

# Maine Yankee

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December 12, 2013

OMY-13-065

10 CFR 50.82(a)(7)

10 CFR 50.4

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

Maine Yankee Atomic Power Company  
Maine Yankee Independent Spent Fuel Storage Installation  
NRC License No. DPR-36 (NRC Docket Nos. 50-309 and 72-30)

Subject: Revision 2 of the Maine Yankee Atomic Power Station Post-Shutdown  
Decommissioning Activities Report

Pursuant to the requirements of 10 CFR 50.82(a)(7) Maine Yankee Atomic Power Company provides Revision 2 to the Maine Yankee Atomic Power Station Post-Shutdown Decommissioning Activities Report (PSDAR) (Enclosure 1). Attachment 1 provides a summary and rationale for the changes. Enclosure 1 is a complete copy of the Maine Yankee Atomic Power Station PSDAR.

This letter contains no commitments.

If you have any questions regarding this submittal, please contact me at (207) 882-1303 or jconnell@3yankees.com.

Sincerely,



James M. Connell  
Vice President and ISFSI Manager

Attachments and Enclosures

Attachment 1 – Summary of Proposed Changes to the Maine Yankee Atomic Power Station Post-Shutdown Decommissioning Activities Report

Enclosure 1 – Maine Yankee Atomic Power Station Post-Shutdown Decommissioning Activities Report, Revision 2 – December 2013

cc: W. M. Dean, NRC Region I Administrator  
J. Goshen, NRC Project Manager  
P. Dostie, Maine State Nuclear Safety Inspector

NH5526

**ATTACHMENT 1 TO OMY-13-065**

**SUMMARY OF CHANGES TO THE MAINE YANKEE ATOMIC POWER STATION  
POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT**

**ATTACHMENT 1 TO OMY-13-065**  
**SUMMARY OF CHANGES TO THE MAINE YANKEE ATOMIC POWER STATION**  
**POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT**

<b>Section</b>	<b>Proposed Change</b>	<b>Reason for Change</b>
I, II, III, IV, VI, VII	Updated to reflect that the decommissioning of the Maine Yankee Nuclear Plant is complete, with the exception of the Maine Yankee Independent Spent Fuel Storage Installation (ISFSI) and the applicable land areas.	On July 30, 2002 and September 30, 2005, the NRC issued Amendment Nos. 167 and 172, respectively, to Facility Operating License No. DPR-36 for the Maine Yankee Atomic Power Station that resulted in the release of all of the land from the Maine Yankee 10 CFR 50 License, with the exception of the land where the ISFSI is located and an adjacent parcel of land. The total area that remains under the control of the 10 CFR 50 License is approximately 12 acres. Thus, the decommissioning of the Maine Yankee plant is complete. The only remaining decommissioning activities are those associated with the ISFSI and applicable areas.
II, III, IV, VI	Updated to reflect the current activities of the Maine Yankee ISFSI.	Changes were made to reflect the current practices at the Maine Yankee ISFSI. These changes are consistent with approved procedures or other license basis documents.
II	Eliminated the list of specific low-level waste disposal sites.	The general statement regarding the need for access to low-level waste sites is sufficient at this time. The decommissioning of the ISFSI is not expected to occur for numerous years, thus, the names, owners, and locations of the sites that will be available at that time is not known.
III	Updated a quote to 10 CFR 51.23	The quote provided in the Post-Shutdown Decommissioning Activities Report does not accurately reflect the current version of 10 CFR 51.23. Thus, it was revised to incorporate an accurate quotation.
IV, V	Updated to reflect the new cost estimates regarding decommissioning and storage of spent nuclear fuel and Greater than Class C (GTCC) waste approved by FERC in July 2013. The cost estimate assumes that the storage period will be extended from 2022 to 2031 with license termination in 2033. In addition, the decommissioning cost estimate assumes that all of the concrete and steel from the VCCs and ISFSI storage will be shipped offsite as low-level radioactive waste.	The decommissioning cost estimate was submitted to the NRC in January 2013 as part of the Decommissioning Funding Plan. In addition, the Federal Energy Regulatory Commission approved the new decommissioning cost estimate and a new cost estimate for the management of spent nuclear fuel and GTCC Waste in July 2013.
VI	Updated to reflect the environmental impacts associated with the change in schedule for storage of spent nuclear fuel and GTCC waste and change in methodology regarding disposal of the materials comprising the Vertical Concrete Casks and the ISFSI Storage Pad as low-level radioactive waste.	The changes update the environmental impact associated with decommissioning the ISFSI and the longer time period that the spent nuclear fuel and GTCC waste will be stored onsite. The environmental impact remains bounded by the previous assessment.
III, VI	Editorial or administrative changes were made.	These changes are non-substantive changes that do not modify the intent of the document.

**ENCLOSURE 1 TO OMY-13-065**

**MAINE YANKEE ATOMIC POWER STATION**

**POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT**

**REVISION 2 – DECEMBER 2013**

MAINE YANKEE ATOMIC POWER STATION

POST-SHUTDOWN DECOMMISSIONING ACTIVITIES REPORT

REVISION 2 – DECEMBER 2013

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## **I. INTRODUCTION**

Under the provisions of 10CFR50.82 (a)(4)(i), this Post Shutdown Decommissioning Activities Report (PSDAR) is submitted to describe Maine Yankee's planned decommissioning activities and schedule, provide an estimate of expected costs, and discuss the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities are bounded by the appropriate previously issued environmental impact statements (EIS), specifically NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (Reference 1) and Maine Yankee's Site Specific EIS (Reference 2).

The reactor was shutdown on December 6, 1996 and has not been operated since. On June 20, 1997 transfer of all fuel assemblies from the reactor vessel into the Spent Fuel Pool for temporary storage was completed. On August 6, 1997 the Maine Yankee Board of Directors voted to permanently cease further operation of the plant. Certification to the Nuclear Regulatory Commission of the permanent cessation of operation and permanent removal of fuel from the reactor vessel, in accordance with 10CFR50.82 (a)(1)(i) & (ii), was filed on August 7, 1997 (Reference 3).

On July 30, 2002 and September 30, 2005 (References 7 and 8), the NRC issued Amendment Nos. 167 and 172, respectively, to Facility Operating License No. DPR-36 for the Maine Yankee Atomic Power Station that resulted in the release of all of the land from the Maine Yankee 10 CFR 50 License, with the exception of the land where the Independent Spent Fuel Storage Installation (ISFSI) is located and an adjacent parcel of land. The total area that remains under the control of the 10 CFR 50 License is approximately 12 acres. Thus, the decommissioning of the Maine Yankee plant is complete. The only remaining decommissioning activities are those associated with the ISFSI and applicable areas.

## **II. OVERVIEW OF THE PSDAR**

The goal of Maine Yankee is to decommission the plant and ISFSI safely and in a cost effective manner. Prompt decommissioning satisfies both objectives. As of September 30, 2005, the decommissioning of the plant is complete, with the exception of the areas associated with the ISFSI. The ISFSI will be decommissioned following removal of the spent fuel and GTCC waste from the site. See Section V for a discussion of the cost estimate and Section VI for a review of environmental impacts.

Completion of the DECON schedule is contingent upon three key factors:

- Continued access to one or more federally licensed low level waste disposal sites, and
- Timely funding of the decommissioning activities.
- The removal of spent fuel and GTCC waste from the site by the Department of Energy.

### III. DESCRIPTION OF PLANNED DECOMMISSIONING ACTIVITIES

On July 30, 2002 and September 30, 2005 (References 7 and 8), the NRC issued Amendment Nos. 167 and 172, respectively, to Facility Operating License No. DPR-36 for the Maine Yankee Atomic Power Station that resulted in the release of all of the land from the Maine Yankee 10 CFR 50 License, with the exception of the land where the Independent Spent Fuel Storage Installation (ISFSI) is located and an adjacent parcel of land. The total area that remains under the control of the 10 CFR 50 License is approximately 12 acres. Thus, the decommissioning of the Maine Yankee plant is complete. The only remaining decommissioning activities are those associated with the ISFSI and applicable areas. The ISFSI will be dismantled after the Department of Energy (DOE) has taken possession of the stored materials and removed them from the site.

The following discussion provides an outline of the decommissioning plans. This PSDAR description is an overview of Maine Yankee's current intentions. The detailed planning required for each decommissioning activity will be completed prior to the start of work for that activity.

#### Planning

Planning and preparation for the remaining decommissioning activities associated with the ISFSI will include the following general types of activities:

- Develop decommissioning organization structure and select project staff
- Review and reclassify systems, structures, and components consistent with the removal of spent fuel and Greater than Class C (GTCC) waste from the site
- Review and revise licensing basis documents as necessary, consistent with the removal of spent fuel and GTCC waste from the site
- Review and revise programs and procedures as necessary, consistent with the removal of spent fuel and GTCC waste from the site
- Prepare detailed (area-by-area) decommissioning procedures and cost estimates

#### Site Characterization

A detailed site characterization was performed for the Maine Yankee plant. Surveys were designed and conducted to establish the contamination and radiation levels throughout the facility. This information was used in developing the detailed (area-by-area) procedures to ensure that contaminated materials were removed and to ensure that worker exposure was maintained as low as reasonably achievable. Surveys of the outdoor areas were performed in order to confirm the locations of known contaminated soil and to identify any previously unknown contaminated soils.



A detailed characterization of the areas associated with the ISFSI will be conducted following the removal of the spent fuel and GTCC waste from the site.

### Decontamination

Several different techniques can be employed in decontamination of surfaces. These typically include wiping, washing, vacuuming, and water jets. The objectives of the decontamination effort are two-fold: First, to reduce the radiation levels throughout the facility in order to minimize personnel exposure during dismantlement; and second, to clean as much material as possible to unrestricted use levels, thereby permitting disposal as salvage and minimizing the quantities of material that must be disposed of by burial as radioactive waste.

The RCS was decontaminated prior to dismantlement. The resulting waste was disposed of in accordance with plant procedures and applicable regulations.

### Major Decommissioning Activities

10 CFR 50.2 defines "major decommissioning activity" as any activity that results in permanent removal of major radioactive components, permanently modifies the structure of the containment, or results in dismantling components for shipment containing greater than Class C waste in accordance with 10 CFR 61.55. The major activities are summarized as follows:

- The steam generators and the pressurizer were dismantled and removed.
- The upper and lower core support structures were segmented, packaged in shielded casks and removed.
- The remaining reactor internals were segmented, packaged in shielded casks and removed.
- The GTCC components were segmented as necessary for storage in canisters at the ISFSI.
- The reactor vessel was packaged and removed.
- The neutron shield tank structure formerly surrounding the reactor vessel was segmented, packaged into shielded containers, and removed.
- The RCS and other large-bore piping were segmented, packaged, and removed.
- The containment structure was dismantled and the material removed.
- The spent fuel facility was decontaminated, dismantled, and materials removed.

Segmenting operations were developed as appropriate for the various components and/or selected portions of the facility. Segments were placed in liners and stored using a remote or shielded crane. The liners were loaded into shielded transport casks for disposal at a commercial

shallow-land waste disposal facility. Packaged items meeting 10 CFR 61.55 Class C or less were shipped and buried.

The ISFSI storage pads and Vertical Concrete Casks are not expected to be significantly activated. However, the ISFSI decommissioning cost estimate assumes that the material comprising the ISFSI storage pads and Vertical Concrete Casks will be disposed of as low-level radioactive waste.

#### Other Decommissioning Activities

Other decommissioning activities which do not meet the definition of "major activities" include the following:

- Removal of low level waste. Radioactively contaminated or activated materials will be removed from the site as necessary to allow the site to be released for unrestricted access. LLW will be processed in accordance with procedures and existing commercial options, and sent to licensed disposal facilities. Wastes may be incinerated, compacted, or otherwise processed by authorized and licensed contractors as appropriate.
- Removal of mixed wastes. If mixed wastes are generated, they will be managed according to all applicable federal and state regulations to the extent they are not inconsistent with NRC handling, storage, and transportation regulations. Mixed wastes from Maine Yankee will be transported only by authorized and licensed transporters and shipped only to authorized and licensed facilities. Processes to render the mixed wastes nonhazardous will be evaluated if technology, resources, and approved processes are available.

#### Storage of Spent Fuel

Congress passed the "Nuclear Waste Policy Act" in 1982, assigning the responsibility for disposal of spent nuclear fuel created by the commercial nuclear generating plants to the Department of Energy (DOE). This legislation also created a Nuclear Waste Fund to cover the cost of the program, which is funded, in part, by the sale of electricity from the Maine Yankee plant (and an estimated equivalent for assemblies irradiated prior to April, 1983). The target date for startup of the federal Waste Management System was originally 1998.

The backlog of spent fuel in the national inventory, delays in site characterization, and intermittent progress in the development of a waste transportation system, make it necessary to reflect spent fuel storage in the cost and schedule of commercial reactor decommissioning. For planning purposes, Maine Yankee has assumed that the high-level waste repository or some interim storage facility will be operational by 2031. Spent fuel and GTCC waste will be stored at the Maine Yankee ISFSI until DOE takes possession of the material and removes it from the site.

The issue of storing spent fuel onsite is specifically addressed in 10CFR51.23, which states:

(a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed life for operation...of that reactor in a combination of storage in its spent fuel storage basin and at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that sufficient mined geologic repository capacity will be available to dispose of the commercial high-level radioactive waste and spent fuel generated in any reactor when necessary.

(b) Accordingly, as provided in §§ 51.30(b), 51.53, 51.61, 51.80(b), 51.95, and 51.97(a), and within the scope of the generic determination in paragraph (a) of this section, no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the reactor operating license or amendment... or initial ISFSI license or amendment for which application is made, is required in any environmental report, environmental impact statement, environmental assessment, or other analysis prepared in connection with the issuance or amendment of an operating license for a nuclear power reactor under parts 50 and 54 of this chapter... or the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.

Maine Yankee will continue to maintain and protect the ISFSI.

#### Final Site Survey and Termination of License

Maine Yankee prepared and the NRC approved a License Termination Plan, which includes the details of the final radiological survey to be performed once the decontamination activities are completed. Once the survey is complete, the results will be provided to the NRC in a format that can be verified.

As of September 30, 2005 (Reference 8), the only land that remains within the control of the Maine Yankee 10 CFR 50 License is the land associated with the ISFSI and an adjacent parcel of land.

### Site Restoration

Although not within the scope of NRC regulation, Maine Yankee is presently considering restoring the site to a condition comparable to a natural state. This would be done in the following manner:

- Components and materials meeting NRC release criteria may be removed from the site and disposed of as scrap, as salvage, or at regional land fills.
- Decontaminated structures will be demolished and removed to an approximate depth of three feet below grade.
- The site will be back-filled with clean material, graded, and landscaped.

### IV. SCHEDULE FOR DECOMMISSIONING ACTIVITIES

Maine Yankee intends to pursue decommissioning by prompt dismantlement, with the exception of the Maine Yankee ISFSI and applicable areas. The schedule outlined below reflects this intention. The actual schedule may differ in response to the availability of waste disposal facilities, or unforeseen circumstances.

#### Period 1 - Preparation / Planning

- Activities include site characterizations, engineering evaluations and planning, development of detailed procedures for dismantlement and disposal, design and procurement of special tools, and site preparation activities. The site characterization activities for Maine Yankee Nuclear Plant are complete.
- Decontamination of some components and piping systems were performed to minimize worker exposure.

#### Period 2 - Decommissioning Operations and License Termination

- On July 30, 2002 and September 30, 2005 (References 7 and 8), the NRC issued Amendment Nos. 167 and 172, respectively, to Facility Operating License No. DPR-36 for the Maine Yankee Atomic Power Station that resulted in the release of all of the land from the Maine Yankee 10 CFR 50 License, with the exception of the land where ISFSI is located and an adjacent parcel of land. The total area that remains under the control of the 10 CFR 50 License is approximately 12 acres. Thus, the decommissioning of the Maine Yankee plant is complete. The only remaining decommissioning activities are those associated with the ISFSI and applicable areas.
- Final site survey and license termination, as discussed above under the heading "Final Site Survey and Termination of License."

### Period 3 - Site Restoration

- Demolition of the ISFSI storage pads, Vertical Concrete Casks, and remaining buildings and other structures will be performed using conventional demolition techniques. Site Areas affected by the dismantling activities will be cleaned and the ISFSI area graded as required to prevent ponding and inhibit the refloating of subsurface materials.
- The Maine Yankee ISFSI is expected to be operated until 2031, when the spent fuel and GTCC waste is expected to be removed from the site. Using this assumption, the Maine Yankee license will be terminated after the ISFSI is decommissioned. This is scheduled to occur in 2033.

### V. DECOMMISSIONING COST ESTIMATE

The current Federal Energy Regulatory Commission (FERC) approved decommissioning cost estimate (December 2012) and cost estimate for management of spent fuel and GTCC waste is based on the Stipulation and Settlement Agreement between MYAPCO and the Connecticut Public Utilities Regulatory Authority, the Connecticut Office of Consumer Counsel, the Maine Public Utilities Commission, the Maine Office of Public Advocate, the Massachusetts Department of Public Utilities, and the Attorney General of Massachusetts dated April 30, 2013.

This cost estimate includes the cost associated with the projected ISFSI decommissioning costs and a funding assumption of 15 years of operations costs to manage spent fuel and GTCC waste. A funding mechanism provides that damage awards and settlement proceeds that MYAPCO receives in future phases of its litigation with the Department of Energy (DOE) will be applied to maintain the adequacy of the Nuclear Decommissioning Trust (NDT) to cover 15 years of ISFSI operations (as well as all other projected decommissioning costs). In addition, MYAPCO has the right to resume collection of decommissioning charges from its customers subject to the submittal of a proposal under section 205 of the Federal Power Act, if needed.

MYAPCO has an account within its NDT entitled, "ISFSI Radiological Decom," that segregates the funds for radiological decommissioning of the ISFSI from the larger balance of funds for ongoing management of spent fuel and GTCC waste held in the NDT.

The assumptions of the current decommissioning cost estimate are discussed in the Decommissioning Funding Plan submitted to the NRC on January 8, 2013 in accordance with 10 CFR 72.30(b)(2) (Reference 9). The decommissioning cost estimate incorporates the most recent assumptions with respect to the remaining decommissioning activities and related costs (i.e., those associated with the Maine Yankee ISFSI). The total un-escalated cost estimate for decommissioning the ISFSI, including contingency is \$26.8 million, which includes \$22.1 million for radiological removal and \$4.7 million for non-radiological removal. The decommissioning cost estimate is in 2013 dollars.

ISFSI operations will continue until DOE removes the spent fuel and GTCC waste, allowing for the decommissioning of the ISFSI. MYAPCO expects that the ISFSI operating costs will continue to cover a number of categories, including costs for insurance, labor, security, materials

and supplies, miscellaneous expenses, outside services, property taxes, regulatory fees, rentals and leases and utilities. The un-escalated cost estimate for the management of spent fuel and GTCC waste from 2013 through 2032, including contingency, is \$187.2 million. The cost estimate is in 2013 dollars. This is based on the estimate submitted to FERC on May 1, 2013 (Reference 10).

The total un-escalated cost estimate is approximately \$214 million for decommissioning the ISFSI and managing the storage of spent fuel and GTCC waste for the time period of 2013 through 2033.

MYAPCO will continue to inform the NRC regarding the status of this funding by complying with the obligations defined in: 1) 10 CFR 50.75(f)(1) and (2) to submit an annual Decommissioning Funding Status Report; 2) 10 CFR 50.82(a)(8)(v) to submit an annual financial assurance status report regarding decommissioning funding; 3) 10 CFR 72.30(c) to resubmit the decommissioning funding plan at intervals not to exceed three years; and 4) 10 CFR 50.82(a)(8)(vii) to submit an annual report regarding the status of the funding for managing irradiated fuel.

## VI. ENVIRONMENTAL IMPACTS

10 CFR 50.82 (a)(4)(i) describes the Post-Shutdown Decommissioning Activities Report (PSDAR), and requires that it include "a discussion that provides the reasons for concluding that the environmental impacts associated with the site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements." The following discussion provides our reasons for drawing that conclusion, based on three previously issued documents: 1) Maine Yankee Atomic Power Station Environmental Report, Supplement One, dated April 19, 1972 [Reference 4]; 2) the Final Environmental Statement Related to Operation of Maine Yankee Atomic Power Station, dated July 1972 [Reference 2]; and 3) NUREG-0586, "Final Generic Environmental Impact Statement (GEIS) on decommissioning nuclear facilities" [Reference 1].

Decommissioning the Maine Yankee plant and ISFSI will have generally positive environmental effects, in that:

- Radiological sources that create the potential for radiation exposure to site workers and the public will be eliminated
- Decommissioning will return the site to a condition allowing unrestricted use

Further, the Maine Yankee plant and ISFSI decommissioning will be accomplished with no significant adverse environmental impacts, in that:

- No Maine Yankee site specific factors would alter the conclusions of the GEIS or the earlier environmental report and statement
- Radiation dose to the public will be minimal
- Radiation dose to decommissioning workers will be a small fraction of the operating experience
- The low-level radioactive waste removed from the site will occupy a small burial volume at approved waste disposal sites
- The non-radiological environmental impacts are temporary and not significant

The effects of decommissioning activities with respect to specific environmental issues are discussed briefly below. As of September 30, 2005 (Reference 8), the decommissioning of the Maine Yankee plant was complete. The only decommissioning activities that remain are those activities associated with the Maine Yankee ISFSI and associated areas that remain under the control of the Maine Yankee 10 CFR 50 License.

#### Radiation Dose to the Public

Radiation dose to the public will be maintained below comparable levels when the plant was operating through the continued application of radiation protection and contamination controls combined with the reduced source term available in the facility.

#### Occupational Radiation Exposure

Maine Yankee has estimated that a total of 9.46 person-Sv (946 person-rem) would be incurred during the decommissioning of Maine Yankee, with the exception of those associated with the decommissioning of the ISFSI. This total includes the exposure from decontamination and dismantlement activities and the exposure during transportation of the low-level wastes. Given the low levels of activation expected on the Vertical Concrete Casks and the ISFSI storage pads, the total radiation exposure for decommissioning the ISFSI is expected to be insignificant.

NUREG-0586 [Reference 1], Table 4.3-2, estimates a total dose of 12.15 person-Sv (1215 person-rem) for the DECON alternative for the reference plant. While the Maine Yankee decommissioning will delay the decontamination and dismantlement of the ISFSI and applicable areas until the DOE takes possession of and removes the spent fuel and GTCC waste, the plan closely resembles the DECON alternative of NUREG-0586. The 9.46 person-Sv (946 person rem) total dose for the Maine Yankee decommissioning is below the 12.15 person-Sv (1215 person-rem) total dose that was found acceptable for decommissioning the reference PWR in the "Final Generic Environmental Impact Statement on decommissioning of nuclear facilities," NUREG-0586 [Reference-3].

### Low-Level Radioactive Waste Burial Volume

Maine Yankee estimated the low-level waste burial volume for immediate dismantlement as 209,000 cubic feet (or 5,920 cubic meters). The GEIS estimates the volume as 18,340 cubic meters. The Maine Yankee estimate assumed the use of present-day volume reduction techniques not credited in the GEIS. For high level waste requiring deep geological burial (greater than class C waste), Maine Yankee estimates 227 cubic feet (or 6.5 cubic meters). The GEIS estimates the volume of high level waste as 88 cubic meters.

A significant portion of the LLRW that was shipped offsite contained very low levels of radioactivity (DOT exempt) and was created as a result of remediation activities to satisfy the State of Maine radiological release criteria or to more efficiently decommission the facility.

The decommissioning cost estimate assumes that all of the material associated with the Vertical Concrete Casks and the ISFSI storage pads will be shipped offsite as LLRW. This assumption was made to maximize the cost of disposal of radioactive materials in the decommissioning cost estimate. Maine Yankee does not anticipate that this material would be required to be disposed of to satisfy the NRC's 25 mRem/year release criteria.

These estimates thus support the conclusion that the previously issued environmental statements are bounding, since the disposal of waste will require fewer resources (i.e., less waste disposal facility area) than considered in the GEIS.

### Non-Radiological Environmental Impacts

The non-radiological environmental impacts from the Maine Yankee decommissioning are temporary and not significant. The largest occupational risk associated with the decommissioning is the risk of industrial accidents. This will be addressed by adherence to work controls during decommissioning, similar to the procedures followed during power operation. Procedures controlling work related to asbestos, lead, and other non-radiological hazards will also remain in place during the decommissioning. The primary environmental effects of the decommissioning are temporary, small increases in noise levels and dust in the immediate vicinity of the site, and truck traffic to and from the site for hauling equipment and waste. These effects will be similar to those experienced during normal refueling outages, and certainly less severe than those present during the original plant construction. No significant socioeconomic impacts or impacts to local culture, terrestrial or aquatic resources have been identified.

### Additional Considerations

While not quantitative, the following considerations are also relevant to concluding that decommissioning activities will not result in significant environmental impacts not previously reviewed.

- The release of effluents will continue to be controlled by procedures throughout the decommissioning. With respect to radiological releases, Maine Yankee will continue to operate in accordance with the Offsite Dose Calculation Manual (ODCM) during the



decommissioning activities. No gaseous or liquid effluents are expected during the period of storage of spent fuel and GTCC waste at the ISFSI and the decommissioning of the ISFSI. The remaining dose contributor will be shine through the Vertical Concrete Casks. No non-radioactive effluents are expected during the period of storage of spent fuel and GTCC waste at the ISFSI and the decommissioning of the ISFSI. Any releases of non-radiological effluents would be controlled per the applicable requirements during the decommissioning of the Maine Yankee plant

- Radiation protection principles will remain in effect during decommissioning to ensure that protective techniques, clothing, and breathing apparatus are used as appropriate.
- Sufficient decontamination prior to dismantlement will be performed to ensure that individual and integrated doses will not exceed those estimated in the final generic environmental impact statement.
- Detailed site radiological surveys will be performed to confirm the burial volume of low-level radioactive waste, and highly activated components which require deep geological disposal.
- Detailed site radiological surveys will be performed to identify the requirements for decontaminating the ground surrounding the ISFSI.
- Transport of radioactive waste will be in accordance with procedures, applicable federal regulations, and the requirements of the receiving facility.
- Site access control will be maintained during decommissioning to ensure that residual contamination is minimized or eliminated as radiation pathways to the public during decommissioning.

### Conclusion

Based on the above, Maine Yankee concludes that the environmental impacts associated with the site-specific decommissioning activities (including the decommissioning of the ISFSI) will be bounded by appropriate previously issued environmental impact statements. Should unforeseen circumstances arise that may challenge a bounding environmental impact, Maine Yankee will seek prior NRC review and approval before proceeding.

### VII. REFERENCES

1. NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," dated August, 1988
2. "Final Environmental Statement related to operation of Maine Yankee Atomic Power Station," dated July 1972
3. MN-97-89, MY Letter to NRC, "Certifications of Permanent Cessation of Power Operation and Permanent Removal of Fuel From the Reactor," dated 8/7/97

4.     Maine Yankee Atomic Power Station Environmental Report, Supplement One, dated April 19, 1974 (MY APC to AEC)
5.     NUREG/CR-5849, "Manual for Conducting Radiological Surveys in Support of License Termination"
6.     AIF/NESP-036, "Guidelines for Producing Commercial Nuclear Power Plant Decommissioning Cost Estimates"
7.     Letter from (NRC) to (MYAPCO), Issuance of Amendment No. 167 to Facility Operating License No. DPR-36, dated July 30, 2002
8.     Letter from D. Gillen (NRC) to J. Niles (MYAPCO), Issuance of Amendment No. 172 to Facility Operating License No. DPR-36 – Maine Yankee Atomic Power Station (TAC No. M8000), dated September 30, 2005
9.     Letter from C. Pizzella (MYAPCO) to U.S. Nuclear Regulatory Commission, OMY-13-003, "Revised Independent Spent Fuel Storage Installation Decommissioning Funding Plan," dated January 8, 2013
10.    Letter from Alston & Bird LLP to Federal Energy Regulatory Commission, "Maine Yankee Atomic Power Company Docket No. ER13-\_\_\_\_-000," dated May 1, 2013