

# State Nuclear Safety Inspector Office

## May 2009 Monthly Report to the Legislature

### 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 eleventh monthly report from the State Nuclear Safety Inspector under this new legislation.

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.

Since the footnotes are expanded definitions of some scientific terms, for simplicity they were placed in a glossary at the end of the report. In addition, to better understand some of the content of the topics, some effort was placed in providing some historical information. However, for the time being this historical context will be provided as an addendum to the report.

### Independent Spent Fuel Storage Installation (ISFSI) (May Report)

During May the general status of the ISFSI was normal. There were 5 instances of spurious alarms due to environmental conditions. All alarms were investigated and no further actions were warranted.

There was one fire related impairment on May 19<sup>th</sup>. The inner door of the ISFSI document vault was not fully closing and latching properly. Security checks were performed each shift until the impairment was resolved on May 21<sup>st</sup>. There were no security related impairments or security events logged in May.

There were three condition reports<sup>1</sup> (CRs) for the month of May. The first CR was written on May 11<sup>th</sup> and was related to a strand of barbed wire on the ISFSI fence which had become dislodged from its outrigger. The wire was popped back into its place. The second CR was written on May 25<sup>th</sup> and involved damage to an industrial tractor attachment when it came into contact with a tree. The failed mower was taken out of service until it can be repaired. On May 28<sup>th</sup> a third CR was written on another strand of barbed wire becoming dislodged from its outrigger.

#### *Other ISFSI Related Activities*

On May 1<sup>st</sup> a bulb in one of the ISFSI yard lights failed, but it did not adversely impact the overall lighting. The bulb was replaced. On the same day two non-security camera monitors experienced a temporary problem that corrected itself.

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<sup>1</sup> Refer to the Glossary on page 6

On May 6<sup>th</sup> two suspicious vehicles stopped at the site gate. The Wiscasset police were called, but the vehicles departed before the police arrived.

On May 11<sup>th</sup> three security tracking forms were written for transient environmental conditions with a security camera.

On May 18<sup>th</sup> the Nuclear Regulatory Commission performed a security inspection of the ISFSI. Since the NRC inspection also involved two other decommissioned plants in New England, Connecticut Yankee and Yankee Rowe in Massachusetts, an exit briefing will be conducted sometime in the future. Also on May 18<sup>th</sup> Maine Yankee formally submitted documentation to the Department of Environmental Protection (DEP) on the disposal of the small diesel fuel oil spill back on April 21<sup>st</sup>. As related in last month's report, the spill was reported to the DEP and DEP was satisfied with the clean up.

On May 22<sup>nd</sup> two non-security camera monitors experienced a brief problem similar to that noted on May 1<sup>st</sup> and again the issue corrected itself.

## Environmental

In addition to its periodic air sampling at the old Bailey Farm House, on May 4<sup>th</sup> the State received the results from the first quarter field replacement of its thermoluminescent dosimeters (TLDs)<sup>2</sup> of the ISFSI and Bailey Cove. The results from the quarterly change out showed that of the 13 TLD locations near the ISFSI 11 did not demonstrate any appreciable values above normal background radiation levels, whereas two stations, G and K, did exhibit slightly elevated levels due to their proximity to the storage casks. The control TLDs that are stored at the State's Radiation Control Program in Augusta averaged about 26 milliRoentgens (mR)<sup>3</sup>. The two normally elevated stations had values of 26 mR, as compared to the 11 other stations that averaged about 21 mR and ranged from 19 to 24. In comparison the normal expected quarterly background radiation levels on the coast of Maine would range from 13 to 25 mR.

The reason for the depressed radiation values for all the TLDs was due to the snow cover conditions for the winter season. Since there is a seasonal variation to the ambient radiation environment that follows the out gassing of the Radon gas from the soils, it is normal for the values to decrease during this time period. However, there was one station, E, that had one of its six phosphoric elements reading high, 45 mR, in comparison to the other five elements that ranged from 22 to 25 mR. Since the 45 was nearly double the other five, a statistical test was performed to see if the data point was an outlier. The test verified that it was and the data point was rejected for comparative purposes only.

For informational purposes Figure 1 at the end of the report illustrates the locations of the State's 13 TLD locations in the vicinity of the ISFSI. The State's locations are identified by letters. The two highest locations were stations G and K.

## Maine Yankee Decommissioning

With only the East Access Road survey near the ISFSI scheduled for further evaluation in June, one final confirmatory report remained to be completed. At present, there are ten confirmatory reports that are essentially complete with one remaining that is currently being drafted. More documentation was compiled in May and forwarded to the State's consultant for incorporation of that information into the final draft. The final confirmatory report for the final site survey is expected to be completed in late June. Due to the

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<sup>2,3</sup> Refer to the Glossary on pages 6 and 7

extensive write-up and delay in finalizing this last report, the decommissioning summary report is now expected to be completed in late July or early August.

## Groundwater Monitoring Program

The review of Maine Yankee's third annual ground water report has been slow and steady over the last few months given the amount of information provided. The review was completed at the end of May with comments to follow in June.

On May 12<sup>th</sup> the State received Maine Yankee's results from the September 2008 and March 2009 sampling events. Maine Yankee's results for September 2008 identified three wells with positive indications of Tritium, a natural radioactive form of Hydrogen (H-3)<sup>4</sup>. Two of three wells had background Tritium levels ranging from 410 to 450 pCi/L<sup>5</sup> with the highest well at 38,720 pCi/L. In comparison Maine Yankee's Tritium results for March 2009 were comparable to those in September with the same three wells having positive indications. Two wells were found to have low levels of Tritium ranging from 370 to 440 pCi/L. The high Tritium well had a concentration of 36,480 pCi/L.

The State was able to compare Maine Yankee's results with the quality assurance testing it performed on seven of those 16 wells. Maine Yankee's high Tritium reading of 36,480 pCi/L compares well with the State's result of 34,700. The Tritium in this well has been steadily decreasing since its peak value of 59,570 pCi/L in March of 2006. It is expected that this well will remain elevated for some time as the water infiltration rates are very low. Consequently, the decrease will be slow and steady as evident by the September and March sample results. In addition, the State's results also indicated three other wells with positive indications, their numbers, ranging from 124 to 229, were considered indistinguishable from the natural background levels of Tritium normally found in the environment. The State utilizes a value of 600 pCi/L as an upper limit for the natural Tritium level in groundwater.

In reviewing both sampling events for other potential radioactive elements from Maine Yankee's plant operations, several nuclides were identified, such as Cerium-141, Cerium-144, Cobalt-57, Cobalt-58, Cobalt-60, Iodine-131, Niobium-95, Antimony-124, Antimony-125, Selenium-75 and Zinc-65. Selenium-75's association with the plant is very questionable. Technically, the computer generated reports indicated traces of these radioactive elements. However, except for one situation with Antimony-125, the remainders appear to be non-existent either due to their short radioactive half-lives or no distinguishable energy peaks that correspond to the radioactive elements fingerprints. The positive indication of Antimony-125 is miniscule as its radiological consequences are two and one half times lower than the natural cutoff limit of 600 pCi/L adopted by the State for Tritium in groundwater.

## Other Newsworthy Items

1. In May the Institute for 21<sup>st</sup> Century Energy, an affiliate of the U.S. Chamber of Commerce, issued a report, entitled "Revising America's Nuclear Waste Policy". The report "recounts the history of the country's nuclear waste policy, discusses the mechanics of the issue, and offers specific recommendations to the Obama Administration and the U.S. Congress." Six recommendations were offered in such areas as restructuring government's nuclear waste management to a government corporation, establishing interim storage facilities, creating a clear path for constructing a permanent nuclear waste repository, evaluating the retrievability requirement of the Nuclear Waste Policy Act,

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<sup>4 5</sup> Refer to the Glossary on page 7

consider recycling the used fuel, and assessing whether the nuclear waste fee should continue or deposit it into a private escrow account.

2. On May 4<sup>th</sup> the National Conference of State Legislatures (NCSL) forwarded letters to Energy Secretary Chu and the Senate. Both letters espouse the need to establish private interim storage facilities for spent nuclear fuel and that this need is imperative in light of the opposition by the Administration to the Yucca Mountain repository in Nevada. Both letters also recommend the appointment of one state legislator familiar with the nuclear waste issues to be on the proposed Blue Ribbon Panel.
3. On May 7<sup>th</sup> four ranking members of the Committees of Energy and Commerce, and Science and Technology forwarded a letter to Energy Secretary Chu requesting a response to a number of questions and to provide information supporting the scientific basis for the decision that Yucca Mountain is “not an option”. The House letter is very similar in scope to the Senate letter issued on April 29<sup>th</sup> and is attached to the end of the report.
4. On May 7<sup>th</sup> Representative Dean Heller from Nevada and Policy Chair of the Western Caucus inserted provisions in “The American Energy Innovation Act” to ensure that the Yucca Mountain high level waste repository is not included in the Republican comprehensive energy bill.
5. On May 11<sup>th</sup> the Nuclear Regulatory Commission’s Atomic Safety and Licensing Boards issued an order that allows eight petitioners and 299 contentions on safety and environmental issues to be admitted to the licensing proceedings. Initially, the Boards held hearings from March 31<sup>st</sup> through April 2<sup>nd</sup> on the 12 petitions to intervene and 318 proposed contentions on the Department of Energy’s license application to construct a repository at Yucca Mountain in Nevada. Besides the eight, one petition was denied, two Nevada counties were granted status as interested governmental participants and three tribal organizations were not admitted as interveners until they can demonstrate compliance with the NRC’s licensing support network. The parties and petitioners have 10 days to appeal the order to the Commission. They will then have another 10 days to reply to any appeals.
6. On May 13<sup>th</sup> President Obama designated Dr. Gregory Jaczko, a former aide to Senator Majority Leader Harry Reid of Nevada and a member of the Nuclear Regulatory Commission (NRC), as Chairman of the federal nuclear safety agency. “Jaczko, who has a doctorate in physics, was a science advisor to Senate Reid and managed the Nevada’s opposition to the Yucca Mountain project before he was appointed to the NRC in 2005”.
7. On May 14<sup>th</sup> the Nuclear Waste Strategy Coalition held its periodic status briefing. The major topics of discussion focused on a) the serious impact of the proposed FY 2010 Yucca Mountain budget would have on the Department of Energy and the Nuclear Regulatory Commission, b) Senator Jeff Bingaman’s, Chairman of the Senate’s Committee on Energy and Natural Resources, proposed bill on the National Commission on Nuclear Waste, c) the House and Senate letters to Energy Secretary Chu, and d) the letters of the National Conference of State Legislatures (NCSL) to Energy Secretary Chu and the Senate. A copy of Senator Bingaman’s nine page draft legislation is available upon request to the State Nuclear Safety Inspector.
8. On May 14<sup>th</sup> Senators Olympia Snowe and Susan Collins coauthored a letter to Energy Secretary Chu urging him to appoint a representative from an affected community that currently stores spent fuel. Both Senators advocated that a member of Maine Yankee’s Community Advisory Panel on Spent Nuclear Fuel Storage and Removal, could provide representation on the proposed Blue Ribbon Panel to evaluate the nation’s alternatives to nuclear waste management. A copy of the letter is attached to the report.

9. On May 19<sup>th</sup> Senator Tom Carper from Delaware moderated a forum on nuclear waste at the Massachusetts Institute of Technology (MIT), where a panel of nuclear power experts from MIT and Harvard said that dry cask storage of spent fuel at reactor sites is safe for another half century and provides ample time to research alternatives and work on a permanent solution. In addition, MIT also updated its 2003 report on nuclear energy. In 2003 the motivation for the report was the growing concern of global warming, the urgency of developing electrical generating technologies of non-emitting greenhouse gases and how nuclear power could significantly reduce climate change risks. In MIT's 2009 update the report expresses a sober warning that if more is not done in the U. S. and globally, nuclear power will essentially fade away as a practical and timely option to substantially mitigate climate change.
10. On May 21<sup>st</sup> the State Nuclear Safety Inspector (SNSI) commented on the National Waste Strategy Coalition's draft letter to Energy Secretary Chu outlining the principles of operation for the Blue Ribbon Panel. The SNSI's comment focused on expanding the proposed pilot projects to employ stand alone, decommissioned reactor sites, such as Maine Yankee, as a plausible means to test the nation's transportation system. The NWSC letter is expected to be finalized in June.
11. On May 27<sup>th</sup> the Nuclear Waste Strategy Coalition (NWSC) held another status briefing. The major topics of discussion again focused on the FY 2010 proposed budget and the Massachusetts Institute of Technology study on Nuclear Power. The NWSC is an ad hoc group of state utility regulators, state attorneys general, electric utilities and associate members representing 47 stakeholders in 31 states, committed to reforming and adequately funding the U.S. civilian high-level nuclear waste transportation, storage, and disposal program.
12. On May 29<sup>th</sup> the State of Nevada submitted a brief in opposition to the Nuclear Regulatory Commission (NRC) Staff's appeal to the Commission on the admissibility of 31 of Nevada's 222 contentions that were admitted by the NRC's Atomic Safety and Licensing Boards May 11<sup>th</sup> ruling on the Yucca Mountain hearings.
13. On May 31<sup>st</sup> the Northeast High-Level Radioactive Waste Transportation Task Force recommended Dr. Max Power to Energy Secretary, Dr. Steven Chu, as an appointment by the President to the blue ribbon panel on nuclear waste that will evaluate alternatives to the Yucca Mountain repository in Nevada. A copy of the nomination is attached at the end of the report. The Northeast High-Level Radioactive Waste Transportation Task Force is a subsidiary of the Council of State Governments Eastern Regional Conference.

# Glossary

**Condition Report (CR):** 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.

**Decay Series:** There are three naturally occurring decay series of heavy elements that transform into a series of various radioactive elements by releasing energy in the form of particles, (such as alpha or beta), and/or gamma rays to end in a stable form of non-radioactive Lead. All three decay series start with extremely long lived radioactive, heavy elements that can be measured in geologic time units. They are Uranium-238 with an approximate half-life of 4.5 billion years, Uranium -235 with a half-life of about 700 million years, and Thorium-232 with a half-life of 14 billion years. All three series contain some more well-known radioactive species, Radium and Radon.

**Dose** is the amount of radiation that is absorbed by a person's body. In the radiation field the term dose is sometimes used interchangeably with dose equivalent, which is defined as the rem and described below.

**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 curie, named after its discoverers Pierre and Marie Curie, is defined as the rate at which a radioactive element transforms itself into another element that is most often another radioactive element. It is mathematically equivalent to 37 billion disintegrations or transformations per second. A "femto" is a scientific prefix for an exponential term that is equivalent to one quadrillionth (1/1,000,000,000,000,000).

**Gamma Spectroscopy** is a scientific method used to analyze gamma rays emanating from radioactive elements. The analytical system determines the gamma ray energy which acts as a "fingerprint" for specific radioactive materials. For example, Potassium-40 (K-40) has a very, distinctive gamma energy at 1460 keV. This uniqueness allows the instrument to positively identify the K-40 1460 energy as its own unique fingerprint. A keV is an abbreviation for kilo electron volt, which is a measure of energy at the atomic level. A kilo is a scientific prefix for the multiplier 1,000.

**Gross Beta** is a simple screening technique employed to measure the total number of beta particles emanating from a potentially radioactive sample, with higher values usually indicating that the sample contains natural and/or man-made radioactive elements. High values would prompt further analyses to identify the radioactive species. A beta is a negatively charged particle that is emitted from the nucleus of an atom with a mass equal to that of an orbiting electron.

**Liquid Scintillation** is an analytical technique by which Tritium and many other radioactive contaminants in water are measured. A sample is placed in a special glass vial that already contains a special scintillation cocktail. The vial is sealed and the container vigorously shaken to create a homogeneous mix. When the tritium transforms or decays it emits a very low energy beta particle. The beta interacts with the scintillating medium and produces a light pulse that is counted by the instrument. Although a different scintillation cocktail is used, this is basically how radon in well water is measured.

**milliRoentgen (mR)** is one thousandth (1/1000) of a Roentgen.

**pCi/kg** is an acronym for a pico-curie per kilogram, which is a concentration unit that defines how much radioactivity is present in a unit mass, such as a kilogram. A “pico” is a scientific prefix for an exponential term that is equivalent to one trillionth (1/1,000,000,000,000).

**pCi/L** is an acronym for a pico-curie per liter, which is a concentration unit that defines how much radioactivity is present in a unit volume, such as a liter.

**Rem** is an acronym for roentgen equivalent man. It is a conventional unit of dose equivalent that is based on how much of the radiation energy is absorbed by the body multiplied by a quality factor, which is a measure of the relative hazard of energy transfer by different particles, (alpha, beta, neutrons, protons, etc.), gamma rays or x-rays. In comparison the average natural background radiation dose equivalent to the United States population is estimated to be 292 millirems per year, or 0.8 millirem per day, with 68 % of that dose coming from radon. A millirem is one thousandth, (1/1000), of a rem.

**Roentgen** is a special unit of exposure named after the discoverer of X-Rays, Wilhelm Roentgen. It is a measure of how much ionization is produced in the air when it is bombarded with X-Rays or Gamma Rays. Ionization is described as the removal of an orbital electron from an atom.

**Thermoluminescent Dosimeters (TLD)** are very small plastic-like phosphors or crystals that are placed in a small plastic cage and mounted on trees, posts, 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 and that light 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.

**Tritium (Hydrogen-3 or H-3)** is a special name given to the radioactive form of Hydrogen usually found in nature. All radioactive elements are represented as a combination of their chemical symbol and their mass number. Therefore, Tritium, which is a heavy form of the Hydrogen molecule with one proton and two neutrons in the nucleus of its atom, is abbreviated and represented by its chemical symbol, H, for Hydrogen and 3 for the number of particles in its nucleus, or mass number. Similarly, other radioactive elements, such as Potassium-40, can be represented and abbreviated as K-40, and so on.

# Addendum

## Historical Perspective

### Independent Spent Fuel Storage Installation (ISFSI)

In 1998 the Department of Energy (DOE) was required to take title and possession of the nation's spent nuclear fuel as mandated by the Nuclear Waste Policy Act (NWPA) of 1982. When the NWPA was enacted, Congress assumed that a national repository would be available for the disposal of the spent fuel. Since the licensing and construction of the high level waste repository at Yucca Mountain in Nevada has experienced significant delays, DOE is currently projecting that the Yucca Mountain site will not be available until at least the year 2020 or later.

DOE's inaction prompted Maine Yankee to construct an ISFSI during decommissioning to store the more than 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 at a low level radioactive waste facility. These are expected to be shipped along with the spent fuel to the Yucca site should the repository open.

### Environmental

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 (HETL). Presently, the State monitors one freshwater location, one saltwater and seaweed location, and one air sample location. The State maintains a quarterly sampling regimen, except for the air sample, which is performed bi-weekly near the old Bailey Farm House. Besides the media sampling, over the years the State has maintained a robust thermoluminescent dosimeter (TLD) program to measure the radiation environment. The TLDs were placed within a 10 to 20 mile radius of the plant to measure the background radiation levels and later, when the plant was operating, any potential increases in background levels due to plant operations. Over time the number of TLDs nearly doubled to address public concerns over the clam flats in Bailey Cove and the construction of the ISFSI. After the plant's decommissioning the State reduced the number of TLDs around Bailey Cove, but maintained the same number for the environmental surveillance of the ISFSI. A further evaluation of reducing the State's radiological environmental monitoring program is planned for the fall of 2009.

### Maine Yankee Decommissioning

Maine Yankee's decommissioning was completed in the fall of 2005. At that time the State Nuclear Safety Inspector (SNSI) also commenced his final walk down survey of the site. Certain areas such as the transportation routes exiting the plant site were surveyed after the plant industrial area was decommissioned. Due to the length of the egress routes, it took a considerable amount of time to complete both half-mile east and west access routes and the two thirds of a mile of the railroad track. In addition, seven specific areas, including the dirt road, were also examined as part of the final site survey. The State's final survey of the

dirt road leading to the old softball field was extended in the fall of 2007 when the State discovered three localized elevated areas on the road that were contaminated. At that time, extensive bounding samples were taken to determine the extent of the contamination.

Because of the State's findings the original Class III designation of little or no potential for small areas of elevated activity was deemed incorrect. Therefore, the Dirt Road systematic sampling was necessary to ensure that all the State's findings would still pass Maine Yankee's License Termination Plan (LTP) Class I criteria. In September's report the results of Maine Yankee's 18 Dirt Road soil samples identified one sample with man-made Cesium-137, with the remaining radioactivity from natural radioactive elements normally found in soil and bedrock, namely Uranium and Thorium and their respective decay series, and Potassium-40. On October 16<sup>th</sup> the State met with Maine Yankee to discuss their findings. The State's analyses reported that six of their 18 soil samples contained the radioactive element Cesium-137 with the remainder from the same natural decay series and Potassium-40 that was found in the Maine Yankee samples. In both cases the findings indicated that the concentration of the Cesium-137 was low and comparable to what is normally found in nature from past weapons testing during the 1950's and 1960's. On October 31<sup>st</sup> the State issued a letter to Maine Yankee stating that, based on the recent systematic sampling and bounding efforts on the elevated areas, the results demonstrated that Maine Yankee had met its Class I LTP criteria. Therefore, the State concluded that there were no further outstanding issues relative to the Dirt Road and considered the issue closed. 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 does 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 is the portion of the East Access Road adjacent to the ISFSI bermed area. This area remains as the background radiation levels from the ISFSI were initially too high to survey, (greater than 30,000 counts per minute), and could mask potential elevated areas. Since then the State has been monitoring the levels every spring and has observed a steady decrease in the ambient radiation levels down to 25,000 counts per minute (cpm). When the levels reach about 20,000 cpm the area will be surveyed to close out all transportation routes at the Maine Yankee site.

The State will publish its decommissioning findings in a confirmatory summary that is expected in June of 2009. As part of that process the State will condense over 40 major survey areas into eleven confirmatory reports that are being worked on by an outside consultant. The independent consultant has been collecting all the State's findings and summarizing them in confirmatory reports that the State Nuclear Safety Inspector will use to complete the State's confirmatory summary.

### Groundwater Monitoring Program

In June of 2004, the State, through the Department of Environmental Protection's (DEP) authority under 38 MRSA §1455, signed an agreement with Maine Yankee for a five year, post decommissioning radiological groundwater monitoring program at the site. Presently, the program is in its fourth year. The details of how the agreement would be carried out relative to the quality assurance facets of the monitoring, sampling and analyses would be captured in Maine Yankee's Radiological Groundwater Monitoring Work Plan.

The normal sampling regimen for the groundwater monitoring program is March, June and September of each year. However, since the first sampling took place in September of 2005, the annual sampling constitutes the September sampling of the current calendar year and finishes with the June sampling of the following year.

It should be noted that the Agreement between the State and Maine Yankee set an administrative limit of 2 mrems per year per well as a demonstration that it has met the State's groundwater decommissioning standards of a 4 mrem dose per year above background values. If a well exceeds the 2 mrem value after the five year monitoring program ends, Maine Yankee would allow the State to continue monitoring that well. To-date fifteen of the sixteen wells sampled have not exceeded one tenth of the limit, or 0.2 mrems/yr. Only well number MW-502 has come close to exceeding the 2 mrems administrative limit and that was back in March of 2006 when the dose was 1.96 mrems. Since then the Tritium in this well has been steadily decreasing. It is expected that this well will remain elevated for some time as the water infiltration rates are very low. Consequently, the decrease will be slow and steady.