

State Nuclear Safety Inspector Office  
Maine CDC – DHHS

April 2013 Monthly Report to the Legislature

Executive Summary

As part of the State's long standing oversight of Maine Yankee's nuclear activities, legislation was enacted in the second regular session of the 123<sup>rd</sup> and signed by Governor John Baldacci requiring that the State Nuclear Safety Inspector prepare a monthly report on the oversight activities performed at the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) facility located in Wiscasset, Maine.

The report covers activities at the storage facility, including the State's on-going environmental radiation surveillance and the national debate over the licensing and construction of a geologic repository for the disposal of spent nuclear fuel. The report's highlights assist readers to focus on the significant activities that took place during the month, both locally and nationally.

LOCAL:

- The legislatively mandated group, representing the Department of Environmental Protection (DEP), the State Police, the Public Advocate, the Department of Health and Human Services' Radiation Control Program and Maine Yankee, met for its quarterly meeting to discuss the State's and Maine Yankee's activities pertinent to the oversight of the Independent Spent Fuel Storage Installation (ISFSI). Maine Yankee noted that the NRC's new ISFSI rule will not be published until 2017 with an implementation date of 2019. The proposed rule has raised significant conflicts as it proposed to change the NRC's long standing design basis threat for radiological preparedness to one that is dose based. In addition, Maine Yankee mentioned that they were proposing to the Federal Energy Regulatory Commission a 15 year plan for distributing the \$81.7 million monies it recently received from the U.S. Treasury for its successful litigation against the federal government's failure to take the spent nuclear fuel. The 15 year plan was based on the Department of Energy's timetable to take the used nuclear fuel. They also indicated that they will continue to file claims every five years against the federal government until all the used nuclear fuel is removed from the Wiscasset site. Maine Yankee informed the Group that the Chair of the Maine Yankee Community Advisory Panel, Marge Kilkelly, has resigned to join Senator Angus King's staff. The Vice Chair, Dr. Donald Hudson of the Chewonki Foundation, will assume the Chair's role. Maine Yankee reiterated that it will conduct neutron measurements this summer to better quantify its neutron dose to workers. The State Police noted that the flying restrictions over the Maine Yankee site have expired and that it is permissible to fly over the storage facility. The State Police also reported on the status of weaponry it ordered to replace its outdated ordnance.
- On April 11<sup>th</sup>, as part of its Environmental Covenant with the DEP, Maine Yankee notified DEP that it had invoked its Soil Management Plan once in the previous year to support Central Maine Power's expansion of the 345,000 volt switch yard. The soil work was conducted as part of CMP's Grid Reliability Improvement Program on Maine Yankee's property. As part of the excavation process samples were taken and analyzed and no chemical contamination was found in the excavated soils.
- Maine Yankee submitted two annual reports to the Nuclear Regulatory Commission. By design there were no gaseous or liquid releases from the ISFSI. Therefore, there was no radioactivity to report in its Annual Effluent Release Report. In addition, there were no solid waste shipments from the site. The second document, the Annual Radiological Environmental Operating Report, explains Maine Yankee's environmental monitoring program and findings. 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)<sup>1</sup>. There are nine TLD stations in the vicinity of the ISFSI and one control station at the Wiscasset Fire Station. All nine stations were comparable to or 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 of 2005. Due to its distance from the bermed area of the ISFSI, the higher values are assumed to be due to its line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 1.65 mrem<sup>2</sup> from the storing of the casks at the Wiscasset facility.

The national highlights primarily focused on federal court decisions, agency activities, and a congressional legislative initiative.

### National:

- The U.S. Court of Appeals for the Federal Circuit affirmed the Court of Federal Claims' decision to strike the federal government's "unavoidable delays" defense argument in Entergy's breach of contract cases against the U.S. government. The Court affirmed the lower court's decision because it correctly applied the Nebraska Public Power Rule. The plaintiffs in the case included New York's Fitzpatrick and Indian Point 3 nuclear power plants. At a later date the U.S. Court of Federal Claims awarded \$47.8 million to Entergy Corporation for the Department of Energy's failure to remove the spent nuclear fuel at the Arkansas Nuclear One Power Station.
- The Department of Energy's (DOE) Assistant Secretary for Nuclear Energy testified before the House's Appropriations Subcommittee on Energy and Water Development. He presented the DOE's nuclear energy funding summary for the Administration's FY 2014 congressional request. As part of the funding \$60 million was earmarked for spent nuclear fuel disposition that included design concepts for consolidated storage facilities, advancing salt repository science for the disposal of heat generating waste such as spent nuclear fuel, researching deep borehole disposal, and completing an analysis for spent fuel shipments from shutdown reactor sites.
- The NRC held a monthly teleconference to discuss the status of its Generic Environmental Impact Statement (GEIS) for its Waste Confidence Rule. The NRC's Waste Confidence Rule stated that the Commission had reasonable assurance that spent fuel could be safely stored for at least 60 years beyond a reactor's license expiration. According to the DC Circuit Court of Appeals the NRC's Rule amounted to a major federal action necessitating an environmental impact statement or a finding of no significant environmental impact. The GEIS was the NRC's response to the Court Order overturning the NRC's Rule. The NRC decided on ten regional public meetings once it issues its draft GEIS this fall. NRC decided on nine cities and they were Washington, D.C. for the first and last meetings, which will be nationally webcast with public access via a teleconference line. The other cities were Boston, New York, Denver, Minneapolis, San Luis Obispo and San Clemente, California, Toledo, and Charlotte. The NRC re-emphasized that the GEIS will cover interim spent fuel pool storage, short term dry storage out to 60 years, long term storage to 100 years, and no repository. Both the short and long term storage scenarios assume that a repository will be available at the end of the storage term.
- Four senators issued a discussion draft of comprehensive nuclear waste management legislation for disposing of the nation's high-level nuclear waste. The senators were seeking comment from stakeholders on the discussion draft and eight policy and technical questions. The draft legislation would establish a new federal agency with a single administrator and an Oversight Board. It would also

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<sup>1</sup> Thermoluminescent Dosimeters (TLD) are very small, passive radiation monitors requiring laboratory analysis. For a further explanation, refer to the glossary on the Radiation Program's website.

<sup>2</sup> A mrem or millirem is a conventional unit that is based on how much of the radiation energy is absorbed by the human body multiplied by a quality factor that is a measure of its relative hazard. For a further explanation, refer to the glossary on the Radiation Program's website.

institute a consent-based approach to the siting of a consolidated interim storage or a repository facility. The legislation would create a linkage between storage and a repository such that if progress towards a repository was not being made, then shipments to a storage facility would cease. The proposed bill would form a new Working Capital Fund into which the fees collected would be deposited and available for use without further appropriation. However, the current existing balance of about \$28 billion in the Nuclear Waste Fund would be subject to appropriation.

## Introduction

As part of the Department of Health and Human Services' responsibility under Title 22, Maine Revised Statutes Annotated (MRSA) §666 (2), as enacted under Public Law, Chapter 539 in the second regular session of the 123<sup>rd</sup> Legislature, the foregoing is the monthly report from the State Nuclear Safety Inspector.

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

Commencing with the January 2010 report the glossary and the historical perspective addendum are no longer included in the report. Instead, this information is available at the Radiation Control Program's website noted above. In some situations the footnotes may include some basic information and may redirect the reviewer to the website. In October 2011 the format of the report was changed to include an executive summary which replaced the official memorandum to the legislative leadership transmitting the report. To further streamline efforts, beginning in August of 2012, the report featured hyperlinks to documents that would normally be attached as copies to the report. The hyperlinks should facilitate the reports review with some readers focusing on the report while others who wish to explore the cited documentation can do so.

## Independent Spent Fuel Storage Installation (ISFSI)

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

There was one fire impairment for the month and it was related to the increased fire loading from paper removed from 18 filing cabinets. The paper was shredded on-site by a contracted vendor.

There were no security-related impairments for the month. Only one security event was logged and it involved a transient environmental condition.

There were sixteen condition reports<sup>3</sup> (CR) for the month and they are described below.

- 1<sup>st</sup> CR: Documented an inventory being performed just before the procedure controlling the inventory was issued. The procedure contained revised information from a prior revision.
- 2<sup>nd</sup> CR: Documented some missing amendments to a Department of Environmental Protection (DEP) Site License. The appropriate copies were obtained from DEP.
- 3<sup>rd</sup> CR: Was written to document the failure to log a custody record.

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<sup>3</sup> A condition report is a report that promptly alerts management to potential conditions that may be adverse to quality or safety. For more information, refer to the glossary on the Radiation Program's website.

- 4<sup>th</sup> CR: Documented the discovery of a leak in the sewer line. The break appeared to have been caused by an elbow chaffing on its thrust block. The sewer line was repaired the following day.
- 5<sup>th</sup> CR: Documented finding a radiation device unplugged. This model needs to be plugged in to keep the batteries charged.
- 6<sup>th</sup> CR: Was written to document the label on the radiation device not containing all the necessary information.
- 7<sup>th</sup> CR: Documented a radioactive source not being signed out in accordance with procedure. The source was used as part of a training module.
- 8<sup>th</sup> CR: Documented site access badges expiring prior to their intended date due to a data entry error.
- 9<sup>th</sup> CR: Was written to document some procedure deficiencies.
- 10<sup>th</sup> CR: Documented an out-of-spec log reading not being flagged and investigated.
- 11<sup>th</sup> CR: Was written to document one certification missing from the company's Negation Action Plan. The certification was issued upon discovery.
- 12<sup>th</sup> CR: Documented a log reading outside the allowable limits.
- 13<sup>th</sup> CR: Documented a camera problem.
- 14<sup>th</sup> CR: Was written to document finding of an unlocked door that is normally locked.
- 15<sup>th</sup> CR: Documented a small hydraulic oil leak from a contractor's truck. The leak was less than a quarter cup and was cleaned up immediately. The leak was not reported to DEP as it was on pavement.
- 16<sup>th</sup> CR: Documented a small gas spill by a Central Maine Power truck. Since the leak was to the soil, it was cleaned up and reported to DEP.

#### *Other ISFSI Related Activities*

1. On April 9<sup>th</sup> the legislatively mandated group, representing the Department of Environmental Protection (DEP), the State Police, the Public Advocate, the Department of Health and Human Services' Radiation Control Program and Maine Yankee, met for its quarterly meeting to discuss the State's and Maine Yankee's activities pertinent to the oversight of the ISFSI. The State Inspector briefed the group on his past and near term activities for the quarter. Maine Yankee briefed the Group on the new building that will be constructed in the old staff building parking lot and were in the process of securing permits from DEP and the Department of Health and Human Services for the septic system. Maine Yankee noted that the NRC's new ISFSI rule will not be published until 2017 with an implementation date in 2019. The proposed rule has raised significant conflicts as it proposed to change the NRC's long standing design basis threat for radiological preparedness to one that is dose based. Maine Yankee mentioned that they were proposing to the Federal Energy Regulatory Commission a 15 year plan for distributing the \$81.7 million monies it received from the U.S. Treasury for its successful litigation against the federal government's failure to take the spent nuclear fuel. The 15 year plan was based on the Department of Energy's timetable to take the used nuclear fuel. They also indicated that they will continue to file claims every five years against the federal government until all the used nuclear fuel is removed from the Wiscasset site. Maine Yankee informed the Group that the Chair of the Maine Yankee Community Advisory Panel, Marge Kilkelly, has resigned to join Senator Angus King's staff. The Vice Chair, Dr. Donald Hudson of the Chewonki Foundation will assume the Chair's role. Maine Yankee reiterated that it will conduct neutron measurements this summer to better quantify its neutron dose to workers. The State Police noted that the flying restrictions over the Maine Yankee site have expired and that it is permissible to fly over the storage facility. The State Police also reported on the status of weaponry it ordered to replace its outdated ordnance.
2. On April 11<sup>th</sup>, as part of its Environmental Covenant with the DEP, Maine Yankee notified DEP that it had invoked its Soil Management Plan once in the previous year to support Central Maine Power's expansion of the 345,000 volt switch yard. The soil work was conducted as part of CMP's Grid Reliability Improvement Program on Maine Yankee's property. As part of the excavation process samples were taken and analyzed and no chemical contamination was found in the excavated soils.

3. On April 11<sup>th</sup> Maine Yankee submitted two annual reports to the Nuclear Regulatory Commission. By design there were no gaseous or liquid releases from the ISFSI. Therefore, there was no radioactivity to report in its Annual Effluent Release Report. In addition, there were no solid waste shipments from the ISFSI site to describe in the Effluent Release Report. The second document, the Annual Radiological Environmental Operating Report, explains the environmental monitoring program. 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). There are nine TLD stations in the vicinity of the ISFSI and one control station at the Wiscasset Fire Station. All nine stations were comparable to or 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 of 2005. Due to its distance from the bermed area of the ISFSI, the higher values are assumed to be due to its line of sight and proximity to the ISFSI. Maine Yankee calculated an annual dose of 1.65 mrem from the storing of the casks at the Wiscasset facility.
4. On April 25<sup>th</sup> Maine Yankee submitted its annual individual monitoring report to the NRC. The report contained the individual dose of each person monitored at the facility for 2012 with the dose broken down by skin, lens of the eye, organ (if appropriate), extremities, and whole body as well as the total dose for the body and organ (if appropriate).
5. On April 28<sup>th</sup> Maine Yankee notified the NRC of changes to its Board membership with the resignation of one member and a replacement appointed from Northeast Utilities. In addition, the Site Vice President also certified his responsibilities to protect classified information and special nuclear material from access to foreign owners and their representatives.

## Environmental

The State received the 2013 first quarter results in April from the field replacement of its thermoluminescent dosimeters around the ISFSI and the Maine Yankee industrial site. The results from the quarterly TLD change out continued to illustrate three distinct exposure groups: elevated, slightly elevated, and normal. The high stations identified were F, G, and K with an average of 23.4 milliRoentgens<sup>4</sup> (mR). Station F, which has been historically in the slightly elevated grouping increased to the elevated group whereas station Q decreased to the slightly elevated group this quarter.

The slightly elevated group decreased in the number of stations from eight (E, L, O and Q) to four with an average of 21.0 mR. The stations continue to trade places due to background variations. Four remained and six others traded places from the previous quarter. For example, stations C, I, J, M, N, and O that were in the slightly elevated group last quarter returned to the normal group this quarter. These deviations will be tracked over the next several quarters to see if a pattern develops. There were ten stations (A, B, C, D, H, I, J, M, N, and P) in the normal group as opposed to the previous quarter's five and they averaged 19.5 mR.

The Maine Yankee industrial site TLDs averaged 18.5 mR, which is comparable to the normally expected background radiation levels of 15 to 30 mR for the coast of Maine. Some of the background levels are highly dependent upon tidal effects, and local geology. However, virtually all the stations exhibit seasonal fluctuations that are affected by the out gassing of the naturally radioactive gas, Radon.

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<sup>4</sup> A milliRoentgen (mR) is a measurement of radiation exposure. For a further explanation, refer to the glossary on the Radiation Program's website.

The control TLDs that are stored at the State's Health and Environmental Testing Laboratory (HETL) in Augusta averaged about 11.5 mR. Although the storing of the control TLDs at HETL's pre-World War II steel vault lowers the natural background values, the 11.5 mR value for this quarter is much higher when compared to last quarter's control results of 7.9 mR. The 7.9 value is more representative of what the control badges should read in the shielded environment. Even though seasonal fluctuations are expected, a 46% increase in the background from one quarter to the next in a shielded environment was very unusual. It was also noted that the steel shield background had been increasing over the last year until it dropped the previous quarter. The State conferred with its TLD vendor on its findings. Nevertheless, last year's data seemed to point to the steel vault losing its shielding effectiveness. However, the previous quarter's decrease to 7.9 would seem to indicate otherwise. Further discussions with the vendor were on-going. Although we have not pinpointed the cause of the wide fluctuations yet, there is no doubt that something is impacting the TLDs. The controls were initially part of a program to better quantify the individual impacts of storage and transit exposures on the thermoluminescent dosimeters (TLDs). However, as indicated above, they also have been instrumental in pointing out changes that would normally have not been captured if it were not for the program.

As a further application of this TLD control assessment, on March 12<sup>th</sup> three of the seven control TLDs received for the first quarter of 2013 were returned to the State's TLD vendor, Global Dosimetry in California, for an analysis of the transportation exposures. The initial set of results from the control TLD badges returned indicated an average of 5.0 mR for the total exposure picked up between leaving the vendor, arriving at the State and then immediately being shipped back and received by the vendor. The 5.0 mR was the lowest transit exposure the State has ever seen and represented a fairly substantial decrease when compared to last quarter's 8.6 mR transit badges. The sudden decrease is presently unexplained just as the sudden decrease in the previous quarter was also unexplainable. Besides seasonal and daily fluctuations in the background, small increases or decreases could be attributed to an extra few days of or a few days less transit. However, large variations as we have experienced are unsettling until we can get enough data to explain the variations. Discussions with the vendor were still on-going.

The field control TLDs at Ferry Landing on Westport Island, the Edgecomb Fire Station and the roof of the State's Health and Environmental Testing Laboratory read 20.3, 20.7, and 18.7 mR, respectively.

As noted in earlier reports the State's maintains an environmental air sampler on the roof of HETL for local or national events. The air sampler was extremely instrumental during Fukushima event in Japan two years ago as in quantifying the levels of radioactivity that was coming from the crippled reactors. This year's third quarter results did not identify any unusual radioactive elements and were within historical ranges for both gross beta<sup>5</sup> and Beryllium-7, a naturally radioactive cosmogenic element that is produced from cosmic rays interacting with the nitrogen and oxygen atoms in the atmosphere. The gross beta results ranged from 19.2 to 50.2 femto-curies per cubic meter (fCi/m<sup>3</sup>)<sup>6</sup>. A composite of the five bi-weekly air filter samples was used to measure the Beryllium-7's concentration of 84.6 fCi/m<sup>3</sup>.

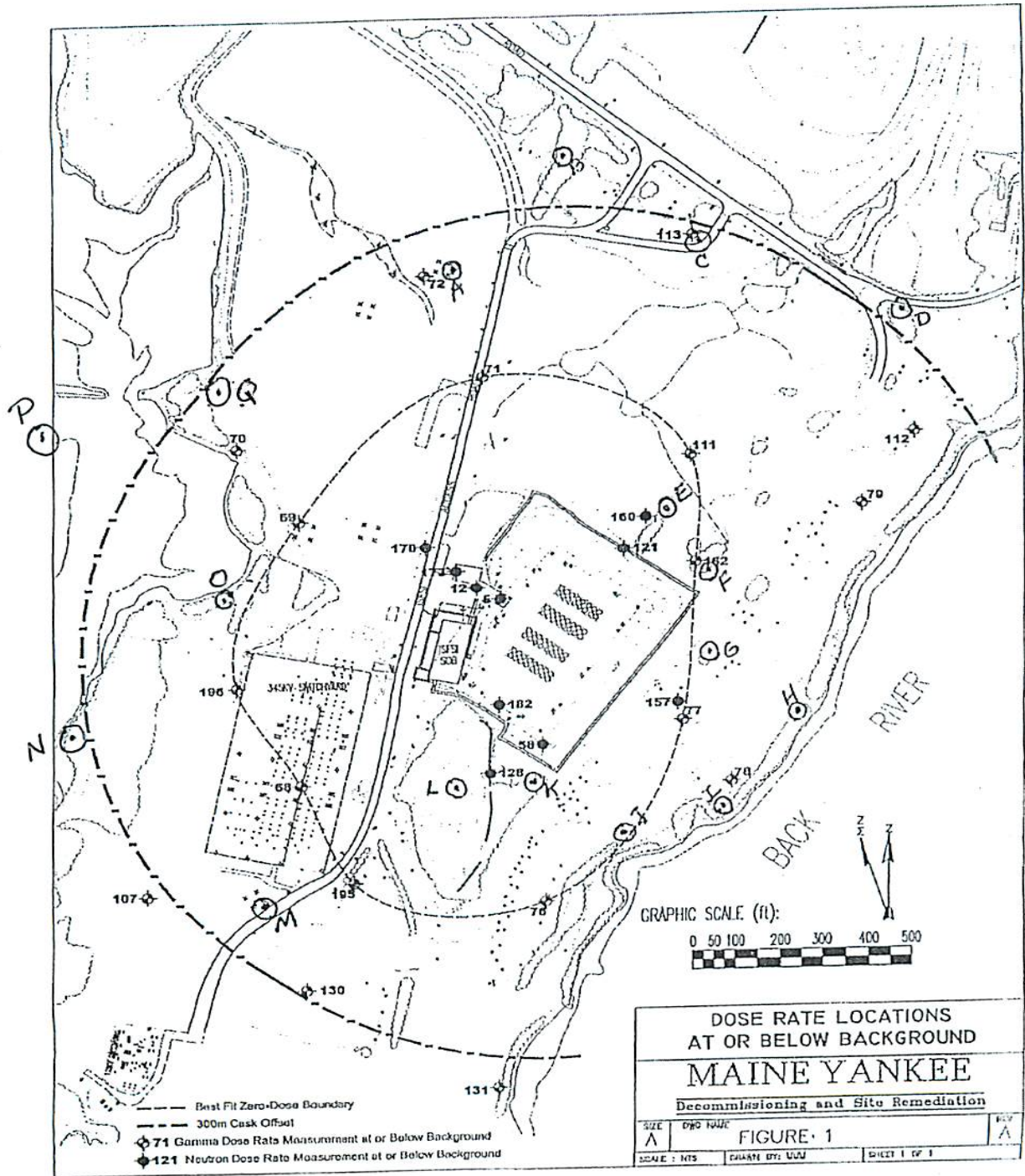
For informational purposes Figure 1 on page 7 illustrates the locations of the State's 17 TLD locations in the vicinity of the ISFSI. The State's locations are identified by letters with the highest location being station K this quarter as opposed to the historically high station G.

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<sup>5</sup> Gross Beta is a simple screening technique that measures the total number of beta particles emanating from a potentially radioactive sample. High values would prompt further analyses to identify the radioactive species. Refer to the glossary on the website for further information.

<sup>6</sup> A fCi/m<sup>3</sup> is an acronym for a femto-curie per cubic meter, which is a concentration unit that defines how much radioactivity is present in a particular air volume, such as a cubic meter. A "femto" is a scientific prefix for an exponential term that is equivalent to one quadrillionth (1/1,000,000,000,000,000).

Figure 1



### Other Newsworthy Items

1. On April 2<sup>nd</sup> the U.S. Court of Appeals for the Federal Circuit affirmed the Court of Federal Claims' decision to strike the federal government's unavoidable delays defense argument in Entergy's breach of contract cases against the U.S. government. The Court noted that it affirmed the lower court's decision because it correctly applied the Nebraska Public Power Rule. The plaintiffs in the case included New York's Fitzpatrick and Indian Point 3 nuclear power plants. The web link for the [decision](#) can be accessed by positioning the cursor over the underlined text and following the directions.

2. On April 4<sup>th</sup> the Nuclear Waste Strategy Coalition held its bi-weekly conference call to update its membership on the litigation before the US Court of Appeals for the D.C. Circuit for restarting the Yucca Mountain licensing proceedings and suspension of the nuclear generating fee for the Nuclear Waste Fund. There were no new decisions by the Court but status reports were filed by the petitioners and respondents in the case. Both maintained their positions. The Coalition did note the recent U.S. Court of Appeals for the Federal Circuit decision to grant dismiss the federal government's unavoidable delays argument. The Coalition also discussed the upcoming Senate hearing on the newly nominated Energy Secretary, Dr. Ernie Moniz. His nomination was expected to have bipartisan support. Other upcoming Senate and House hearings were mentioned such as the Senate hearing on the Administration's proposed FY 2014 Budget, the Senate hearings on the nomination of the Chairman of the NRC, Dr. Allison Macfarlane, to a five year term, and the House's oversight hearing on Nuclear Waste Programs and Strategies.
3. On April 5<sup>th</sup> Esmeralda County in Nevada provided their comments on the December 2012 Nevada Commission on Nuclear Project's Report to their local Senator and Assemblyman and requested that they share this information with their legislative counterparts. The County expressed its concern that the report was biased and that it relied too heavily on one consultant's opinions of the technical adequacy of the Yucca Mountain site. The County believed that the technical adequacy of the site should be judged by the NRC which was designated by the Nuclear Waste Policy Act to do so. The County Commissioners included in one of their attachments a rebuttal to the technical arguments presented in the December 2012 report. The attachment took issue with the role of the geological environment, the integrity of the waste packages, disposal in the unsaturated zone, and the role of drip shields at Yucca Mountain. The letter also discussed the money myth purported by the Commission's report. Esmeralda County is on record as one of six Nevada counties supporting the continuation of Yucca Mountain licensing proceedings. The web link for the comment [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
4. On April 5<sup>th</sup> the NRC filed with the U.S. Court of Appeals from the District of Columbia Circuit their third status report. In the interest of full disclosure, the NRC notified the Court that it had \$11.1 million in unobligated and \$2.5 million in obligated carryover funds from the Nuclear Waste Fund. However, they continued to maintain that they have insufficient funds to complete the licensing process over the Yucca Mountain application. The web link for the [filing](#) can be accessed by positioning the cursor over the underlined text and following the directions.
5. On April 5<sup>th</sup> the petitioners (the states of South Carolina and Washington, Aiken County, South Carolina, the Tri-City Business Leaders near Hanford, Washington, the National Association of Regulatory Utility Commissioners, and Nye County, Nevada) filed with the U.S. Court of Appeals for the D.C. Circuit its fourth supplemental status report. The petitioners stated that the NRC has \$13.6 million and the Department of Energy (DOE) \$17 million in carryover funds appropriated from the Nuclear Waste Policy Act for its licensing proceedings on the Yucca Mountain Project. The petitioners maintain that the NRC has stated that the remaining funds were adequate to complete and release their crucial Safety Evaluation Reports, a critical step in the repository licensing process. The petitioners requested that the Courts should issue the Order to restart the licensing proceedings. The web link for the [status report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
6. On April 9<sup>th</sup> the national Section 180(c) Working Group for the DOE, which the State is represented by the State Inspector, held its bi-weekly webinar. The Group is responsible for providing recommendations to the DOE on a national funding plan to train state and local public officials in emergency response training to a used nuclear fuel shipment originating or traversing their borders. The purpose was to come to some resolution on recommendations to past key topics before the Yucca Mountain Project was terminated. The Group closed out previous issues on state inspection fees and



contingency re-routing of spent nuclear fuel shipments. The Group voted on the definitions revised by the DOE's General Counsel on Public Safety Officials and Safe Routine Transportation. The definition for Technical Assistance was still under discussion and would be brought up at the next webinar. The DOE committed to funding operational activities based on page 86 of the Blue Ribbon Commission's January 2012 report and the DOE's January 2013 Strategy Document. The webinar concluded with the participants expanding on the list of allowable activities that should be funded by the DOE. This included such items as track inspections, mechanical and radiological inspections, the development and issuance of public information as well as outreach activities.

7. On April 10<sup>th</sup> Germany announced that a new site selection process for a repository was agreed upon under a compromise between federal and state governments and opposition parties, terminating the site suitability investigation at the Gorleben salt dome that started in 1977. The draft legislation will create a "24 member federal-state commission to develop proposals on safety requirements and site selection criteria by the end of 2015". The commission was expected to "recommend a repository site to parliament by 2031" and available by 2040. The web link for the [news article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
8. On April 11<sup>th</sup> the Government Accountability Office (GAO) published "Commercial Spent Nuclear Fuel – Observations on the Key Attributes and Challenges of Storage and Disposal". The report was based on prior work with updated information from DOE and was presented as testimony before the House's Committee on Appropriations' Subcommittee on Energy and Water Development by the GAO's Director of Natural Resources and Environment as one of five panelists. The testimony focused on the 70,000 metric tons of spent nuclear fuel from commercial reactors and not the 13,000 metric tons of defense-related spent nuclear fuel and other high-level waste. The testimony emphasized the main attributes and challenges of the Yucca Mountain repository, centralized interim storage, and a permanent repository other than Yucca Mountain. The web link for the [report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
9. On April 11<sup>th</sup> the Chairman of the U.S. Nuclear Waste Technical Review Board (NWTRB) also provided testimony before the House's Subcommittee on Energy and Water Development hearing on Nuclear Programs and Strategies. In his talk he summarized the experiences and approaches of other countries (Sweden, France, United Kingdom, Canada, Japan, Switzerland, and Germany) in their attempts to cite a geologic repository. The Chairman also listed various lessons learned from the Yucca Mountain Project and the preservation of the Yucca Mountain data and documents. In addition, DOE's Assistant Secretary for Nuclear Energy also testified before the Committee. He presented the DOE's nuclear energy funding summary for the FY 2014 congressional request. As part of the funding \$60 million is earmarked for used nuclear fuel disposition that includes design concepts for consolidated storage facilities, advancing salt repository science for the disposal of heat generating waste such as spent nuclear fuel, researching deep borehole disposal, and completing an analysis for used fuel shipments from shutdown reactor sites. Additional testimonies from the NRC and the Blue Ribbon Commission were also presented at the hearing. The web links for the [NWTRB](#), [DOE](#), [NRC](#), and the [BRC](#) testimonies can be accessed by positioning the cursor over the underlined text and following the directions.
10. On April 16<sup>th</sup> the U.S. Nuclear Waste Technical Review Board held a meeting in Richland, Washington on the status of the vitrification (process of solidifying waste into a glass form) of high-level radioactive waste. Besides the updates on vitrification presentations were made on the DOE's waste form development program, the potential for direct disposal of dry storage containers, and comments by tribal, state, and public organizations on the most important technical issues related to the disposal of high-level waste and spent nuclear fuel stored at the Hanford Site near Richland. The web link for the [agenda](#) can be accessed by positioning the cursor over the underlined text and following the directions.

11. On April 16<sup>th</sup> the DOE announced a new investment in nuclear fuel storage research. The project will involve new dry storage research in high burn-up spent nuclear fuel with industry footing 20% of the cost and the federal government chipping in \$15.8 million for the research. The web link for the [news](#) can be accessed by positioning the cursor over the underlined text and following the directions.
12. On April 17<sup>th</sup> the NRC held its monthly teleconference to discuss the status of its Generic Environmental Impact Statement (GEIS) for its Waste Confidence Rule. The principal focus of this call was the locations NRC chose to hold its ten regional public meetings once it issues its draft GEIS this fall. NRC decided on nine cities and they were Washington, D.C. for the first and last meetings. These will be nationally webcast and the public will also have access via a teleconference line. The other cities were Boston, New York City, Denver, Minneapolis, San Luis Obispo and San Clemente, California, Toledo, and Charlotte. The NRC re-emphasized that the GEIS will cover interim spent fuel pool storage, short term dry storage out to 60 years, long term storage to 100 years, and no repository. Both the short and long term storage scenarios assume that a repository will be available at the end of their storage term. The summary report highlighted the major concerns, questions raised, and issues addressed in the conference call. The web link for the [summary report](#) can be accessed by positioning the cursor over the underlined text and following the directions.
13. On April 17<sup>th</sup>-18<sup>th</sup> the High-Level Radioactive Waste Committee of the Western Interstate Energy Board held its semi-annual meeting in Portland, Oregon to discuss a number of topics in preparation for the National Transportation Stakeholders Forum. The two day session was broken down into four parts:
  - Semi-annual program update on key initiatives, such as the states expectations for the DOE and State Regional Group, federal funding of state and tribal planning and training grants known as Section 180(c) of the Nuclear Waste Policy Act, the Settlement Agreement between the Departments of Energy and Defense and the Baltimore, Ohio, Aberdeen, and Rockfish Railroads.
  - The future direction of the spent nuclear fuel and high-level waste program based on key court decisions, proposed legislation, and DOE's strategy.
  - Focus topics on western shutdown sites, the National Transportation Plan, NRC initiatives on transportation system design implications, and the Waste Isolation Pilot Project transportation model.
  - State and regional group reports.

The web link for the [agenda](#) can be accessed by positioning the cursor over the underlined text and following the directions. The briefing materials can be retrieved by clicking on the respective links within the agenda.

14. On April 18<sup>th</sup> the Nuclear Waste Strategy Coalition (NWSC) held its second bi-weekly conference call to update its membership on the Senate's hearing and vote on Dr. Moniz for Energy Secretary, the President's FY2014 Budget, the recent venture between DOE and the industry on dry storage research for high-burn-up fuel, congressional activities, the GAO report on attributes and challenges for storage and disposal options, the status of the draft senate legislation for managing the nation's nuclear stockpile, and the NRC's waste confidence teleconference and updated fact sheets on spent nuclear fuel storage. The conference call concluded with highlights and announcements of upcoming meetings of interest. The State is a member of the NWSC, which is an ad hoc organization of state utility regulators, state attorneys general, consumer advocates, electric utilities, local governments, tribes, and associate members. Its primary focus is to protect ratepayer payments into the Nuclear Waste Fund and to support the removal and ultimate disposal of spent nuclear fuel and high-level radioactive waste currently stranded at numerous sites across the nation.

15. On April 23<sup>rd</sup> the U.S. Court of Federal Claims awarded \$47.8 million to Entergy Corporation for DOE's failure to remove the spent nuclear fuel at the Arkansas Nuclear One Power Station. The web link for the [article](#) can be accessed by positioning the cursor over the underlined text and following the directions.
16. On April 23<sup>rd</sup> the national Section 180(c) Working Group for the DOE held its second bi-weekly webinar and approved the definition on Technical Assistance based on some expanded wording from the DOE's General Counsel. The Group tackled the issue of distribution of funds. The discussion centered on whether the states received direct grants from DOE or through their Council of State Governments Regional Boards, or cooperative agreements with the DOE. It was noted that direct grants would be more restrictive with cooperative agreements providing the greatest flexibility. All the participants agreed the individual states should decide which approach best suits them. The Midwest Region leaned towards direct grants to states whereas the Northeast Region preferred grants administered through the Council of State Governments' Eastern Regional Conference. Concerns were raised as to whether the DOE could administer multi-faceted approaches. The Group continued to discuss what activities should be funded and what unforeseen circumstances that would prompt additional funding. The Group deferred rulemaking and timing and eligibility for the next webinar.
17. On April 25<sup>th</sup> the Chairman of the House Committee on Energy and Commerce and the Chairman of the House Subcommittee on Environment and the Economy sent a letter to the Comptroller General of the General Accountability Office (GAO) underscoring their estimated timeframes for opening two interim storage sites and a permanent repository as compared to the DOE's recently released strategy document presuming much shorter timeframes. The Chairs requested the GAO to undertake a comparison study between GAO's projections versus those of DOE's and assess the impact of the DOE's new strategy on the federal government's long term liability. The web links for the [press](#) release and [letter](#) can be accessed by positioning the cursor over the underlined text and following the directions.
18. On April 25<sup>th</sup> the United States Senate published a press release indicating that four senators had issued a discussion draft of comprehensive nuclear waste management legislation for disposing of the nation's high-level nuclear waste. The senators were seeking comment on the discussion draft and eight policy and technical questions from stakeholders. The draft legislation would establish a new federal agency with a single administrator and an Oversight Board. It would also institute a consent-based approach to the siting of a consolidated interim storage or a repository facility. The legislation would create a linkage between storage and a repository such that if progress towards a repository was not being made, then shipments to a storage facility would cease. The proposed bill would form a new Working Capital Fund into which the fees collected would be deposited and available for use without further appropriation. However, the current existing balance of about \$28 billion in the Nuclear Waste Fund would be subject to appropriation. The web links for the [release](#), the [summary](#), the [section by section](#) summary, [questions](#), and the [draft legislation](#) can be accessed by positioning the cursor over the underlined texts and following the appropriate directions.