine stations were comparable to or in some cases slightly higher than the control station. However, there was one station that was noticeably higher than the other eight ISFSI stations. This location has been consistently high since March, 2005. Due to its distance from the bermed area, the higher values were assumed to be due to its line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 0.99 mrem at its highest TLD location, which was much lower when compared to the Environmental Protection Agency's annual public limit of 25 mrem. Most of the changes to the ODCM were editorial in nature with the key exception being the change in the sampling frequency from quarterly to semi-annually for the TLDs.

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.

In December Maine Yankee submitted its updated Decommissioning Funding Plan to the NRC. The Plan updated the costs for managing the stored wastes and the ISFSI Decommissioning Cost Estimate (DCE) through 2033. The DCE appraised the total cost for decommissioning the ISFSI at $27.4 million for 2015 with the radiological decontamination portion at $21.6 million and the remaining $5.8 million for the non-radiological decontamination costs. The submittal included a certificate of financial assurance that funds would be available to perform the ISFSI decontamination and decommissioning and that funds for decommissioning were segregated from the funds for ongoing management of the stored spent nuclear fuel and Greater Than Class C wastes.

2.1.5 Security Plan

In June Maine Yankee submitted to the NRC its changes to the storage facility's Physical Security Plan to address administrative changes and its protection of certain radioactive material

[1] A mrem or millirem is a conventional unit that is based on how much of the radiation energy is absorbed by the human body multiplied by a quality factor that is a measure of the relative hazard for the different types of particles or rays.

[2] 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.

in its possession from theft or diversion. Since the Plan involved security sensitive information disclosure to the public was prohibited.

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 13, April 14, July 14, 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 such as his participation in three national groups, with one focused on developing recommendations from states to the Department of Energy on emergency preparedness for local communities on spent fuel shipments traversing their jurisdictions, a communications ad hoc group, and a rail/routing group in preparation of a national transportation plan and shipment program. Discussions also centered on the Group's annual and financial reports to the Legislature, including the Inspector's new initiatives to streamline his monthly reports, national and congressional efforts on spent fuel waste management, especially centralized interim storage at some away facility outside of New England such as Texas and New Mexico who are leading efforts in establishing an interim storage facility, the status of litigation efforts in the Federal Energy Regulatory Commission rate case settlement cases pending before the federal Appeals Court, the State's environmental radiation monitoring data, the anomalies found, and the options going forward to resolve the disparities. Maine Yankee also informed the Group of their elimination of self-reading pocket dosimeters for routine radiation work permits, the measuring of their personnel TLDs once a year, the collection and measurement of their environmental TLDs twice a year, and the performance of their radiation surveys of the cask vents once a year. In addition, they would be constructing a 3500 foot barbed wire fence to keep trespassers and hunters out, constructing new offices in the Security and Operations Building, and plans to upgrade security cameras. Other topics included 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, their proposal to reduce the number of wells sampled and DEP's review and perspective. The Public Advocate's Office remarked that electric rates were slightly lower than they would be due to the Maine Yankee's successful lawsuit over the federal government's failure to take the spent nuclear fuel.

2.1.6.2 Department of Environmental Protection

In February Maine Yankee submitted to DEP their Groundwater Monitoring Report for Bailey Point. As part of the DEP's Resource Conservation and Recovery Act closure of the site, Maine Yankee was required to establish a 30 year groundwater program to perform periodic sampling of wells on the property to monitor for chemical contaminants. The report provided a monitoring overview and trend analysis for the three sampling events from October 2013 to September 2014. Maine Yankee informed the DEP that they were re-submitting their chemical Electronic Data Deliverables to correct a sampling error of one of the wells and to revise seven data qualifiers on the results.

In April Maine Yankee notified the DEP that, according to their Environmental Covenant with DEP, Maine Yankee invoked its Soil Management Plan on three occasions last year. The first site preparation and excavation activity involved the underground drainage and

paving around the Maintenance Building. The second concerned the installation of windows on the north side of the Security and Operations Building. The last one included the replacement of a security system foundation. In all three instances soil samples were taken and analyzed. No chemical contamination was found.

In June Maine Yankee forwarded their recommendations to the DEP to modify the existing chemical groundwater sampling program on Bailey Point. According to the Consent Order every five years Maine Yankee can make suggestions to change the sampling program. Since enough data was collected over the past ten years, Maine Yankee was able to perform a comprehensive review that included statistical trend analyses, comparisons with the model developed for the site, and evaluations of the geochemical conditions for the chemical parameters being monitored. The review indicated that a majority of the monitored parameters met health and environmental guidelines and, since there were no residential facilities onsite and no use of the groundwater, there was no human exposure. Therefore, Maine Yankee was recommending reduced monitoring with a highly focused sampling program for those remaining wells.

2.1.6.3 State Radiation Control Program

In July the State met with Maine Yankee to discuss their cask relicensing efforts, the guidance structure for license renewal, an operations-based aging management program, degradation mechanisms such as chloride-induced stress corrosion cracking, performance of high burnup fuel, and canister inspections.

In August Maine Yankee responded to the State's Low Level Waste Questionnaire for 2014. The company noted that it did not produce or ship any low-level radioactive waste.

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 Incident Reports/Events/Impairments/

Although there were no spurious alarms due to environmental conditions, there were no security-related impairments for the year. However, there were 72 security incident reports (SIR) logged in 2015. This compares to 44 security events logged (SEL) and 16 SIRs in 2014, 70 in 2013, 145 in 2012 and 142 in 2011. It should be noted that prior to October 2014 Maine Yankee employed a SEL tracking system. Except for the name change, there were no fundamental changes or differences in thresholds between the present and previous tracking systems.

Of the 72 SIRs, 37 were due to security system issues due to transient environmental conditions. Of the 35 remaining, seven were due to the loss of internet connectivity with a vendor, seven more dealt with work associated with the security system, five were written to support a system maintenance activity, three documented the semi-annual performance testing of a security system, two involved a security system degradation, two involved the office build out project, two were due to camera issues, two were related to an equipment malfunction, one was due to a security system not alarming as anticipated while another was due to a computer system issue, one involved the installation of gutters on the Security and Operations Building, one was to support snow removal, and finally one involved a degraded security system due to an off-site equipment malfunction.

2015 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 five instances in 2015 as compared to four in 2014, three in 2013 to 15 in 2012, six in 2011 versus 15 in 2010 and only two in 2009. The five suspicious instances of vehicles and/or persons occurred one in April and four in May.

On the first instance two teenage trespassers entered the front entrance area and threw rocks at a porcupine, then left the property. The Local Law Enforcement Agency (LLEA) was contacted but was unable to locate the individuals. The event was not deemed suspicious.

The second involved some suspicious activity. A photographer was taking pictures of the facility from Old Ferry Road. The Local Law Enforcement Agencies and the Nuclear Regulatory Commission (NRC) Operations Center were notified. The local officials were not able to apprehend the individual.

In the third situation two turkey hunters were observed across the street from Maine Yankee's entrance putting out decoys in a small field. The Game Warden was contacted but was unable to respond. The Wiscasset Police Department was then contacted but, by the time they arrived, the hunters had picked up their gear and left the area.

In the fourth instance a drone flew over Maine Yankee and hovered over various areas of the site, including the protected area where the vertical concrete casks are stored, before leaving the site and heading northwest. The Wiscasset Police Department, the Lincoln County Sheriff's Office and the State Police were notified and responded, but did not find any suspicious activity in the area. The Federal Aviation Administration in Portland and in Nashua, New Hampshire and the NRC Operations Center were all notified.

In the final instance another photographer was taking pictures of the facility from Old Ferry Road. The Local Law Enforcement Agencies and NRC Operations Center were notified. The photographer left before the Local Law Enforcement arrived.

There was one notable mention of two suspect phone calls on the same day. The first caller phoned several times requesting to speak to a staff member but would not say why. The second caller asked to speak to a person not employed by Maine Yankee. Since the phone calls did not meet the suspicious activity definition, the NRC was not notified. However, a courtesy notification was made to the State Police's Maine Information and Analysis Center.

2.1.7.3 Fire Related Events/Impairments

There were five fire-related impairments reported in 2015 as compared to eight in 2014, ten in 2013, six in 2012, and eleven in 2011. Two occurred in January. The first involved a fire detection panel that was taken out of service to support the construction of new offices as part of the office build out project in the Security and Operations Building. Compensatory measures were put into place until the panel was restored to service. The second encompassed the fire detection system in the Truck Bay area that had been taken out of service to support the office build out project. Compensatory measures were put into place. This impairment continued until the office build out new fire system was put into service on September 1.

The third impairment occurred in May and involved a fire door that was not closing properly. The door was repaired in less than 30 minutes a few days later. The fourth was in June and also involved another fire door not closing properly. Periodic fire rounds were implemented until the door was repaired. The final impairment occurred in October and it involved putting compensatory measures in place to support the testing of the fire suppression system.

2.1.7.4 Condition Reports

There were 223 condition reports written in 2015 as compared to 177 in 2014, 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 concrete truck having a minor oil spill onto the pavement to a Ford Pickup Truck with an engine light on. Other CR's included a light pole turning on and off intermittently at night, an expired fire extinguisher on a vendor's forklift, the Maine State Police phone not working when it was tested, hardhats that to be replaced after an inspection, a lock that was found sticking and frozen in the winter, an emergency battery pack being missed on a surveillance, a loss of internet connectivity with an off-site vendor, water found leaking into the Security and Operations Building through a buried conduit, and a hydraulic hose failure on a piece of snow removal equipment.

A complete list of CR's can be found in Appendix A. It should be noted that in May of 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

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

Wiscasset Selectmen decided at their bi-weekly meeting to send a letter to the federal government urging them to move the spent fuel from the Maine Yankee site. The Selectmen tasked the Town Manager to work with Maine Yankee's Public and Government Affairs Director to draft a letter.

In February Maine Yankee submitted to the NRC its annual notification of their foreign ownership, control or influence (FOCI) status. Maine Yankee noted changes in foreign interests since their last annual report that included two changes in Maine Yankee's Board of Directors. One change did not affect FOCI while the other did. Therefore, the Board's Negation Action Plan was enforced with a submission of a Certification of

Foreign Sponsor Representative to the NRC to ensure that there would be no exertion of foreign control, dominion, or "influence over operational, safety or security matters at Maine Yankee".

In May Maine Yankee submitted revisions to three of its six Emergency Plan Implementing Procedures for Off-Normal Operations, Accidents, and Natural Phenomena. Each procedure incorporated an extra set of steps to record the dates and times of the event, when the four hour Technical Specification response for cask surveillance would be performed, and when the air circulation conditions would be restored.

In July Maine Yankee notified the NRC of some changes in its Board of Directors with the resignation of one and the appointment of another from Eversource, formerly known as Northeast Utilities. Since the firm was a domestic corporation, there were no foreign ownership, control or influence issues to contend with.

Also in July Maine Yankee submitted to the NRC revision 5 to its Emergency Plan and a revision to one of its implementing procedures. The revision to the Plan involved the retitling of a table along with a restructuring of that table to better reflect the initiating conditions, the action levels, and the corresponding NRC classification level. The changes to the procedure were minor as they encompassed the matching of the revised table in the Emergency Plan, clarifications on actions undertaken as recommended from a previous exercise observation for the Site Supervisor/Emergency Coordinator, ensuring that contractors were included in any evacuation of unnecessary personnel, and updates to phone contacts.

In September Maine Yankee submitted to the NRC an exemption request from their Technical Specification surveillance after an off-normal, accident, or natural phenomena event in order to eliminate the inconsistencies between two Tech Specs that require separate actions to ensure an operable heat removal system. The current Tech Specs require that all the casks have to be inspected within four hours of the event to ensure that all the concrete cask inlets and outlets are not blocked or obstructed, and that half of the inlets and outlets for each cask must be cleared of any blockage or debris within 24 hours to restore circulation. Maine Yankee's request would utilize their Tech Spec Surveillance Requirement to meet this Tech Spec by confirming operability of the concrete cask heat removal system by verifying that the difference of the outlet temperature of the cask and the ambient temperature would be less than 102 degrees Fahrenheit. If the temperature difference exceeded the 102 degree limit, then the cask system would be required to meet the temperature limit within eight hours by ensuring the inlet and outlet vents were not blocked or obstructed. The first Tech Spec was only applicable for certain events whereas the second was applicable under all circumstances.

Also in September Maine Yankee submitted to the NRC revision 6 of their ISFSI Emergency Plan. The only change made was to reflect the modifications made to the Security and Operations Building to accommodate extra office space and conference rooms and to inform the NRC of the elimination of the truck bay.

In October the State forwarded a letter to the NRC commenting on Maine Yankee's recent Technical Specification exemption request from one of their surveillances in off-normal, accident or natural phenomena events. The State concluded that Maine Yankee's

request was more restrictive than the present requirement and had no objection to the request.

In November Maine Yankee informed the NRC of a change in their Board of Directors. Two members from the Canadian firm, Emera, were removed and replaced with two other individuals from the firm. Since they represent a foreign sponsor company, both signed certifications of foreign sponsor representatives to "ensure that Emera Maine will not exert control, domination, or influence over operational, safety or security matters at Maine Yankee."

Also in November Maine Yankee submitted comments to the NRC on their draft Fuel Retrievability in Spent Fuel Applications document. Maine Yankee had four comments. They supported the NRC staff's position that retrievability should include removal from both a canister loaded with spent fuel from a storage cask and a cask loaded with spent fuel from a storage location. Maine Yankee also supported NRC's reliance on Aging Management Programs and Time-Limited Aging Analyses for license renewals. Since Maine Yankee no longer has the capability to retrieve fuel loaded in their casks, they advocated for retrievability to be performed at future consolidated storage or repository facilities.

Additionally in November the Chairs of the Communities and Citizens Advisory Panels for Maine, Connecticut, Massachusetts, and Vermont forwarded a letter to members of the New England delegation urging them to overcome the stalemate in Congress over nuclear waste management policy by supporting legislation introduced in the House on interim storage. The Panels declared that indefinite on-site storage of spent nuclear fuel in their communities was unacceptable and instituting a pilot consolidated storage facility focused on the stranded spent fuel at their sites would go a long way in relieving their communities' burden by returning these sites to productive use.

In December Maine Yankee submitted to the NRC their seventh revision to their Emergency Plan. The eight changes were mostly administrative in nature. They included reformatting, renumbering pages, deleting a note in one of the tables, adding one reference, and title changes such as Emergency Coordinator to Emergency Director, General Employee Training to ISFSI Access Training, and updated titles to the Fire Protection and Physical Security Plans. The remaining two changes dealt with radiation protection issues. The first involved removing the specific location where potentially contaminated individuals would be monitored and leaving it up to the radiation protection personnel to decide where the monitoring and decontamination, if necessary, would be performed. The second radiation issue designated the Radiation Protection Contractor as responsible for providing the appropriate personnel protective equipment to work in contaminated areas.

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 of 2011.

In June of 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 of 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 of 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 of 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 14 and Table 1 on page 15 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 second, third, and fourth quarters, Stations G and K continued to be high due to their proximity to the ISFSI. However, Station F was also in the elevated group in the second, third, and fourth quarters. Station F is located north of the ISFSI's bermed area adjacent to the old East Access Road. In addition, station Q also ended in the elevated grouping for the second and fourth quarters.

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. Station Q has historically been in the slightly elevated grouping with occasional periods in the elevated grouping. The location of Station Q is on top of a man-made ridge of rocks abutting the east side of Bailey Cove. The composition of the rocks natural radioactivity may explain the higher readings in comparison to other stations.

Figure 1

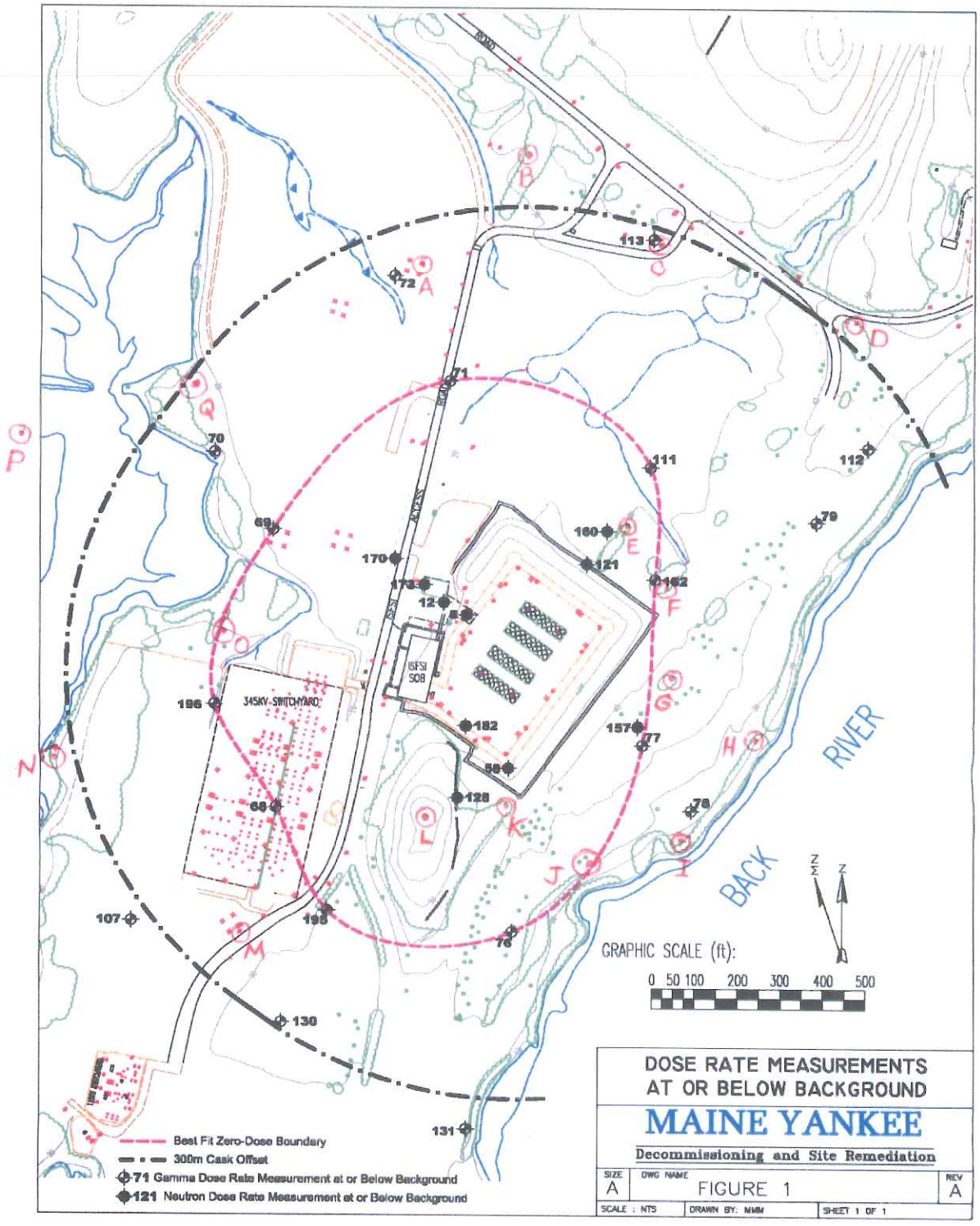
345KV SWITCHYARD
ISFSI
SOB
RIVER
BACK
GRAPHIC SCALE (ft):
0 50 100 200 300 400 500
Best Fit Zero-Dose Boundary
300m Cask Offset
71 Gamma Dose Rate Measurement at or Below Background
121 Neutron Dose Rate Measurement at or Below Background
DOSE RATE MEASUREMENTS
AT OR BELOW BACKGROUND
MAINE YANKEE
Decommissioning 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	20.2 (20-21)	21.5 (21-22)	24.3 (24-25)	25.8 (24-27)
B	19.2 (18-20)	21.7 (20-24)	22.7 (22-23)	23.0 (22-24)
C	20.2 (20-21)	22.0 (21-25)	23.5 (22-24)	24.3 (24-25)
D	18.7 (17-20)	23.7 (23-24)	23.5 (23-24)	24.6 (23-43)**
E	21.5 (20-23)	22.2 (21-23)	24.8 (24-25)	26.0 (24-27)
F	22.3 (21-23)	24.7 (23-25)	26.8 (23-26)	28.0 (27-30)
G	24.5 (24-25)	25.5 (25-26)	27.5 (27-28)	28.3 (28-29)
H	19.5 (19-21)	19.8 (19-20)	21.8 (21-23)	23.0 (22-24)
I	20.2 (20-21)	20.2 (20-21)	23.5 (23-24)	23.8 (22-25)
J	21.7 (21-22)	22.5 (22-23)	25.7 (24-27)	26.5 (26-27)
K	24.5 (23-25)	24.8 (24-25)	27.3 (26-30)	29.5 (28-30)
L	23.0 (22-24)	23.2 (23-24)	24.3 (23-25)	27.0 (25-28)
M	20.0 (19-21)	22.8 (22-23)	25.5 (24-27)	25.7 (25-26)
N	17.8 (17-19)	21.8 (21-23)	22.0 (21-23)	24.2 (23-25)
O	19.3 (19-21)	23.2 (20-22)	25.0 (24-27)	26.3 (25-27)
P	18.5 (17-21)	20.8 (22-24)	21.3. (21-22)	23.3 (23-24)
Q	19.8 (19-21)	25.5 (25-26)	26.0 (25-27)	28.3 (28-30)

** One element had a result that appeared to be outlier. The vendor rejected the data point. The State concurred that the outlier could be rejected at the 99% confidence level. Therefore, the State accepted the vendor's results. The outlier was not included in the average.

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 Maine 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 over the past four years indicate that the 10 day transit exposures may range from about 5 to 8 mrem with an estimated average of 6.5 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% of the dose reported. With the statistics indicating that virtually all the transit data for the last four years fell within the range of the 95% confidence level, the State has some assurance of what the transit exposure is.

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

Table 2 – TLD Transit Controls

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2012	7.1	5.7	6.4	14.5 (15.3)
2013	8.5	4.8	5.5	11.9 (7.1)
2014	7.6	7.0	6.9	5.9
2015	5.8	6.3	6.2	7.1

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.

The 2012 fourth quarter value cannot be explained. Possible explanations could include a longer transit time, longer storage in an area with a higher than average radiation background, or exposure either in transit or storage to a nearby radioactive package. However, the 2013 fourth quarter exposure was attributed to the storage of the TLDs and six of the seven controls for an extra 27 days at the TLD vendor processor in California. The difference between the six TLDs held longer and the one control processed later amounted to 4.8 mrem. That is why all the TLDs, except for this one control had higher fourth quarter readings.

For the last two years the fourth quarter results were not higher as was experienced in 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 one of the higher values, there was also no obvious explanation why the fourth quarter results were back to normal. Consequently, no adjustments were necessary to illustrate the expected seasonal variations.

Since the State has a better understanding for the transit exposure and what to expect for exposures, it will shift its attention to the final unknown, the storage exposure within the steel vault at the Health and Environmental Testing Laboratory. The exposure determination will take about two years to complete with exposure assessments performed every six months.

Figure 2 on Page 17 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 of 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 2015 are illustrated in Table 3 below.

Figure 2 – TLD STATIONS

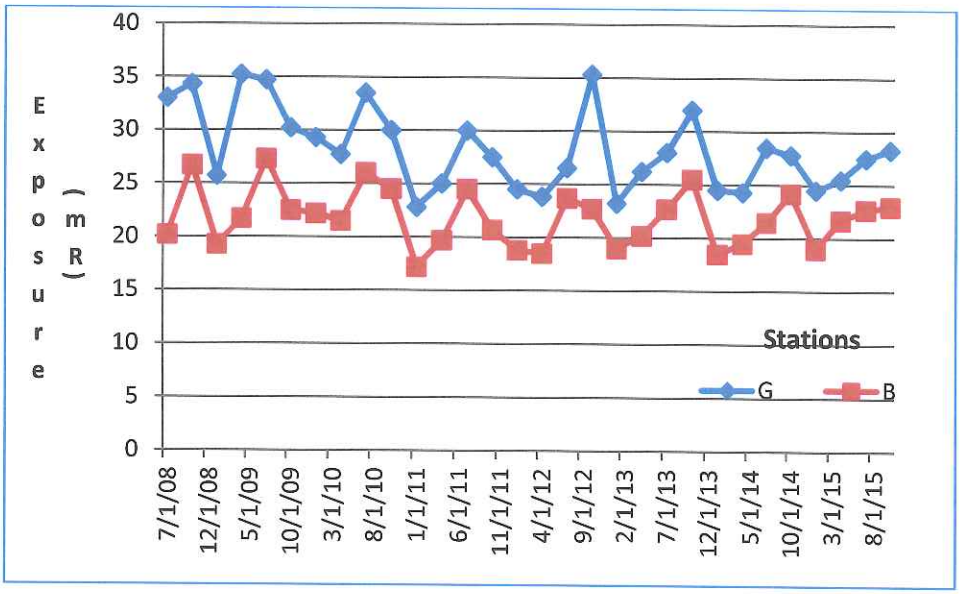

Table 3 – Bailey Cove TLD Results

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)
1	17.8 (17-18)	21.2 (21-22)	21.8 (21-24)	24.3 (24-25)
2	19.2 (19-20)	22.5 (22-23)	22.8 (22-24)	23.8 (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 (Refer to Table 4). 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	20.8 (20-21)	23.8 (23-25)	23.8 (23-25)	25.5 (25-26)
143	19.3 (18-20)	24.8 (24-26)	25.0 (24-27))	26.5 (25-28)
160	20.7 (19-21)	20.3 (20-21)	20.5 (20-21)	22.3 (21-23)

2.2.3 REMP Air Filter Results

2.2.3.1 State's Health and Environmental Testing Laboratory Roof Sampler

Table 5 on the next page 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[3].

Beryllium-7 (Be-7)[4] 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.

[3] 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)

[4] 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.

Table 5 – HETL Air Filter Results*

Positive Results	Quarterly Sampling Period 1st Quarter (fCi/m^3)[4]	2nd Quarter (fCi/m^3)	3rd Quarter (fCi/m^3)	4th Quarter (fCi/m^3)
Gross Beta** (range)	(28.2 – 43.1)	(11.7 – 25.2)	(10.3 – 36.4)	(21.9 – 29.4)
Quarterly Composite (Be-7)	66.9	69.6	71.3	50.3

* 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

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 of 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 of 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.

In 2014 the State was compelled to dispose of over 1,000 decommissioning samples and move over 150 boxes of archived documents that were in storage, pending the completion of the State's Confirmatory Summary Report on its decommissioning findings. The force disposition was brought on by the sale of the storage building and the new owner wanting the storage space.

2.3.2 Confirmatory Report

A final draft of the State's verification and findings from the decommissioning was completed and the Confirmatory Summary Report was submitted to management for their review.

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 2014 soil sample disposal project seriously delayed the 2014 monthly reports, the Inspector was able to issue the February through August reports and started on the September report by the end of 2014. All the 2014 reports were caught up by March 2015. By the end of 2015 the Inspector had completed the November report and had started working on the December report.

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 2014 annual report was completed in August 2015. This 2015 report fulfills the legislative mandate for July 1, 2016.

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 sixth annual National Transportation Stakeholders Forum in Albuquerque, New Mexico. The State Inspector attended the DOE Forum, which highlighted the National Nuclear Safety Administration's (NNSA) briefing on safe and secure transportation of federally owned nuclear weapons and nuclear materials; DOE's operational changes stemming from the February 2014 radiation leak incident and DOE's recovery efforts; NRC's activities on packaging, storing, and transportation of spent nuclear fuel; the Federal Railroad Administration's provided an overview of track discipline, motive power and equipment, signal and train control, hazardous materials, and operating practices, including case studies of large-scale movements by barge and heavy-haul. Other topics included personnel monitoring, emergency response training, a live demo of a Commercial Vehicle Safety Alliance Level VI inspection, a proposed consolidated storage facility in West Texas, and DOE's efforts in moving forward on nuclear waste disposal and their vision for the next two years.

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 updates on the NNSA's efforts on Global Threat Reduction and the planned Canadian shipments from Chalk River, Ontario to the DOE complex at the Savannah River Site in South Carolina. The Seneca Nation of New York provided their perspective on the tribal nation's activities relative to the Canadian shipments through their territory and their oversight of the decommissioning of West Valley's spent fuel reprocessing project. DOE provided a status recovery at the Waste Isolation Pilot Project near Carlsbad, New Mexico. The State Inspector provided a report to the Northeast Task Force on Maine's activities and his participation and involvement in three national working groups on the future state funding for spent fuel shipment emergency preparedness training, on information and communication activities, and spent fuel rail/routing efforts.

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.

In addition to 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 with Texas and New Mexico competing for storing the nation's nuclear stockpile, extended storage, legislation or appropriations, or efforts to implement the President's Blue Ribbon Commission'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 included on-going research activities, reports, the resumption of the Yucca Mountain licensing proceedings, publishing the remainder volumes of the Yucca Mountain safety evaluation report, drafting a supplemental Environmental Impact Statement for groundwater impacts and discharges at Yucca Mountain, segregating some defense-related nuclear wastes for disposal in a separate, deep borehole repository, a Presidential designation of the Basin and Range near Yucca Mountain as a

national monument, DOE's consent-based siting initiative, and NWSC positions on consolidated interim storage, incentives for hosts, Yucca Mountain and permanent disposal, congressional linkage between storage and disposal facilities, transportation, and funding reform. 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 five notable events that occurred during the year. First, the NRC published the remaining two volumes of their five volume Safety Evaluation Report and their draft supplemental environmental impact statement on Yucca Mountain. Next, Waste Control Specialists of Texas informed the NRC that they would be submitting a license application to construct an interim storage facility for spent nuclear fuel. Likewise, a few months later, Holtec International also informed the NRC they would submit their license application for a below ground spent fuel storage facility in New Mexico. Finally, Finland became the first country in the world to approve the construction of a permanent geologic repository for the disposal of spent nuclear fuel.

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 President Obama's information on his signed memorandum revising a 1985 policy signed by President Reagan giving DOE authority to develop a separate repository for defense-related nuclear wastes since some defense wastes was less radioactive, cooler and easier to handle than commercial wastes.

Appendix C illustrates the letters of intent from Waste Control Specialists and Holtec International to construct consolidated interim storage facilities for spent nuclear fuel and high-level radioactive waste in Texas and New Mexico. Both companies are expecting to receive licenses from NRC in 2019 and begin operations by 2021.

Appendix D covers DOE's award of a contract to AREVA, with principal subcontractor KASGRO Rail, to design, analyze, and fabricate cask and buffer railcars that would meet the Association of American Railroads requirements for future large-scale shipments of spent fuel and high-level waste.

Appendix E highlights NRC's issuance of their draft environmental impact statement supplement on the effects to groundwater from radiological and chemical releases from a planned geologic

repository at Yucca Mountain in Nye County, Nevada. The draft report concluded the impacts to the groundwater would be "small."

Appendix F contains DOE's published intent in the Federal Register to seek public comment on what elements should be contained in a consent-based process for the siting of nuclear waste storage and disposal facilities. To facilitate involvement DOE provided five questions to start the public discussion on designing a process.

Appendix G provides a timeline of the other significant individual activities that transpired in 2015 that finally produced movement in communities in Texas and New Mexico to host interim storage facilities for spent nuclear fuel. The timing meshed well with DOE's contract award for the fabrication of cask and buffer cars for transporting spent nuclear fuel and their initiative to develop a national consent-based siting process. For a more complete and comprehensive depiction of the highlights the reader is referred to the individual monthly reports that are available at the following website: http://www.maine.gov/dhhs/mecdc/environmental-health/rad/hp-npow.htm.

Appendix A

Condition Reports

Date	CR #	Description
1/6/2015	15-001	Failure to conduct refresher Briefings based on NRC regulations
1/6/2015	15-002	Self assessment performed on snow removal activities
1/7/2015	15-003	Small oil spill in the Maintenance Building
1/8/2015	15-004	Loss of internet connectivity with off-site vendor
1/8/2015	15-005	Bulk diesel tank nozzle leaking
1/11/2015	15-006	Small leak on the main gate hydraulic cylinder
1/12/2015	15-007	Tractor clipped and chipped a detection system cover while removing snow
1/13/2015	15-008	Ford pickup truck engine light on.
1/13/2015	15-009	Two dampers opened during a lockout/tagout of an electric circuit
1/13/2015	15-010	Component failure in the industrial closed circuit video system
1/16/2015	15-011	Failure to record in a video system due to a video card problem
1/19/2015	15-012	Small oil spill from a parked vehicle
1/19/2015	15-013	One area TLD radiation dosimeter was not collected in 2014
1/19/2015	15-014	Annual preventative maintenance on diesel generator
1/20/2015	15-015	Two separate pieces of equipment found leaking in the Maintenance. Bldg.
1/21/2015	15-016	Procedure non-compliance with personnel access authorization records.
1/22/2015	15-017	Procedure step obstructed by a note in the latest revision
1/22/2015	15-018	Vehicle search requirements not clearly defined
1/22/2015	15-019	Neutral connections to diesel automatic transfer switch wired incorrectly
1/27/2015	15-020	Security system degraded during transient environmental condition
1/27/2015	15-021	Security system degraded during a snowstorm
1/27/2015	15-022	Security system degraded due to a component failure
1/28/2015	15-023	Fuel tank on John Deere was dented
1/28/2015	15-024	Removable media logbook did not record all removable media usage
1/29/2015	15-025	CRs coded as conditions adverse to quality had incomplete closure reviews
2/2/2015	15-026	A resistor required by the Fire Detection Panel was misplaced during work
2/2/2015	15-027	Security system degraded during transient environmental condition
2/2/2015	15-028	Security system degraded during transient environmental condition
2/3/2015	15-029	A hydraulic hose failure on a piece of snow removal equipment]
2/3/2015	15-030	Security system degraded during transient environmental condition
2/5/2015	15-031	Security system degraded during transient environmental condition
2/6/2015	15-032	Radio system problems with several frequencies
2/6/2015	15-033	Lock was found sticking and frozen due to extreme cold weather
2/8/2015	15-034	Security system degraded during transient environmental condition
2/9/2015	15-035	Emergency light was not illuminating properly
2/9/2015	15-036	Tracking areas for improvement from QA surveillance
2/10/2015	15-037	One bolt could not be re-installed in a cask vent screen
2/10/2015	15-038	Door card reader and palm switch were not working properly
2/18/2015	15-039	Key broken off in a weapons storage locker
2/19/2015	15-040	Loss of internet connectivity with off-site vendor
2/19/2015	15-041	Issues with Rad Controls and procedures during vent screen snow removal
2/22/2015	15-042	Loss of internet connectivity with off-site vendor
2/24/2015	15-043	Radiator hose leak from snow removal equipment in Maintenance Building
2/25/2015	15-044	Security system degraded during transient environmental condition
2/26/2015	15-045	Security system degraded during transient environmental condition

2/27/2015	15-046	Loss of internet connectivity with off-site vendor
3/2/2015	15-047	Security system degraded during transient environmental condition5
3/2/2015	15-048	Misplaced unescorted access background check documents
3/3/2015	15-049	Water leak in Maine Yankee temporary construction trailer
3/4/2015	15-050	Water leaked into front Gatehouse
3/5/2015	15-051	A channel on the radio system not working properly
3/11/2015	15-052	One of two state police radio channels not working properly
3/11/2015	15-053	Recurring Housekeeping Issues
3/11/2015	15-054	Personal vehicle damaged on site from another vehicle door opening
3/16/2015	15-055	Self-assessment done to include NRC guidance on suspicious aircraft
3/18/2015	15-056	A Maine State Police telephone number did not work during testing
3/23/2015	15-057	Sole source justification not completed as required for a purchase order
3/24/2015	15-058	Fire extinguisher on a vendor's forklift was expired
3/25/2015	15-059	Construction worker's behavior resulted in assessment for Fitness For Duty
3/26/2015	15-060	Received electric shock from vacuum while trying to pickup snow
3/30/2015	15-061	Errors found in the fourth quarter 2014 environmental TLD data sheets
3/30/2015	15-062	Space heater replaced without the breaker being locked and tagged out
3/31/2015	15-063	Inspection of hardhats found hardhats that needed to be replaced
3/31/2015	15-064	Fire Pond's concrete dam found with degraded overflow piping
4/2/2015	15-065	Individual received slight shock when touching keycard reader at gatehouse
4/6/2015	15-066	Culvert under the roadway near the mailbox at the entrance collapsed
4/7/2015	15-067	Exterior light in yard was going on and off at night
4/8/2015	15-068	Concrete truck had a minor oil spill on the pavement
4/8/2015	15-069	Issued a tracking CR for self-assessment done on a surveillance procedure
4/12/2015	15-070	Security System did not alarm as expected during a personnel transit
4/13/2015	15-071	Emergency light battery pack surveillance did not check one battery pack
4/13/2015	15-072	Procedure data log was missing for one day in March
4/15/2015	15-073	Inconsistency in issuing keys between Security Plan and procedure
4/16/2015	15-074	Surveillance procedure not updated to reflect changes in Radiation Program
4/17/2015	15-075	Emergency Action Limit lacked baseline level for airborne contamination
4/19/2015	15-076	Two teenage trespassers threw rocks at porcupine
4/20/2015	15-077	Emergency Plan procedures inconsistent in specifying Tech Spec requirement
4/21/2015	15-078	Water found leaking into Truck Bay through a buried conduit
4/22/2015	15-079	Small non-reportable spill to pavement from a vendor's forklift
4/22/2015	15-080	Ground fault occurred on Fire Panel
4/28/2015	15-081	New Gator clutch bolt found backing out of the clutch
4/29/2015	15-082	Dose Calculation Manual Change No. 36 lacked change bars in the margin
4/29/2015	15-083	Hot work was being performed without a fire watch
4/30/2015	15-084	NRC incorrectly called Maine Yankee to attend conference call
5/1/2015	15-085	Video recording system experienced a freeze
5/4/2015	15-086	Delivery truck had minor oil spill to pavement
5/6/2015	15-087	Weapons inventory needed updating due to personnel changes
5/10/2015	15-088	Suspicious activity – photographer taking pictures from Ferry Road
5/11/2015	15-089	Inconsistencies found in Emergency Plan procedure
5/11/2015	15-090	Turkey hunters placing decoys in small field across Ferry Road near entrance
5/13/2015	15-091	Adverse trend in nuisance alarm frequency
5/15/2015	15-092	Unknown suspicious aircraft in the vicinity of the facility
5/15/2015	15-093	Identified an incorrect phone number in a security procedure
5/17/2015	15-094	Water leaking into the Truck Bay from construction work
5/19/2015	15-095	Fire Door # 104 not closing properly
5/19/2015	15-096	Suspicious activity – another photographer taking pictures from Ferry Road
5/20/2015	15-097	Security System Degraded
5/26/2015	15-098	Found groundhog burrows near ISFSI concrete pads

6/2/2015	15-099	Tracking CR for lessons learned from Fire-Medical Drill
6/3/2015	15-100	Computer system issue with door alarms
6/4/2015	15-101	Computer backup function was not enabled properly after a reboot
6/7/2015	15-102	Door latch on John Deere Gator utility vehicle was missing
6/7/2015	15-103	An AED defib unit failed its battery check
6/9/2015	15-104	Loss of internet connectivity with offsite vendor
6/10/2015	15-105	Controlled copy of an INPO Manual missing from the Conference Room
6/11/2015	15-106	An overheated extension cord found in construction area
6/14/2015	15-107	Security System Degraded
6/15/2015	15-108	Weapons turnover not in accordance to procedure requirements
6/16/2015	15-109	Procedure non-conformance regarding access list in Alarm Station
6/18/2015	15-110	Tracking CR due to changes in Fire Protection Designee
6/18/2015	15-111	Failure to complete signing in and out of the repository form.
6/18/2015	15-112	Possible software issue regarding computer login screens
6/19/2015	15-113	Temporary light bulb in construction area melting plastic casing
6/19/2015	15-114	Video recorder re-booted itself without any person helping it
6/22/2015	15-115	Fire door closer not working properly
6/23/2015	15-116	Daily log check not completed properly
6/24/2015	15-117	Security system degraded during transient environmental condition5
6/24/2015	15-118	A State Police radio channel not working properly
6/28/2015	15-119	Security and Operations leak in East Wall due to ductwork
6/30/2015	15-120	Cask Resistance Temperature Detector hit by manlift during cask inspections
6/30/2015	15-121	Environmental radiation detector missing but later found
7/4/2015	15-122	Loss of internet connectivity with offsite vendor
7/6/2015	15-123	Procedure compliance not followed during a system outage
7/7/2015	15-124	Compensatory measures not followed by Local Law Enforcement Agency
7/8/2015	15-125	One radio system could not contact Local Law Enforcement Agency
7/8/2015	15-126	Ineffective compensatory measures – should have considered alternate means
7/12/2015	15-127	Industrial camera exhibited poor video quality
7/13/2015	15-128	New screening form not completed in a timely manner
7/13/2015	15-129	Industrial camera field of view found inadequate
7/14/2015	15-130	Procedure noncompliance trend analysis
7/19/2015	15-131	Security system degraded due to environmental conditions
7/21/2015	15-132	Special Nuclear Material Balance Report for 2014 not submitted to records
7/22/2015	15-133	Security system degraded due to environmental conditions
7/28/2015	15-134	Perform evaluation for process improvement for field transfer of weapons
7/28/2015	15-135	Cancellation Regulatory Review Form not signed off properly in 2014
7/28/2015	15-136	Failure to generate purchase requisition for vendor.
7/29/2015	15-137	Security system degraded due to environmental conditions
7/30/2015	15-138	Security system degraded due to environmental conditions
7/30/2015	15-139	Contractor using propane torch without Fire Permit
7/30/2015	15-140	Breaker found incorrectly labeled
7/31/2015	15-141	Security system degraded due to environmental conditions
7/31/2015	15-142	South HVAC unit was not working
8/1/2015	15-143	Lost Keycard
8/5/2015	15-144	Diesel generator failed to swap power
8/8/2015	15-145	New men's room toilet found pulled away from wall
8/10/2015	15-146	Improvement areas identified during a Radiation Protection assessment
8/12/2015	15-147	Loss of on-site power for two hours
8/13/2015	15-148	Tracking recent UPS and Fire Warden alarms from loss of on-site power event
8/15/2015	15-149	Momentary loss of off-site power
8/17/2015	15-150	NRC phone found without a dial tone
8/17/2015	15-151	6 month follow-up assessment was not completed

8/19/2015	15-152	Fire door was not latching consistently
8/21/2015	15-153	Five VHS tapes found labeled as safeguards information
8/21/2015	15-154	Phone in Clean Room was not working
8/24/2015	15-155	Found a room number error in a newly revised operational procedure
8/24/2015	15-156	Remote alarm internet switch not working properly
8/26/2015	15-157	Improper declassification of a safeguards VHS tape
8/27/2015	15-158	Personal vehicle found leaking oil in the front parking area
8/27/2015	15-159	Fire Protection procedure presumed to have deficiencies when there were none
8/31/2015	15-160	Missing data in TLD report but TLD found and results reported
9/2/2015	15-161	Small diesel oil spill onto pavement from a contractor's vehicle
9/3/2015	15-162	Designated instructor forms were not filled out for several individuals
9/6/2015	15-163	Small drone found hovering over the concrete casks
9/11/2015	15-164	Outgoing regulatory correspondence not adhering to administrative procedures
9/14/2015	15-165	Bulk propane tank line found damaged
9/14/2015	15-166	Numerous trouble alarms from back-up cell phone on remote alarm system
9/17/2015	15-167	Loss of a camera during foundation replacement project
9/18/2015	15-168	Video recorder stopped working on several cameras
9/21/2015	15-169	Several security hand held radios were not functioning
9/22/2015	15-170	Ops channel found transmitting over State Police car to car frequency.
9/22/2015	15-171	Electrical safety concerns identified during fuse replacement
9/28/2015	15-172	Fire Hydrant in the northwest corner found with water in it
9/30/2015	15-173	Routine action items were not completed within their required timeframe
10/1/2015	15-174	Procedure not updated after changes were made
10/1/2015	15-175	Floor plug on second floor not rated for foot traffic
10/3/2015	15-176	Security System Degraded due to a camera issue
10/4/2015	15-177	John Deere Gator utility vehicle not running properly
10/5/2015	15-178	Sewer pump trouble alarm was on high level
10/6/2015	15-179	Several electrical safety concerns identified
10/8/2015	15-180	CMP False Alarm Response to Maine Yankee security officers nearby
10/8/2015	15-181	Radiation safety training recommended for local offsite responders
10/14/2015	15-182	Several instances of security officers not filling out security form properly
10/19/2015	15-183	Radiation monitoring system losing its wireless signal
10/20/2015	15-184	Front vestibule inner door had cracked glass
10/21/2015	15-185	Repeat sewer pump trouble alarm
10/22/2015	15-186	Tracked lessons learned items from Emergency Plan drill
10/26/2015	15-187	Repeat issue with wireless signal for fence line radiation monitoring system
10/30/2015	15-188	Coversheets required for safeguard documents
10/31/2015	15-189	Fire Protection procedure contained incorrect step numbers
11/2/2015	15-190	Tracking three deficiencies from quality assurance surveillance
11/2/2015	15-191	Tracking seven areas for improvement from quality assurance surveillance
11/4/2015	15-192	Incorrect time stamp on temperature monitoring computer
11/5/2015	15-193	Security System Degraded due to an equipment malfunction
11/8/2015	15-194	Security System Degraded due to another equipment malfunction
11/8/2015	15-195	Video monitor degrading
11/8/2015	15-196	Old Gator utility vehicle running poorly and taken out-of-service
11/19/2015	15-197	Diesel generator shut down in five minutes after monetary loss of offsite power
11/23/2015	15-198	Trend identified in nuisance alarms
11/25/2015	15-199	Numerous bolts found along the fence line causing a safety concern
11/26/2015	15-200	Long gun mounts for patrol vehicles
11/28/2015	15-201	Process improvement for temporary weapons storage
12/1/2015	15-202	Potential tripping hazard on second floor
12/2/2015	15-203	One radio channel was not working when contacting Lincoln County
12/2/2015	15-204	Light in parking lot turning off and on at different times during the night

12/3/2015	15-205	Evaluate Maine State Police Emergency Notification Process
12/3/2015	15-206	Potential procedure non-compliance regarding weapons storage requirements
12/4/2015	15-207	Two suspicious phone calls
12/4/2015	15-208	Wooden planks between the concrete pads had come loose
12/4/2015	15-209	Identified some chipping of concrete along bottom edge of several casks
12/5/2015	15-210	Fire door received a small dent
12/6/2015	15-211	Earthquake in Waldoboro but no movement felt or seen
12/7/2015	15-212	Track recommendations from Independent Management Assessment
12/10/2015	15-213	Identified procedural weakness with vehicle control
12/11/2015	15-214	Offsite vendor equipment caused trouble alarm
12/12/2015	15-215	Follow-up from previous trouble alarm
12/14/2015	15-216	Battery pack/emergency light not listed on Fire Protection procedure
12/15/2015	15-217	Additional comment raised from Independent Management Assessment
12/17/2015	15-218	Repeat of one radio channel not working when contacting Lincoln County
12/17/2015	15-219	Missing log entry for inventory of two computer thumb drives
12/22/2015	15-220	Heater failed in an equipment cabinet
12/25/2015	15-221	Digital Video Recorder lost recording capability
12/28/2015	15-222	Annual fire procedure review found one procedure requiring a revision
12/30/2015	15-223	Sewer pump trouble alarm due to high groundwater in the sewer vault

Appendix B – President Obama's Memorandum on Disposal of Defense Wastes

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release March 24, 2015

March 24, 2015

MEMORANDUM FOR THE SECRETARY OF ENERGY

SUBJECT: Disposal of Defense High-Level Radioactive Waste in a Separate Repository

Your memorandum and accompanying report of January 9, 2015, analyze the factors enumerated in section 8 of the Nuclear Waste Policy Act of 1982 (the "Act") concerning disposal of high-level radioactive waste resulting from atomic energy defense activities, conclude that a strong basis exists to find a separate repository is required pursuant to section 8 of the Act, and recommend that I make this finding.

In accordance with the Act, I find the development of a repository for the disposal of high-level radioactive waste resulting from atomic energy defense activities only is required.

BARACK OBAMA

# # #

Appendix C – Letters of Intent from Waste Control Specialists and Holtec International

AMERICA'S NUCLEAR SOLUTION

U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Washington, D.C., 20852

February 6, 2015

ATTN: Ms. Catherine Haney, Director
Office of Nuclear Material Safety and Safeguards

LETTER OF INTENT

Dear Ms. Haney:

Waste Control Specialists LLC (WCS) is providing this notice to the Nuclear Regulatory Commission (NRC) of its intent to file an application for a license for the independent storage of spent nuclear fuel and reactor-related greater than Class C wastes in accordance with 10 CFR Part 72.

WCS expects to file the application for a specific license during the first half of NRC's Fiscal Year 2016.

WCS is proceeding to prepare, submit and pursue this application after carefully considering the level of support from our local community, as well as Texas state and Congressional officials.

Just as WCS proceeded with the licensing, construction and operation of its state-of-the-art low-level waste (LLW) disposal facility in Andrews County, Texas only after extensive interactions with the local community, WCS has again engaged with the community to discuss this proposal. In response, the community has formally expressed its support for an interim consolidated spent fuel storage facility, located in Andrews County and operated by WCS, through a resolution passed unanimously by the Andrews County Commissioners' Court on January 20, 2015. A copy of that resolution is enclosed.

Additionally, WCS has taken into account the expressions of Texas officials, most recently the Texas Radiation Advisory Board, stating that Texas can and should be considered for an interim storage facility.

WCS also notes that its plans are consistent with the recommendations of the Blue Ribbon Commission, the Administration's current strategy on used fuel management, and with growing sentiment in the House and Senate that such a facility will be necessary regardless of the status of the program for permanent disposal of used fuel.

Corporate
5430 LBJ Freeway, Ste. 1700
Three Lincoln Centre
Dallas, TX 75240
Ph. 972-715-9800
Fx. 972-448-1419

Facility
P.O. Box 1129
Andrews, TX 79714
Ph. 888-789-2783
Fx. 505-394-3427

By way of background, WCS controls approximately 14,000 acres at the site where its LLW facilities are located, approximately 30 miles west of Andrews, Texas. In accordance with NRC regulations and applicable law, WCS will evaluate several hundred acres at the site as the potential site for a specific license Part 72 facility. WCS envisions a facility that NRC will license and WCS will construct and then operate for an initial period of 40 years with the capability for renewals, dependent upon the progress on a national disposal facility.

WCS's site in Andrews County has been extensively analyzed and characterized, and WCS operates its state-of-the-art LLW disposal facility under licenses from and regulations by the Texas Commission on Environmental Quality.

WCS is working with AREVA, a world leader in the storage and transportation of used nuclear fuel, to, among other things, assist in the development of a high-quality license application and accompanying environmental report. AREVA brings extensive experience and technical expertise to the licensing effort.

WCS looks forward to engaging with the NRC staff in a series of pre-application discussions, during which we can ensure a common understanding of what the Commission requires to facilitate its review of WCS's application and better ensure the mutual commitment of resources associated with the review of the license application for the facility.

Please contact Rod Baltzer (972-450-4235), President of WCS, or me (972-450-9800) with any questions you may have. WCS will contact the NRC Staff to discuss plans and scheduling of pre-application meetings.

Sincerely,

William J. Lindquist, CEO

cc: Stephen G. Burns, Chairman, U.S. Nuclear Regulatory Commission
Kristine L. Svinicki, Commissioner, U.S. Nuclear Regulatory Commission
William C. Ostendorff, Commissioner, U.S. Nuclear Regulatory Commission
Jeff Baran, Commissioner, U.S. Nuclear Regulatory Commission
Mark A. Satorius, Executive Director for Operations, U.S. Nuclear Regulatory Commission

HOLTEC INTERNATIONAL

Holtec Center, One Holtec Drive, Marlton, NJ 08053
Telephone (856) 797-0900
Fax (856) 797-0909

August 3, 2015

Mr. Mark Lombard
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Notice of Intent to License the ELEA Interim Storage facility and Request to Establish a New Part 72 Docket

Reference: Holtec Project number: H-5025
Project Name: ELEA Consolidated Interim Storage Facility

Dear Director Lombard:

We request the NRC to open a part 72 docket to serve as the repository of information on our planned licensing interactions with SFST to establish a Consolidated Interim Storage (CIS) facility on an undeveloped and isolated patch of land in Southeast New Mexico owned by the Eddy-Lea Alliance (ELEA). The proposed away-from reactor (AFR) installation is envisaged to fulfill our national aspiration for an interim storage facility for used nuclear fuel as articulated in the Blue Ribbon Commission's report which was subsequently adopted by the DOE. We are pleased to observe that the prerequisites for a consent-based facility envisioned by the DOE are fully met by the proposed ELEA facility which enjoys overwhelming support of the local community and a strong endorsement of the State's Governor.

We expect the site, which is quite remote (35 miles from the nearest population center) and well investigated (the WIPP facility is only about 12 miles away) to muster environmental qualification without any difficulty.

Holtec International plans to deploy its state-of-the-art HI-STORM UMAX system (docket # 72-1040), which stores fuel safely in a subterranean configuration, and has thus far been adopted by Callaway and SONGS, as well as an earlier low heat load version currently in use at Humboldt Bay. As stated in its FSAR, the HI-STORM UMAX system has been engineered to store the entire complement of canisters currently deployed at ISFSIs around the country. All present Holtec client plants will, of course, become eligible to ship their fuel to ELEA, as will a

prospective client such as Wolf Creek, which can avail itself of the ELEA AFR without having to establish an onsite ISFSI. To serve our existing client with a multi-canister ISFSI, namely SONGS, we plan to expand the contents list of HI-STORM UMAX by incorporating the NUHOMS canisters stored at that site. Thus, we propose a LAR submitted on the HI-STORM UMAX docket that will seek to add SONGS NUHOMS DSCs to the list of approved contents for the HI-STORM UMAX canister storage system. Additionally, we will expand the HI-STORM UMAX contents to include all Holtec canisters, and all canisters from shutdown plants and near term shutdown plants (Connecticut Yankee, Humboldt Bay, Kewaunee, La Crosse, Maine Yankee, Millstone Unit 1, Oyster Creek, Rancho Seco, Trojan, Yankee Rowe, Zion). Further expansion of cask contents in HI-STORM UMAX to include all other canisters deployed at presently operating ISFSIs in the country will be undertaken at a later date in a subsequent submittal of the HI-STORM UMAX licensing application.

The ELEA site specific licensing application will invoke the HI-STORM UMAX FSAR by reference. The work on the site specific licensing application for ELEA is proceeding apace suitably informed by the experience gained in our prior similar work over a decade ago on behalf of Private Fuel Storage, LLC for the Skull Valley, Utah site.

We trust that the low seismicity, the stable desert plateau geology combined with the vanishing small radiation dose and robust missile resistance characteristics of the HI-STORM UMAX system will help make NRC's safety evaluation effort for our New Mexico facility amenable to an expedited and predictable licensing outcome.

Consistent with its mission to serve as a staging venue for the all-welded canisters, the proposed ELEA AFR is being engineered to facilitate convenient and low dose removal of the canisters for their eventual transport to the ultimate repository. Holtec plans to request a 40 year license life for the ELEA facility at this time which, in our considered estimate, is a small fraction of the expected useful service life of the canisters.

A definitive submittal schedule will be finalized after the pre-submittal meeting with SFST, which our Licensing Manager will shortly request from your office to be scheduled at your convenience before the Thanksgiving holiday.

We appreciate your kind consideration of our request to open the docket with Holtec International as the designated licensee of record.

Sincerely,

Stefan Anton
Vice President of Engineering,
Holtec International

Document ID 5025001

Appendix D – DOE's Contract Award to AREVA

AREVA

PRESS RELEASE

AREVA Awarded Contract to Design and Fabricate Railcars for Nuclear Material Transportation

Press Contact

Curtis Roberts
(202) 374-8766
curtis.roberts@areva.com

Denise Woernle
(434) 832-3848
denise.woernle@areva.com

CHARLOTTE, N.C., December 9, 2015 – AREVA Federal Services, an AREVA subsidiary, has been awarded an $8.6 million contract by the U.S. Department of Energy (DOE) for the design and fabrication of prototype railcars for nuclear material transportation. These railcars will be used for large-scale transport of used nuclear fuel and other high-level radioactive material (HLRM) to interim and eventual permanent storage facilities.

This contract includes the conceptual design and dynamic modeling of HLRM transport casks cars as well as buffer cars, which provide spacing between the cask railcars and the locomotive.

Once the concepts are certified by the Association of American Railroads (AAR) for HLRM transport, AREVA will begin the fabrication of the prototype cask and buffer railcars.

"Safe and reliable transportation is a vital component of our country's integrated nuclear waste disposition program," said Tom Franch, president, AREVA Federal Services. "With our commitment to operational excellence and more than 50 years of international experience in nuclear material transportation, we have the resources and expertise to support the DOE's effort to plan and to develop options for execution of this program."

AREVA Federal Services will lead a team that includes KASGRO Rail, the fabricator of the only cask car currently certified for HLRM transport, and Transportation Technology Center, Inc., a railcar dynamic modeling and testing facility. Stoller Newport News Nuclear and MHF Logistics will support conceptual design reviews.

The nuclear transport railcar concepts are an integral part of the DOE's Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste. This outlines a first step in the path to pilot the operation of a national consolidated interim storage facility by 2021 and to site and to license a larger national consolidated interim storage facility by 2025.

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MORE ABOUT AREVA

AREVA in North America (AREVA Inc.) combines U.S. and Canadian leadership to supply high added-value products and services to support the operation of the nuclear fleet. Globally, AREVA is present throughout the entire nuclear cycle, from uranium mining to used fuel recycling, including nuclear reactor design and operating services. AREVA is recognized by utilities around the world for its expertise, its skills in cutting-edge technologies, and its dedication to the highest level of safety. Through partnerships, the company is active in the renewable energy sector. AREVA Inc.'s 4,300 employees are helping build tomorrow's energy model: supplying ever safer, cleaner and more economical energy to the greatest number of people. Visit us at http://us.areva.com or follow us on Twitter: AREVAus.

Appendix E – NRC Issues Draft Groundwater Supplement to Yucca Mountain

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

NRC NEWS
Office of Public Affairs, Headquarters
Washington, DC. 20555-0001
www.nrc.gov ▪ opa.resource@nrc.gov

No: 15-051
CONTACT: David McIntyre, 301-415-8200

August 13, 2015

NRC Issues Draft Supplement to Yucca Mountain Environmental Impact Statement

The Nuclear Regulatory Commission is releasing a draft environmental impact statement supplement on the effects of a permanent repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain. The NRC will begin taking public comments on the draft Aug. 21 upon publication of a notice in the *Federal Register*. The draft can be found on the NRC's website.

In addition to providing written comments, the public will have opportunities to comment at meetings in September at NRC Headquarters in Rockville, Md., Las Vegas and Nye County, Nev., and via a conference call in early October. NRC staff will discuss the draft and how to comment on it in a conference call in two weeks. More information on these meetings will be provided shortly on the NRC's website and in the *Federal Register*.

The draft supplements environmental impact statements the Department of Energy prepared on the proposed repository. DOE issued the final EIS in 2002, then supplemented it in June 2008. Under the Nuclear Waste Policy Act, DOE is responsible for analyzing and proposing mitigation measures for environmental impacts, as required by the National Environmental Policy Act, and the NRC is to adopt DOE's statement to the extent practicable. The NRC staff recommended adoption of DOE's statements in September 2008, but noted two areas needed supplementation with further analysis: potential impacts on groundwater and from groundwater discharges. DOE deferred to the NRC to prepare the supplement.

The supplement finds that the impacts would be "small." It describes the affected environment with respect to the groundwater flow path from the repository. It models that flow path and movement of radiological and non-radiological contaminants. It evaluates the impacts of contaminants at locations where groundwater is currently being withdrawn, and locations of natural surface discharge along the groundwater flow path, considering the effects from possible changes in climate and water withdrawal, and cumulative impacts from other past, present and reasonably foreseeable future activities in the area.

The NRC staff's analysis shows peak estimated radiological doses along the flow path lower than those estimated by DOE for the maximally exposed individual at a location 11 miles south of the repository site. It also shows the impacts from non-radiological contaminants would be "small." This means the environmental effects are not detectable or are so minor they will not destabilize or noticeably alter any important attribute of affected resources.

After considering the comments received, the staff will revise the supplement, as appropriate, before issuing a final supplement in early 2016.

This site displays a prototype of a "Web 2.0" version of the daily Federal Register. It is not an official legal edition of the Federal Register, and does not replace the official print version or the official electronic version on GPO's Federal Digital System (FDsys.gov).

The documents posted on this site are XML renditions of published Federal Register documents. Each document posted on the site includes a link to the corresponding official PDF file on FDsys.gov. This prototype edition of the daily Federal Register on FederalRegister.gov will remain an unofficial informational resource until the Administrative Committee of the Federal Register (ACFR) issues a regulation granting it official legal status. For complete information about, and access to, our official publications and services, go to the OFR.gov website.

The OFR/GPO partnership is committed to presenting accurate and reliable regulatory information on FederalRegister.gov with the objective of establishing the XML-based Federal Register as an ACFR-sanctioned publication in the future. While every effort has been made to ensure that the material on FederalRegister.gov is accurately displayed, consistent with the official SGML-based PDF version on FDsys.gov, those relying on it for legal research should verify their results against an official edition of the Federal Register. Until the ACFR grants it official status, the XML rendition of the daily Federal Register on FederalRegister.gov does not provide legal notice to the public or judicial notice to the courts.

The Federal Register

The Daily Journal of the United States Government

Notice

Invitation for Public Comment To Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

A Notice by the Energy Department on 12/23/2015

This document has a comment period that ends in 5 days (06/15/2016) Submit a formal comment

Action

Notice Of Invitation For Public Comment (Ipc).

Summary

The U.S Department of Energy (DOE) is implementing a consent-based siting process to establish an integrated waste management system to transport, store, and dispose of commercial spent nuclear fuel and high level defense radioactive waste. In a consent-based siting approach, DOE will work with communities, tribal governments and states across the country that express interest in hosting any of the facilities identified as part of an integrated waste management system. As part of this process, the Department wants public input on implementing this system. In order to solicit public feedback, DOE is submitting this Invitation for Public Comment (IPC). Through this IPC, we are requesting feedback from communities, states, Tribes, and other interested stakeholders on how to design a consent-based siting process. In

addition, the Department intends to host a series of public meetings to engage communities and discuss the development of a consent-based approach to managing our nation's nuclear waste.

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- DATES:
- ADDRESSES:
- FOR FURTHER INFORMATION CONTACT:
- SUPPLEMENTARY INFORMATION:
- Background
- Purpose
- Questions for Input
- Next Steps
- Submitting Comments
- Footnotes

DATES:

Written comments will be accepted beginning December 23, 2015 through June 15, 2016. Separate announcements will be made for each public meeting.

ADDRESSES:

You may submit questions or comments by any of the following methods:

Email: Responses may be provided by email to *consentbasedsiting@hq.doe.gov*. Please include "Response to IPC" in the subject line.

Mail: Responses may be provided by mail to the following address: U.S. Department of Energy, Office of Nuclear Energy, Response to IPC, 1000 Independence Ave SW., Washington, DC 20585.

Fax: Responses may be faxed to 202-586-0544. Please include "Response to IPC" on the fax cover page.

Online: Responses will be accepted online at *www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT:

Requests for further information should be sent to *consentbasedsiting@hq.doe.gov*. Please include "Question on IPC" in the subject line.

SUPPLEMENTARY INFORMATION:

Background

Electricity generated by nuclear energy has powered homes, schools, and industry in the United States since the 1950s. Nuclear material is used to power naval vessels and was used to build the U.S. nuclear weapon stockpile during the Cold War. These activities have generated spent nuclear fuel (SNF) and high-level radioactive waste (HLW).

Isolating and containing this radioactive waste is necessary to ensure the long-term safety and security of the public and environment. Though the Cold War ended a quarter century ago and commercial nuclear power has been generated for over half a century, the country still lacks a permanent disposal solution for SNF and HLW. Instead, commercial SNF is stored at operating and shutdown reactor sites around the country while HLW from defense activities resides at Department of Energy sites. Previous attempts to develop long-term solutions for storage and disposal of this waste have resulted in controversy, litigation, protracted delays, and ultimately a failure to address the problem.[1]

Failure to dispose of nuclear waste has proven costly for energy ratepayers and taxpayers who are paying for the inability of the government to meet federal waste management commitments. States, Tribes, and others in the public carry the undue burden of hosting radioactive waste they were promised was only temporary.[2] Collectively, we have the responsibility to dispose of waste using a process that is fair to present and future generations. We must live up to our obligations and develop a lasting solution.

Purpose

The purpose of this IPC is to seek input on the elements that the Department of Energy should consider in the development of a consent-based siting process. As reflected in the Administration's *Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Waste* (Strategy),[3] the Department concurs with the recommendation from the Blue Ribbon Commission on America's Nuclear Future that a phased, adaptive, consent-based siting process is the best approach to gain the public trust and confidence needed to site nuclear waste facilities. As the Department begins to consider a process for consent-based siting, we want to hear from all interested parties.

The Administration's Strategy envisioned the implementation of an integrated waste management system consisting of a range of nuclear waste facilities, each serving a specific role, to address the challenges facing the U.S. These nuclear waste facilities could include:

- A pilot interim storage facility with limited capacity capable of accepting used nuclear fuel and high-level radioactive waste and initially focused on serving shut-down reactor sites;
- A larger, consolidated interim storage facility, potentially co-located with the pilot facility and/or with a geologic repository, that provides the needed flexibility in the waste management system and allows for important near-term progress in implementing the federal commitment;
- Deep borehole disposal, which could be an option for disposal of smaller and more compact waste forms currently stored at Department of Energy sites;

- A permanent geologic repository for the disposal of defense high-level waste and, potentially, some DOE-managed spent nuclear fuel, which would be generally less radioactive, cooler, and easier to handle, enabling a simpler design and earlier availability; and
- A permanent geologic repository for the disposal of commercial spent nuclear fuel.

In early to mid-2016, the Department of Energy will host a series of public meetings to receive input for the design of a consent-based siting process. This IPC announces the Department's intention to hold meetings and to request input about what considerations are important when designing a fair and effective process for consent-based siting. Written input as well as feedback from public meetings will enable the Department to draft the initial steps on a proposal for a phased, adaptive, consent-based process for selecting sites.

Moving forward, the Department of Energy will draw upon extensive experience in storage, transportation, siting, policy, legislative, and regulatory issues both in the U.S. and elsewhere. A top priority is to build upon and improve existing relationships with states, Tribes, communities, and stakeholders to help identify important considerations, challenges, and opportunities for discussion.

Questions for Input

(1) How can the Department of Energy ensure that the process for selecting a site is fair?

Consent based siting seeks to ensure fairness in the distribution of costs, benefits, risks and responsibilities now and in future generations. How, in your view, can fairness be best assured by the process for selecting a site?

(2) What models and experience should the Department of Energy use in designing the process?

The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

(3) Who should be involved in the process for selecting a site, and what is their role?

The Department believes that there may be a wide range of communities who will want to learn more and be involved in selecting a site. Participation in the process for selecting a site carries important responsibilities. What are your views on who should be involved and the roles participants should have?

(4) What information and resources do you think would facilitate your participation?

The Department of Energy is committed to ensuring that people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

(5) What else should be considered?

- A permanent geologic repository for the disposal of defense high-level waste and, potentially, some DOE-managed spent nuclear fuel, which would be generally less radioactive, cooler, and easier to handle, enabling a simpler design and earlier availability; and
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The challenges and opportunities of site selection drive us to continue to learn from previous or ongoing examples. From your perspective, what experience and models do you think are the most relevant to consider and draw from in designing the process for selecting a site?

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(4) What information and resources do you think would facilitate your participation?

The Department of Energy is committed to ensuring that people and communities have sufficient information and access to resources for engaging fully and effectively in siting. What information and resources would be essential to enable you to learn the most about and participate in the siting process?

(5) What else should be considered?

The questions posed in this document are a starting point for discussion on the design of the process for consent-based siting of nuclear waste facilities, the Department of Energy would like to hear about and discuss any related questions, issues, and ideas that you think are important.

Next Steps

Written comments from this IPC, along with input from public meetings, will be documented in a draft report scheduled to be released in summer 2016. The Department is planning to solicit comments on the draft report in order to ensure the content accurately reflects input received.

If you are unable to attend a public meeting or would like to further discuss ideas for consent-based siting, please propose an opportunity for us to speak with you. The Department will do its best to accommodate requests and help arrange additional opportunities to engage. To learn more about nuclear energy, nuclear waste, and ongoing technical work please see *energy.gov/consentbasedsiting.*

Submitting Comments

Instructions: Submit comments via any of the mechanisms set forth in the ADDRESSES section above. Respondents are requested to provide the following information at the beginning of their response to this IPC:

State, tribal, community, organization, public or individual name;

State, tribal, community, organization, public or individual point of contact; and

Point of contact's address, phone number, and email address.

If an email or phone number is included, it will allow the DOE to contact the commenter if questions or clarifications arise. No responses will be provided to commenters in regards to the disposition of their comments. All comments will be officially recorded without change or edit, including any personal information provided. Personal information (other than name) will be protected from public disclosure upon request.

Please identify your answers by responding to a specific question or topic, if possible. Respondents may answer as many or as few questions as they wish. Any additional comments that do not address a particular question should be included at the end of your response to this IPC as "Additional Comments."

DOE would appreciate early input in order to identify initial interest and concerns, as well as any early opportunities. Amended or revised inputs from commenters are also welcome throughout the comment period to help DOE develop this process. Comments received after the closing date will be considered as the planning process progresses; however, the DOE is only able to ensure consideration of comments received on or before the closing date as the initial phase of the consent based siting process is developed. Subsequent comments and input will also be welcome as DOE views this as a core component of a phased and adaptive consent-based siting process.

Privacy Act: Data collected via the mechanisms listed above will not be protected from the public view in any way.

Issued in Washington, DC, on December 15, 2015.

Andrew Griffith,

Associate Deputy Assistant Secretary for Fuel Cycle Technologies, Office of Nuclear Energy, Department of Energy.

[FR Doc. **2015-32346** Filed 12-22-15; 8:45 am]

BILLING CODE 6450-01-P

Footnotes

1. Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy, January 2012. *http://energy.gov/ne/downloads/blue-ribbon-commission-americas-nuclear-future-report-secretary-energy*.

Back to Context

2. Ibid.

Back to Context

3. Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste, January 2013. *http://www.energy.gov/downloads/strategy-management-and-disposal-used-nuclear-fuel-and-high-level-radioactive-waste*.

Back to Context

Appendix G – Newsworthy Items

- On January 8, DOE filed with the New Mexico Environment Department a request for hearing and answer to challenge New Mexico's administrative order requiring compliance and assessing civil penalties to DOE and the Waste Isolation Pilot Plant (WIPP).
- On January 9, Senator Susan Collins responded to the Chair of Maine Yankee's Community Advisory Panel expressing her appreciation of the CAP's support for her efforts in Congress in promoting the establishment of a pilot interim storage facility for spent nuclear fuel from thirteen permanently shutdown nuclear power sites in the country.
- On January 12, DOE's Assistant Secretary for Nuclear Energy responded to the Minnesota Public Utilities Commissioner's concerns over the DOE's October 2014 report that recommended disposal of some defense-related wastes in a separate repository other than one for commercial spent nuclear fuel by reiterating the Administration's 2013 strategy of a consent-based siting approach and a pilot interim storage facility.
- On January 13, the Council of State Government's Eastern Regional Conference's Northeast High-Level Radioactive Waste Transportation Task Force submitted to DOE the Interregional Team's third progress report toward the development of protocols for implementing Section 180 (c) of the Nuclear Waste Policy Act (NWPA) for training local officials in safety and emergency preparedness for spent nuclear fuel shipments. The report also included the principles of agreement among states on expectations regarding preparations for spent nuclear fuel shipments and state recommendations on funding state expenses in carrying out its responsibilities under the NWPA.
- On January 16, the Oak Ridge National Laboratory developed a new system to test the vibration effect on high burn-up fuel that was more prone to increased corrosion, hydride precipitation, and high levels of radiation induced damage to cladding and fuel pellets, which could impact the spent fuel's dynamic performance under road or rail conditions.
- On January 20, the Commissioners of Andrews County, Texas adopted a resolution that favored establishing a consolidated interim storage facility in Andrews County for spent nuclear fuel and high-level waste.
- On January 22, the Canadian Nuclear Waste Management Organization announced that of the six communities in Northern Ontario taking part in the first phase of the preliminary assessments four were identified for future study and two were disqualified.
- On January 26, Ukraine's nuclear power plant operator, Energoatom, signed an amendment to Holtec International's contract for a central used fuel storage facility, including the design and supply of spent nuclear fuel dry storage, transport, and related equipment for the Chernobyl site.
- On January 29, the NRC published the final two volumes (Volumes 2 and 5) of their Safety Evaluation Report on Yucca Mountain, which completed their safety review of the DOE's Yucca Mountain license application.
- On January 30, Switzerland's national radioactive waste disposal cooperative, Nagra, selected two sites for further study for hosting a deep geologic repository for high-level waste in its third and final stage.
- On February 3, Wiscasset Selectmen decided at their bi-weekly meeting to send a letter to the federal government urging them to move the spent fuel from the Maine Yankee site.
- On February 6, Waste Control Specialists, the operator of a low-level radioactive waste facility in Andrews County, Texas, announced their intention to submit an application to the NRC by April 2016 to license an interim consolidated storage facility with the goal of starting to store the spent fuel from commercial nuclear power plants by the end of 2020.
- On February 25, U.S. Court of Federal Claims granted the government's motion to dismiss Southern Company as a party to the lawsuit since the government's breach was with Georgia Power, denied the government's request on the prejudgment interest since the issue was not ripe for ruling, and granted the

government's motion to prohibit the recovering of future damages and limit them only to those that were incurred.

- On February 25, the Chair of the House Committee on Energy and Commerce along with the Chairs of the Subcommittees on Environment and Economy and Oversight and Investigations forwarded a letter to the Secretary of Energy expressing their anxieties about the potential impacts of any planned activities near the Yucca Mountain site in Nevada that would affect the adequacy of the site.
- On March 3, after performing new geological studies near Creighton, Saskatchewan and Schreiber, Ontario, Canada's Nuclear Waste Management Organization concluded that the geology of each locality was unsuitable for hosting a repository for spent nuclear fuel. Nine other communities in Ontario were still undergoing further studies and evaluations.
- On March 4, the DOE's Principal Deputy Assistant Secretary for Nuclear Energy responded to the House Chair's February 25 letter and confirmed that both agencies were not proposing any activities at the Yucca Mountain site.
- On March 10, Senators Reid and Heller from Nevada introduced Nuclear Waste Informed Consent Act that would require the consent of the affected State and local governments and Indian Tribes before the NRC could authorize the construction of a nuclear waste repository and would provide a state, municipality, or tribe new veto powers over storing waste at any future proposed site.
- On March 12, with DOE refusing to supplement their original Environmental Impact Statement (EIS), NRC announced that the staff would prepare a groundwater supplement to Yucca Mountain's EIS. The supplement will focus on how both radiological and chemical contaminants could impact the aquifer and provide additional information on the impacts from surface discharges of groundwater, the cumulative amount of radiological and chemical contaminants that enter the aquifer from the repository, the amount reasonably expected to remain over time, and estimated amounts of contaminants deposited at or near the surface and their potential impacts.
- On March 17, DOE's independent Technical Assessment Team that investigated the Waste Isolation Pilot Plant's radioactive waste drum breach in the underground repository that released airborne radioactive material into the environment and contaminated 21 workers with low levels of radioactivity, concluded that only one drum was involved and the breach was caused by a reaction of nitrate salt residues, kitty litter, and a neutralizing agent that created an internal build-up of gasses that forced the drum's lid to open thereby releasing the radioactive gases.
- On March 24, with justification that some defense wastes were less radioactive, cooler and easier to handle than commercial wastes. President Obama signed a memorandum revising President Reagan's 1985 policy giving DOE authority to develop a separate repository for defense-related nuclear wastes.
- On March 24, a Bipartisan Senate Coalition introduced the "Nuclear Waste Administration Act of 2015" that would create an independent government agency to manage nuclear wastes, established a consent-based process for siting nuclear waste facilities, adopt a linkage between the siting of storage and disposal facilities, create a new working capital fund, and allow Energy Secretary to determine how best to dispose of defense-related wastes.
- On March 25, the NRC Chair forwarded to the House Chair of Energy and Commerce the Commission's monthly status report on its activities on the Yucca Mountain licensing proceedings as mandated by the D.C. Circuit Court of Appeals noting the Commission's approval of other SER activities going forward such as records retention, the development of a lessons learned report, and making their Licensing Support Documents on Yucca Mountain publicly available.
- On April 10, the Governor of New Mexico forwarded a letter to Energy Secretary Moniz notifying him of her support for the local communities of Carlsbad and Hobbs and Eddy and Lea counties that wish to locate and site a consolidated interim storage facility for spent nuclear fuel in southeastern New Mexico.
- On April 14, the Chair and Ranking Member of the House Committee on Energy and Commerce sent a letter to the Secretary of Energy expressing their concerns over President Obama's recent determination to develop a separate repository for defense-related spent fuel and high-level wastes and requested responses to ten questions that included DOE's use of federal monies for defense related activities at

Yucca Mountain, how quickly a geological repository for civilian nuclear waste could be constructed under the best of circumstances, the use of deep borehole technology for disposal, cost estimates for shared and separate repositories, and the technical and legal basis for changing the policy.

- On April 29, Holtec International and the Eddy-Lea Energy Alliance announced the signing of an agreement for plans to design, license, construct and operate an underground interim spent fuel storage facility for 3600 dry casks near the cities of Carlsbad and Hobbs, New Mexico.
- On April 30, the Governor of New Mexico and the DOE Secretary announced the terms of a $73 million settlement on the State's claims against DOE and its contractors for the truck fire and radioactive release at the WIPP facility in February 2014.
- On April 30, the Nuclear Waste Strategy Coalition issued a call to action to key congressional leaders for the federal government to meet its legal obligations and address nuclear waste policy in the United States by funding the appropriate oversight agencies to complete the Yucca Mountain License Application, by promoting and constructing a consolidated spent nuclear fuel storage facility with priority given to shutdown reactor sites, and by prompting DOE to engage host communities, certify rail cars, and prepare the transportation infrastructure for a national spent fuel shipping campaign.
- On May 1, the House approved the Fiscal Year 2016 Energy and Water Appropriations Bill by a vote of 240-177 that included $150 million for DOE's nuclear waste disposal program and $50 million for NRC to continue the Yucca Mountain licensing proceedings.
- On May 15, the Energy Communities Alliance (ECA) sent a letter to the House Chair of the Energy and Commerce Committee responding to the Chair's April 14th letter to Energy Secretary Moniz expressing their agreement with the concerns presented in the Chair's letter to DOE and by highlighting seven advantages for prioritizing defense waste over commercial wastes. They also conveyed that the present situation has resulted in their communities serving as de facto high-level waste storage sites.
- On May 15, Energy Secretary Moniz responded to the House Chair's April 14 letter on President Obama's recent finding to seek the development of a separate repository for defense-related wastes by presenting the basis for the 1985 decision to co-mingle commercial and defense spent nuclear wastes, what changed over time, and why the original assumptions supporting the comingling were no longer valid. The Secretary also outlined what efforts were underway for implementing field testing of the deep borehole concept and the development of a consent–based siting process.
- On June 16, Representative Conaway from Texas introduced the Interim Consolidated Storage Act of 2015 to amend the Nuclear Waste Policy Act by authorizing DOE to develop its own storage facility or contract with a private company, removing the Yucca Mountain land and water rights issues as impediments to the licensing process, expanding the disposal capacity of the Yucca site to above the current 70,000 ton limit, directing DOE to take title to the spent nuclear fuel, and increasing financial incentives to the hosting state.
- On June 16, the U.S. Nuclear Waste Technical Review Board issued a report in response to the Administration's decision to develop two mined repositories, one for defense-related wastes and the other for commercially wastes. The report recommended consideration of waste form performance in different host-rock types, a better understanding of the degradation rates of DOE spent nuclear fuel types, evaluation of approaches, benefits, and costs of repackaging cooler naval spent nuclear fuel into smaller disposal packages, and assess whether more robust engineered barriers might be required for disposing of selected waste forms in deep boreholes.
- On June 22, the Georgia Public Service Commission forwarded a letter to the Georgia Congressional delegation seeking their help in urging Congress to move forward past the stalemate on spent nuclear fuel by advocating funding for the Yucca Mountain license application, pressing for consolidated interim storage with priority to shutdown sites, funding and governance reform for the nation's nuclear waste program, and supporting transportation infrastructure.
- On June 24, the Swedish Radiation Safety Authority issued its preliminary findings on the construction application submitted by SKB, the builder and operator of the impending spent nuclear fuel repository at

Forsmark that it was cautiously optimistic that the proposed facility could meet the country's 100,000 years radiation protection standards.

- On July 3, Bond Technologies of Elkhart, Indiana, landed a contract with Posiva Oy, the firm responsible for the disposal of spent nuclear fuel in Finland, to build a special welding machine to secure the lids on spent fuel copper barrels designed to last 100,000 years.
- On July 8, DOE issued a request for proposals to perform deep borehole testing for up to five years in order to conduct site and borehole characterization investigations.
- On July 9, SKB International, Sweden's national radioactive waste management company, signed a three year contract to assist Taiwan in drawing plans for a final repository for spent nuclear fuel.
- On July 10, President Obama designated a 704,000 acre parcel in the Basin and Range in Nevada as a new national monument, which included the proposed Caliente Rail line that would have transported spent nuclear fuel shipments to Yucca Mountain in Nye County, Nevada.
- On July 16, the Bipartisan Policy Center, a Washington think tank, announced a nuclear waste primer series of five briefs over the next few months covering such issues as options for consolidated storage, state's authority to regulate, Yucca Mountain, options and limits for presidential executive action, and transportation. The first two briefs on options for consolidated storage and state's authority to regulate were published.
- On July 17, the U.S. Court of Federal Claims ordered the federal government to pay Entergy Corporation's Palisades's nuclear plant in Michigan $20.6 million for partial payment for failing to take the plant's spent nuclear waste with $15.7 million still outstanding and being litigated.
- On July 22, Senators Reid and Heller from Nevada introduced the Nuclear Waste Informed Consent Act, that would prevent the Energy Department from making payments for transporting nuclear waste through Nevada without first receiving consent from the Governor, local officials, and tribal leaders.
- On July 29, Holtec International disclosed that it will submit a letter of intent to NRC next month to construct and operate a consolidated interim storage facility for spent nuclear fuel in New Mexico by 2020. The letter will trigger a pre-application meeting later this year with the goal of submitting an application by June 2016.
- On July 30, Oak Ridge National Laboratory (ORNL) reported that researchers have developed a Cyclic Integrated Reversible-Bending Fatigue Tester to bend a spent fuel rod sample and measured the forces that represent the dynamic vibrations during transport.
- On August 3, Holtec International sent a letter to NRC's Division Director of Spent Fuel Management requesting to establish a new part 72 docket for the purpose of their intent to license the Eddy-Lea Alliance consolidated interim storage facility in southeast New Mexico.
- On August 13, NRC published a draft environmental impact statement (EIS) supplement to DOE's original EIS on Yucca Mountain that concluded the impacts as "small" with a 1.3 mrem peak dose 11 miles south of the Yucca Mountain site in the Armagosa Desert.
- On August 21, the NRC published in the Federal Register Notice the three public meeting locations on the draft supplement to the EIS on Yucca Mountain, Rockville, Maryland, Las Vegas, Nevada, and Nye County's Amargosa Valley, Nevada, in Yucca Mountain's backyard.
- On August 21, the DOE awarded a contract to AREVA, with principal subcontractor KASGRO Rail, to design cask and buffer railcars that will meet the Association of American Railroads (AAR) requirements for future large-scale transport of spent nuclear fuel and high-level waste.
- On August 31, the Nuclear Waste Technical Review Board forwarded a letter to the Acting Assistant Secretary for Nuclear Energy at DOE informing him of the pending technical challenges in meeting regulatory requirements for transporting commercial spent fuel and developing robust inspection tools to identify stress corrosion cracking, crack initiation and growth, the urgency for DOE to publish their transportation planning tools to enhance stakeholder involvement, and the necessity to better understand standardized canisters for storage and transportation.
- In August, the Bipartisan Policy Center (BPC), a Washington think tank, published its third brief on the pros and cons for restarting the Yucca Mountain Project.

- On September 3rd the DOE released a revised report, entitled "Initial Standardized Canister System Evaluation." This initial evaluation noted that there was a noticeable need for more information in the repackaging of stored spent fuel in welded canisters, in the relative costs associated with the size of the waste packages, and the need for significant data collection and verification as present experience and data were limited.
- On September 3rd Sweden's Radiation Safety Authority's preliminary review of the Swedish nuclear fuel and waste management company's (SKB) repository licensing application indicated that it had met several regulatory requirements with further opinions due later this year and a final assessment in 2017.
- On September 9th the House Subcommittees of Energy and Power and Environment and the Economy held a joint public meeting on the oversight of the NRC. The four Commissioners testified before the Subcommittees on the Commission's activities, with the NRC Chairman highlighting the Commission's draft supplemental environmental impact statement on groundwater impacts at Yucca Mountain and its preparation for two anticipated license applications for consolidated interim storage facilities, one in New Mexico and the other in Texas.
- On September 10th AREVA Federal Services made a presentation to DOE on their project scope for the design and prototype fabrication of railcars for the transport of high-level radioactive material. Phase 1 will involve the conceptual design of the ATLAS cask and buffer railcars, the cask loading procedures, and the functional and operational requirements of the cask and buffer railcar designs. Phase 2 will encompass the preliminary design and submittal package to the Association of American Railroads (AAR) for approval. Phase 3 will include material procurement and fabrication of the railcars and delivery to AAR's testing site.
- On September 15th Nevada's Governor issued a letter to the NRC reiterating the State's position that Yucca Mountain was an unsafe repository site based on an unworkable waste management plan and that DOE was lacking the necessary land and water rights to secure a construction authorization for the proposed repository.
- On September 15th the NRC held a public meeting in Las Vegas to receive public comments on their 173 page draft environmental study on the groundwater impacts from the radioactivity released from the proposed Yucca Mountain repository. Of the 80 or so persons present, most of the speakers opposed the project, but the Nye County Commissioner declared that 9 of the 17 counties in Nevada support Yucca.
- On September 25th the Nuclear Waste Strategy Coalition sent a letter to DOE Secretary Moniz urging him to pursue funding for the agency's 2017 fiscal budget funds for preparing the nation's infrastructure for spent fuel shipments, to engage with potential hosts of consolidated interim storage or disposal facilities, to complete the Yucca Mountain licensing process, for fabricating cask and buffer railcars, and supporting financial and technical assistance to states for training tribal and local officials along the shipping routes.
- On September 29th Representative Michael Conaway from Texas along with 15 cosponsors introduced in the House the "Interim Consolidated Storage Act of 2015," which proposed authorizing the Energy Secretary to enter into any contracts for the storage of spent nuclear fuel, to take title of the nuclear wastes, and to use funds from the Nuclear Waste Fund to pay for fees and costs associated with the storage of those wastes.
- In September the Bipartisan Policy Center issued two more briefs in its nuclear waste primer series. The first was entitled, "Transporting Spent Nuclear Fuel in the United States: An Assessment of Current Capabilities and Future Challenges." The brief summarized the challenges as 50 unique storage canister designs, the special railcars that have to be built, the upgrading of rail, road, and barge infrastructure, the limited capabilities to transfer storage canisters to transportation casks at shutdown reactors, the management challenges of a new organization, the complexity of the regulatory oversight from several government agencies, the roles of state, tribal, and local governments, and the historical lack of consistent funding. The second summarized the key actions that can be taken under current statutory authority such as developing consolidated interim storage sites, preference given to shutdown/decommissioned sites, and changing the timing and method of the Nuclear Waste Fee.

- On October 1st the House Subcommittee on Environment and the Economy held a forum to discuss current efforts to transport nuclear materials, opportunities for states and local stakeholder involvement, and DOE's plans to resume the National Transportation Project for shipping spent nuclear fuel.
- On October 1st the National Transportation Stakeholders Forum held a webinar that dealt with safety and hazmat training through exercises, drills, inspections, and interface with emergency response agencies with a special emphasis on how private ownership of the rail lines affected operations and oversight, and how decisions regarding scheduling and routing could be driven by business considerations.
- On October 1st the NRC held a public meeting to discuss the Commission's work in spent fuel storage and transportation that included licensing improvements, establishing a renewal regulatory framework for the impending surge of 35 storage renewals in 2020 and risk informing it, resolving technical issues such as chloride induced stress corrosion cracking, high burnup fuel, in service inspections, and thermal modeling, improving efficiency for the safety-security interface, and managing aging processes and time-limited aging analyses for concrete containers and spent fuel canisters.
- On October 6th the four regional transportation committees sent a letter to the Acting Assistant Secretary to the DOE's Office of Nuclear Energy alerting him of their disappointment when it came to DOE's internal review process for releasing draft information that was consulted on or for DOE to provide draft documents requested by the regional groups.
- On October 6th NRC's Executive Director of Operations issued a memorandum to postpone for five years the proposed security rulemaking on security requirements for facilities storing spent nuclear fuel and high-level waste.
- On October 6th the President and CEO of Connecticut Yankee and Chief Nuclear Officer of Maine Yankee forwarded a letter to Connecticut Congressman Courtney applauding his initiative to co-sponsor the "Interim Consolidated Storage Act of 2015" that would provide for the priority removal of stranded spent nuclear fuel at shutdown reactor sites, allow the Secretary of Energy to enter into contract with private companies that hold a license for an interim consolidated storage facility, and, very importantly, allow for the transfer of title of the spent nuclear fuel from the nuclear utilities to the Energy Secretary.
- On October 7th the National Transportation Stakeholders Forum's Rail/Routing Ad Hoc Working Group held a web meeting to develop a common understanding of how future rail selection criteria such as track class, signal type, route clearances, and carrier interchanges will be factored into shipments of spent nuclear fuel, identify outstanding issues or questions to resolve in advance of commercial shipping campaigns, and facilitate a dialogue between DOE and Federal Rail Administration and Tribes and states.
- On October 8th the U.S. Nuclear Infrastructure Council forwarded a letter to both Chairs and Ranking Members of the Senate and House Appropriations Committees urging them to appropriate funds for DOE and NRC to complete the Yucca Mountain licensing process, to establish consolidated storage for shutdown sites, and provide infrastructure and other transportation needs to support a national shipping campaign.
- On October 19th the National Transportation Stakeholders Forum held a webinar on how NRC regulates of spent nuclear fuel shipments, how spent nuclear fuel shipment routes are reviewed and approved, when advance notification of shipments are provided to states and tribes including their timing and restrictions on sharing safeguards information.
- On October 20th the U.S. Nuclear Waste Technical Review Board held an international workshop on Deep Borehole Disposal that featured an international perspective on the Borehole concept, experience in deep drilling in crystalline rock, emplacement methods at depths of two to three miles underground, borehole seals, hydrogeology and geochemistry of fluids at depth, multiple barriers, efficacy of the concept and risk analysis.
- On October 20th the Council of State Governments Eastern Regional Conference's Director of the Northeast's Transportation Task Force transmitted to the DOE the states evaluation report of the DOE's grant approval process for future funding of shipping spent nuclear fuel which noted that the previous DOE cost assumptions for funding states were underestimated, state involvement greatly exceeded

DOE's estimates, DOE's planning tool needed further development, and any future exercise needed to test DOE's funding allocation formula.

- On October 21st the Black Mountain Research Organization provided to Nevada's Agency for Nuclear Projects a summary of all the congressional districts potentially affected by shipments to Yucca Mountain in Nevada.
- On October 27th the Bipartisan Policy Center held a live webcast to explore the major themes that surfaced at five regional meetings discussing America's nuclear waste management program with industry and community leaders. Three themes stood out; consent-based siting, the need for a separate agency to manage the nation's nuclear stockpile, and transportation.
- On October 27th the Nuclear Information and Resource Service issued a press release stating that a new map showed the Washington, D.C. metropolitan area would be part of a corridor for over 250 nuclear waste shipments from reactors in Virginia and Maryland.
- On October 28th the Nuclear Waste Strategy Coalition sent a letter to both the House and Senate Chairs and Ranking Members Appropriations Subcommittees urging them to fund for Fiscal Year 2016 a re-start of the government's spent nuclear fuel management program without any more delays while advocating for consolidating spent fuel storage with priority given to shutdown reactor sites, completing the Yucca Mountain license application review process, preparing the transportation infrastructure for a national shipping campaign, and engaging potential host communities.
- On October 29th the Nuclear Waste Management Organization of Canada completed the first phase of its Preliminary Assessment for Central Huron in Ontario on its geologic fitness, community profile and well-being, and the environment. The municipality was assessed as having the potential to meet the site selection criteria for the disposal of spent nuclear fuel.
- On November 5th the Idaho National Laboratory published their transactions report from the fuel cycle technologies annual meeting that highlighted the nuclear fuel storage and transportation program's efforts on consent-based siting, storage, transportation, and strategic crosscuts besides the used fuel disposition research and development efforts to support storage, transportation, and disposal in the near-term and long-term. In addition, the report also discussed deep borehole testing, international collaboration on disposal research, modeling spent fuel under transportation and storage loads, and the development of inspection and robotic systems for dry storage casks.
- On November 4th an article was published in the South China Morning Post that indicated a team of Chinese scientists had developed an external, accelerator-driven proton beam to generate enough fast neutrons to change heavy elements such as plutonium, americium and other long lived radioactive elements into elements with much shorter half-lives decreasing significantly the geologic isolation time for disposal from the current million years to a few hundred years.
- On November 6th Duke Energy submitted their comments to the NRC on their draft Supplement Environmental Impact Statement (EIS) on the Yucca Mountain groundwater system and agreed with the staff's conclusion that the groundwater impacts would be small by attaching a table comparing the maximum calculated groundwater dose with other activities that a U.S. citizen would normally be exposed to radiation and urged the NRC to seek funding from Congress to complete the Yucca Mountain licensing application process.
- On November 10th Eureka County in Nevada forwarded their comments to the NRC on the staff's draft supplement to the EIS on groundwater for the Yucca Mountain repository. The County argued that the NRC's draft EIS did not meet the National Environmental Policy Act, that the NRC's generic EIS on continued storage of spent nuclear fuel contradicted the Yucca Mountain EIS, and that a new draft supplemental EIS be composed and reissued for public review and comment.
- On November 12th the Bipartisan Policy Center held a meeting to discuss moving forward on nuclear waste that included Korea's spent nuclear fuel management program, consolidated storage, defining consent-based approaches, and factors affecting geological suitability of repository sites.

- On November 12th Finland became the first country in the world to approve the construction of a permanent underground repository for spent nuclear fuel on Olkiluoto Island. Construction will start in 2016 and the facility was expected to receive an operating license and begin operation in 2023.
- On November 16th the Chairs of the Communities and Citizens Advisory Panels for Maine, Connecticut, Massachusetts, and Vermont forwarded a letter to Senator Leahy of Vermont and other members of the New England declaring that indefinite on-site storage of spent nuclear fuel in their communities was unacceptable and instituting a pilot consolidated storage facility focused on the stranded spent fuel at their sites would go a long way in relieving their communities' burden by returning these sites to productive use.
- On November 17th the Nuclear Energy Institute (NEI) forwarded their comments to the NRC's draft supplement to DOE's EIS on the Yucca Mountain repository in Nevada and urged NRC to complete the Yucca Mountain licensing process by having their Atomic Safety and Licensing Board rule on the 299 contentions to the license application.
- On November 17th the Yankee Atomic Electric Company submitted comments on the NRC's draft guidance on spent fuel retrievability in storage applications and agreed on what spent fuel configurations could be retrieved along with the staff's reliance on the facility's aging management programs and time-limited aging analysis.
- On November 18th the Nuclear Waste Strategy Coalition submitted their comments on the NRC's draft Supplemental EIS on groundwater from the Yucca Mountain repository and urged the NRC to seek funding from Congress to complete the Yucca Mountain licensing review.
- On November 19th Waste Control Specialists stated that they will be concentrating on stranded fuel from ten shutdown reactor sites, including Maine Yankee, in its initial license application to the NRC on constructing a consolidated storage facility in Andrews, Texas.
- On November 20th the Swedish Radiation Safety Authority announced that their preliminary assessment indicated that, of all the Swedish sites investigated for a deep geologic repository, the Forsmark site was the most suitable because of its dry and low fracturing granite bedrock.
- On November 20th the Massachusetts Institute of Technology (MIT) issued a news release indicating that new research showed cement was an effective binding agent for containing radioactive materials and a compelling choice for long-term confinement of nuclear wastes.
- On November 20th the State of Nevada submitted their comments on NRC's draft Supplemental EIS on the Yucca Mountain repository's groundwater impact and maintained that DOE's license application was untenable, the repository was unsafe, DOE lacked the necessary land and water rights to construct the repository, the draft EIS violated both the National Environmental Policy Act and the Nuclear Waste Policy Act, and the proposed repository would not be protective of its people and environment.
- On November 23rd NEI sent a letter to the House Chair of the Energy and Commerce urging congressional leaders to support funding for a new management organization, a consolidated storage facility with priority to shutdown reactor sites, for completing NRC's Yucca Mountain license proceedings, and reducing the volume, heat, and toxicity of the by-products of spent nuclear fuel.
- In November the Nuclear Waste Technical Review Board issued to Congress and the Secretary of Energy a report indicating that DOE's 1984 siting guidelines were appropriate for site selection as long as they contained host-rock-specific-criteria for the different types of geologic formations, but that DOE's 2001 site suitability for Yucca Mountain was not appropriate for the initial site selection and recommended that the final choice of a site be based on extensive underground characterization.
- On December 1st DOE's Office of Inspector General released an audit of the Nuclear Waste Fund Fiscal that illustrated a Fund balance of $34.4 billion and a taxpayer payout of $5.3 billion in awards to utilities for the federal government's 1998 default on its contracts with nuclear utilities to take their spent nuclear fuel.
- On December 3rd the House Subcommittee on Environment and the Economy held a hearing on the budgetary, funding, and scoring issues of the Nuclear Waste Fund and how Congress enacted several

spending and revenue control laws that reduced the Fund's flexibility and prevented the Fund from being used for its intended purpose.

- On December 4th the Western Governors' Association issued a Policy Resolution that stressed the federal government's role in ensuring early coordination and communication with state, tribal, and local governments, receiving the rail industry's cooperation in implementing best transport practices, and for the federal government and the nuclear waste generators to pay all costs associated with assuring safe transportation and responding to accidents and emergencies that may occur."
- On December 9th AREVA issued a press release that they were awarded a $9.5 million contract by DOE to design and fabricate transport cask cars for spent nuclear fuel and high-level waste shipments and buffer cars as spacers between the cask cars and the locomotive.
- On December 11th the NRC Chairman informed Senators Reid and Heller from Nevada that the NRC had 19 packages that were under review or certified to transport spent nuclear fuel and high-level waste and explained the three main safety criteria for package performance: maintaining package radiation dose rates, maintaining release of radioactive material below the maximum allowable limits, and ensuring the contents are unable to sustain a chain reaction.
- On December 18th the Acting Assistant Secretary responded to the Council of State Governments' October 6th letter, which expressed frustration over sharing and receiving documents, and noted that his staff had made significant strides in 2015 by releasing from their backlog six technical documents and 27 conference papers.
- On December 22nd the NRC Commissioners voted to initiate a rulemaking to establish what forms of Greater Than Class C waste that could be disposed in a near-surface facility before allowing an Agreement State, such as Texas, the authority to license a GTCC disposal facility. Maine Yankee has four concrete casks containing GTCC material.
- On December 23rd DOE published in the Federal Register its intent to seek public comment on what elements should be contained in a consent-based process for the siting of nuclear waste storage and disposal facilities and listed five questions to spur public feedback.