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Entergy

**Christopher J. Wamser**
Site Vice President

BVY 14-085

10 CFR 50.54(bb)

December 19, 2014

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

SUBJECT: Update to Irradiated Fuel Management Program Pursuant to 10 CFR 50.54(bb)
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

REFERENCES:

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Report Pursuant to 10 CFR 50.54(bb)," BVY 07-007, dated March 21, 2007 (ML070860696)

2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Revised Spent Fuel Management Plan Pursuant to 10 CFR 50.54(bb)," BVY 08-077, dated October 14, 2008 (ML082910294)

3. Letter, USNRC to Entergy Nuclear Operations, Inc., "Safety Evaluation Re: Spent Fuel Management Program and Preliminary Decommissioning Cost Estimate (TAC Nos. MD8035 and MD8051)," NVY 09-009, dated February 3, 2009 (ML083390193)

4. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Update to Vermont Yankee Spent Fuel Management Plan," BVY 09-022, dated April 1, 2009 (ML091040287)

5. Letter, Entergy Nuclear Operations, Inc. to USNRC, "VY Spent Fuel Management Plan – RAI Response," BVY 09-048, dated August 18, 2009 (ML092370298)

6. Letter, USNRC to Entergy Nuclear Operations, Inc., "Safety Evaluation Re: Update to Spent Fuel Management Program (TAC No. ME1152)," NVY 09-100, dated October 8, 2009 (ML092740238)

7. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Notification of Permanent Cessation of Power Operations," BVY 13-079, dated September 23, 2013 (ML13273A204)

Dear Sir or Madam:

In accordance with 10 CFR 50.54(bb), Entergy Nuclear Operations, Inc. (ENO) is hereby notifying the NRC of significant changes to the Vermont Yankee Nuclear Power Station (VYNPS) Program for Management of Irradiated Fuel.

Pursuant to 10 CFR 50.54(bb), ENO initially submitted a Program for Maintenance of Irradiated Fuel on March 21, 2007 (Reference 1) and a Revised Program for Maintenance of Irradiated Fuel on October 14, 2008 (Reference 2). On February 3, 2009, the NRC staff approved the VYNPS irradiated fuel management program on a preliminary basis and determined that the preliminary decommissioning cost estimate was reasonable (Reference 3).

On April 1, 2009, ENO submitted an update to its irradiated fuel management program to reflect changes in its decommissioning cost estimate, based on updated information from the Department of Energy (DOE) on when the government would begin accepting spent fuel from the industry (Reference 4), which it supplemented on August 18, 2009 (Reference 5). The NRC staff approved the revised irradiated fuel management program, as supplemented, on a preliminary basis on October 8, 2009 (Reference 6).

By letter dated September 23, 2013, ENO notified the NRC of its intent to permanently cease power operations at VYNPS at the end of the current operating cycle, which is expected to occur in the fourth quarter of 2014 (Reference 7). As a result of its decision to permanently cease operations at VYNPS, and related changes to the anticipated schedule of decommissioning activities, irradiated fuel management activities, and decommissioning funding assumptions, ENO is modifying the VYNPS Program for Management of Irradiated Fuel. This submittal provides the required Section 50.54(bb) notification. Attachment 1 provides the Updated Program for Management of Irradiated Fuel (Program), which supersedes all prior versions of the Program.

In Reference 5, Entergy Nuclear Vermont Yankee, LLC committed to make a $127.017 million contribution to the VYNPS decommissioning trust fund in 2026 to ensure adequate funding for license termination and spent fuel management activities. Based on the funding strategy described in the updated Program, this planned contribution is no longer necessary. As a result, ENO is hereby providing written notification on behalf of ENVY of ENVY's cancellation of this commitment. There are no new regulatory commitments made by this letter.

Attachment 2 of this letter contains one cancelled regulatory commitment.

Should you have any questions concerning this letter or require additional information, please contact Mr. Philip Couture at 802-451-3193.

Sincerely,

CJW/plc/shr

Attachments: 1. Updated Program for Management of Irradiated Fuel
2. List of Cancelled Regulatory Commitments

cc: Mr. Daniel H. Dorman
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
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BVY 14-085
Docket 50-271

Attachment 1

Vermont Yankee Nuclear Power Station

Updated Program for Management of Irradiated Fuel

# Vermont Yankee Nuclear Power Station
# Updated Program for Management of Irradiated Fuel

## I. Background and Introduction

Entergy Nuclear Operations, Inc. (ENO) submitted a Program for Maintenance of Irradiated Fuel (Program) on March 21, 2007 (Reference 1) and a revised Program on October 14, 2008 (Reference 2) for Vermont Yankee Nuclear Power Station (VYNPS). ENO submitted these programs pursuant to 10 CFR 50.54(bb), which requires power reactor licensees to submit a spent fuel management and funding program for NRC review five years prior to the expiration of a reactor operating license. At the time, the VYNPS operating license was set to expire on March 21, 2012. On February 3, 2009, the NRC staff approved the VYNPS Program on a preliminary basis and determined that the preliminary decommissioning cost estimate was reasonable (Reference 3).

On April 1, 2009, ENO submitted an update to the VYNPS Program to reflect changes in its decommissioning cost estimate, based on updated information from the Department of Energy (DOE) on when the government would begin accepting spent fuel from the industry (Reference 4), which it supplemented on August 18, 2009 (Reference 5). In Reference 5, VYNPS owner Entergy Nuclear Vermont Yankee, LLC (ENVY) committed to make a $127.017 million contribution to the VYNPS decommissioning trust fund in 2026 to ensure adequate funding for license termination and spent fuel management activities. The NRC staff approved the revised VYNPS Program, as supplemented, on a preliminary basis on October 8, 2009 (Reference 6).

By letter dated September 23, 2013, ENO notified the NRC of its intent to permanently cease power operations at VYNPS at the end of the current operating cycle, which is expected to occur later this month (Reference 7).

Pursuant to 10 CFR 50.54(bb), licensees are required to notify the NRC of any significant changes to their proposed spent fuel management plans. As a result of its decision to permanently cease operations at VYNPS, and related changes to the anticipated schedule of decommissioning activities, irradiated fuel management activities, and decommissioning funding assumptions, ENO is modifying the VYNPS Program. This submittal provides the required Section 50.54(bb) notification. This updated Program supersedes all prior versions of the Program.

Pursuant to 10 CFR 50.82(a)(4)(i), on December 19, 2014, ENO submitted a Post Shutdown Decommissioning Activities Report (PSDAR) for VYNPS that included a site-specific decommissioning cost estimate (DCE) as an attachment (Reference 8). The DCE describes the bases for the assumptions regarding the DOE's acceptance of spent fuel from the industry and from VYNPS. As discussed in the DCE (and subject to the assumptions, qualifications, and reservations stated therein), the Program is based on the assumption that DOE will commence acceptance of VYNPS's spent fuel in 2026 and complete removal of all spent fuel from the site in 2052, consistent with the current DOE spent fuel management and acceptance strategy.[1]

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[1] As noted in the DCE, DOE's repository program assumes that spent fuel is accepted for disposal from the nation's commercial nuclear plants in the order ("queue") in which it was removed from service ("oldest fuel first"). The contracts that U.S. generators have with the DOE provide mechanisms for altering the oldest fuel first allocation scheme, including emergency deliveries, exchanges of allocations amongst generators, and the option of providing priority acceptance from permanently shutdown nuclear reactors. VYNPS will seek the most expeditious means of removing fuel from the site when DOE commences performance. Given DOE's failure to accept fuel under its contracts, however, it is unclear how these mechanisms will operate once DOE begins accepting

The DCE identifies the details, schedules, and costs of spent fuel management activities associated with the Program, along with license termination and site restoration activities and costs.

## II. Irradiated Fuel Management Strategy

At the time of shutdown, there will be 368 fuel assemblies residing in the reactor as part of the current operating cycle, 2,628 spent fuel assemblies[2] stored in the spent fuel pool, and 884 assemblies stored in 13 dry storage casks on an independent spent fuel storage installation (ISFSI) pad. In 2008, construction of the first ISFSI pad was completed, which VYNPS operates under a 10 CFR Part 50 General License (in accordance with 10 CFR Part 72, Subpart K). VYNPS selected the Holtec HI-STORM 100S dry cask storage system for the spent fuel that is currently stored on the ISFSI. The system consists of a multipurpose canister (MPC) with a nominal capacity of 68 fuel assemblies and a concrete storage overpack. The current ISFSI pad was constructed to support 36 dry storage casks (the pad has four additional unused storage locations to allow VYNPS to move the casks if needed). VYNPS completed fuel loading campaigns to the ISFSI in 2008, 2011, and 2012.

As indicated in the VYNPS PSDAR (Reference 8), ENVY has selected the SAFSTOR decommissioning option. The Program assumes that decommissioning is completed within 60 years of permanent plant shutdown (i.e., by the end of 2074). Following shutdown, the reactor building will be operated as an interim wet fuel storage facility for approximately five and one-half years after operations cease. During this time period, the spent fuel residing in the storage pool will be transferred to the ISFSI. The ISFSI will remain operational until DOE is able to accept title to the fuel and complete the transfer of the fuel off site.

The PSDAR and DCE describe three major phases related to spent fuel management at VYNPS, which are summarized below.[3] Spent fuel management activities are further broken out into two categories – "operational" spent fuel management activities, such as operating and maintaining the ISFSI and the spent fuel pool, and "transfer to dry storage" activities, such as procurement of dry storage systems, transfer of fuel from the spent fuel pool to the ISFSI, and construction of the second ISFSI pad.

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spent fuel from commercial reactors. Accordingly, for planning purposes only, this Program assumes that DOE will accept spent fuel in an oldest fuel first order.

[2] This figure includes one fuel debris canister.

[3] Appendix C to the DCE (Reference 8, Attachment 1) includes a detailed cost analysis of all decommissioning activities, including spent fuel management activities, by period.

**TABLE 1 - Irradiated Fuel Management Program: Summary Schedule and Costs**

| Decommissioning Period | Start | End | Duration (Years) | Cost (thousands of 2014 dollars) |
|---|---|---|---|---|
| Periods 0 and 1: Planning and Preparations for Dormancy | 2013 | 2016 | 2.6 | 23,068 |
| Spent Fuel Management Operations | | | | 6,055 |
| Transfer to Dry Storage | | | | 17,013 |
| Period 2a: Dormancy with Wet Fuel Storage | 2016 | 2020 | 4.2 | 217,318 |
| Spent Fuel Management Operations | | | | 91,696 |
| Transfer to Dry Storage | | | | 125,548 |
| Period 2b: Dormancy with Dry Fuel Storage | 2020 | 2052 | 32.5 | 127,961 |
| Spent Fuel Management Operations | | | | 127,961 |
| **TOTAL** | | | **39.3** | **368,347** |

1. Pre-Shutdown Planning and Preparations for SAFSTOR Dormancy

Pre-shutdown planning activities include designing an expanded ISFSI facility to include a second storage pad, which is expected to be located in close proximity to the existing pad. The second pad is being designed for storage of 25 casks, and combined with the existing pad, will allow for dry storage of all spent fuel assemblies generated during the plant operations.

The initial decommissioning activities to be performed after plant shutdown will focus primarily on preparing the plant for a period of safe-storage (also referred to as dormancy) and constructing a second ISFSI pad. During this phase, VYNPS plans to complete the design of the new ISFSI pad and initiate site work. VYNPS also plans to commence security modifications supporting future ISFSI and dormancy operations during this time period.

The estimated spent fuel management costs associated with ISFSI design and construction, site security modifications, and other expenses during this initial phase, such as emergency planning and preparations for dormancy, total approximately $23.1 million.

2. Dormancy with Wet Fuel Storage

During this phase, spent fuel will remain in the spent fuel pool until it meets the criteria for transfer to dry storage. VYNPS expects to complete expansion of the ISFSI in 2017, assuming the timely receipt of the required state regulatory approvals. The estimated costs associated with expanding the ISFSI, including construction of the second pad and related security modifications, total approximately $32.7 million. Table 2 below provides additional detail on certain estimated dry storage-specific expenditures.

VYNPS expects to begin transferring the remaining spent fuel from the spent fuel pool to the ISFSI in 2019 and to complete the transfer of all fuel to the ISFSI by mid-2020. In total, 3,879 spent fuel assemblies and one fuel debris canister will be stored in 58 dry cask systems on the two ISFSI pads. Costs associated with purchasing 45 additional dry cask systems, loading fuel, and transferring fuel from the spent fuel pool to the ISFSI are included in this phase. After the fuel transfer is completed, the pool will be drained and supporting systems will be de-energized for the remainder of the dormancy period.

The total estimated spent fuel management costs associated with this phase is approximately $217.3 million.

3. Dormancy with Dry Fuel Storage

During this phase, the spent fuel will remain stored on the ISFSI until DOE accepts the fuel and removes it from the site. As discussed above and in the DCE (Reference 8, Attachment 1), for planning purposes, the current Program assumes that DOE will begin removing fuel from VYNPS in 2026 and will complete the removal of all spent fuel from the site in 2052, according to the schedule set forth in Table 3 below.

During this phase, programs and procedures required to support safe operation of the ISFSI will be maintained in accordance with applicable requirements. Equipment maintenance, monitoring, and inspection will be performed as necessary. VYNPS will also maintain a 24-hour security force, whose primary responsibility will be to safeguard the spent fuel for as long as it remains on site. A security barrier, sensors, alarms, and other surveillance equipment will be maintained as required to provide security for the spent fuel. The estimated average annual cost to operate the ISFSI during this phase is approximately $4 million.

Late in the dormancy period, additional activities will include transferring the spent fuel from the ISFSI to the DOE. The estimated cost for the eventual transfer of the MPCs to a DOE-provided transport vehicle for off-site disposal is approximately $10 million, excluding a $4.4 million allowance for a spent fuel transfer facility.[4]

The total estimated spent fuel management cost associated with this phase is approximately $127.96 million.

[4] As noted in the DCE (Reference 8, Attachment 1), DOE has breached its obligations to remove fuel from reactor sites on the contracted schedule, and has also failed to provide plant owners with information about how it will ultimately perform and fulfill its obligation. DOE officials have stated that DOE does not have an obligation to accept already-canistered fuel without an amendment to the Standard Contract, but DOE has not explained what costs any such amendment would involve. Consequently, the plant owner has no information or expectations on how DOE will remove fuel from the site in the future. In the absence of information about how DOE will specifically deal with already-canistered fuel, and for purposes of the DCE only, the DCE assumes that there will be no additional costs associated with DOE's acceptance of such fuel. If this assumption is incorrect, it is assumed that DOE will have liability for costs incurred to transfer the fuel to DOE-supplied containers, and to dispose of existing containers.

**Table 2 - Estimated Expenditures for ISFSI Construction, Spent Fuel Packaging and Canister Transfer**
(thousands, 2014 dollars)[5]

| Year | New ISFSI Pad Construction | Spent Fuel Related Security Modifications | MPC and Storage Overpack Costs | ISFSI Loading Campaigns | Fuel Transfer Facility | ISFSI to DOE Transfer | Total |
|---|---|---|---|---|---|---|---|
| 2014 | 4,753 | 0 | 0 | 0 | 0 | 0 | 4,753 |
| 2015 | 7,529 | 2,215 | 0 | 0 | 0 | 0 | 9,744 |
| 2016 | 7,613 | 0 | 0 | 0 | 0 | 0 | 7,613 |
| 2017 | 3,545 | 0 | 25,907 | 0 | 0 | 0 | 29,452 |
| 2018 | 0 | 1,400 | 37,940 | 1,375 | 0 | 0 | 40,715 |
| 2019 | 0 | 4,250 | 13,623 | 21,780 | 0 | 0 | 39,653 |
| 2020 | 0 | 1,400 | 1,311 | 7,920 | 0 | 0 | 10,631 |
| 2021 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2025 | 0 | 0 | 0 | 0 | 4,416 | 0 | 4,416 |
| 2026 | 0 | 0 | 0 | 0 | 0 | 863 | 863 |
| 2027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2028 | 0 | 0 | 0 | 0 | 0 | 518 | 518 |
| 2029 | 0 | 0 | 0 | 0 | 0 | 690 | 690 |
| 2030 | 0 | 0 | 0 | 0 | 0 | 518 | 518 |
| 2031 | 0 | 0 | 0 | 0 | 0 | 518 | 518 |
| 2032 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2033 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2034 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2035 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2036 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2037 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2038 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2039 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2040 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2041 | 0 | 0 | 0 | 0 | 0 | 173 | 173 |
| 2042 | 0 | 0 | 0 | 0 | 0 | 173 | 173 |
| 2043 | 0 | 0 | 0 | 0 | 0 | 518 | 518 |
| 2044 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2045 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2046 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2047 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2048 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2049 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2050 | 0 | 0 | 0 | 0 | 0 | 345 | 345 |
| 2051 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2052 | 0 | 0 | 0 | 0 | 0 | 863 | 863 |
| **Total** | **23,440** | **9,265** | **78,782** | **31,075** | **4,416** | **10,005** | **156,983** |

[5] The costs identified in the first four columns (New ISFSI Pad Construction, Spent Fuel Related Security Modifications, MPC and Storage Overpack Costs, and ISFSI Loading Campaigns) are considered "transfer to dry storage" costs.

**TABLE 3 - Spent Fuel Management Schedule**
(Fuel Assembly Totals by Location)

| Year | Pool Inventory | ISFSI Inventory | DOE Acceptance[6] |
|---|---|---|---|
| 2014 | 2,996 | 884 | |
| 2015 | 2,996 | 884 | |
| 2016 | 2,996 | 884 | |
| 2017 | 2,996 | 884 | |
| 2018 | 2,996 | 884 | |
| 2019 | 820 | 3,060 | |
| 2020 | 0 | 3,880[7] | |
| 2021 | | 3,880 | |
| 2022 | | 3,880 | |
| 2023 | | 3,880 | |
| 2024 | | 3,880 | |
| 2025 | | 3,880 | |
| 2026 | | 3,502 | 378 |
| 2027 | | 3,502 | - |
| 2028 | | 3,284 | 218 |
| 2029 | | 3,010 | 274 |
| 2030 | | 2,784 | 226 |
| 2031 | | 2,558 | 226 |
| 2032 | | 2,422 | 136 |
| 2033 | | 2,286 | 136 |
| 2034 | | 2,157 | 129 |
| 2035 | | 2,029 | 128 |
| 2036 | | 1,901 | 128 |
| 2037 | | 1,781 | 120 |
| 2038 | | 1,661 | 120 |
| 2039 | | 1,549 | 112 |
| 2040 | | 1,549 | - |
| 2041 | | 1,464 | 85 |
| 2042 | | 1,405 | 59 |
| 2043 | | 1,209 | 196 |

[6] This schedule is provided for illustrative purposes only and assumes that DOE begins accepting VYNPS fuel in 2026. It is expected that VYNPS will seek to accelerate acceptance based on shutdown reactor priority, exchanges of acceptance allocations, and other Standard Contract provisions.

[7] Includes one fuel debris canister, which, for purposes of this analysis and for convenience, is assumed to be picked up in the final year of DOE acceptance (2052).

**TABLE 3 - Spent Fuel Management Schedule** (cont'd)
(Fuel Assembly Totals by Location)

| Year | Pool Inventory | ISFSI Inventory | DOE Acceptance |
|---|---|---|---|
| 2044 | | 1,073 | 136 |
| 2045 | | 949 | 124 |
| 2046 | | 821 | 128 |
| 2047 | | 701 | 120 |
| 2048 | | 585 | 116 |
| 2049 | | 469 | 116 |
| 2050 | | 349 | 120 |
| 2051 | | 349 | - |
| 2052 | | - | 349 |
| | | | |
| **Total** | | | **3,880** |

## III. ISFSI Decommissioning

The ISFSI pads and facilities will be decommissioned at the time of plant decommissioning or after DOE has removed all spent fuel from the site. The bases and assumptions used to formulate the cost estimate are discussed in the DCE (Reference 8, Attachment 1). As detailed in Appendix D to the DCE, the estimated cost to decommission the ISFSI is approximately $5.1 million.

## IV. Funding Demonstration for License Termination and Spent Fuel Management Operations Costs

As shown in the DCE (Reference 8, Attachment 1), the projected total cost to decommission VYNPS, after an extended period of safe storage, is estimated at $1.24 billion (in 2014 dollars). This amount includes estimated costs associated with license termination ($817.22 million), interim spent fuel storage ($368.35 million), and site restoration ($57.15 million) activities.

In Reference 9, ENO submitted an updated Decommissioning Funding Status report. Reference 9 reported the VYNPS decommissioning trust fund balance to be approximately $655 million as of October 31, 2014. Tables 3.4 and 3.5 of the DCE (Reference 8, Attachment 1) set forth the estimated annual expenditures for license termination and spent fuel management, respectively. For convenience, those tables are reproduced below as Tables 4 and 5. This annual expenditure information is used in the cash flow analysis in Table 6 below. The cash flow analysis demonstrates that the VYNPS trust fund is sufficiently funded for all license termination activities and certain spent fuel management activities. ENVY plans to fund "operational" spent fuel management activities, such as operating and maintaining the ISFSI and the spent fuel pool, from the trust fund. Of the estimated $368 million total spent fuel management costs, the operational costs total approximately $225 million.

The remaining $143 million is associated with transfer of spent fuel to dry storage (e.g., procurement of dry storage systems, transfer of fuel from the spent fuel pool to the ISFSI, and construction of the second ISFSI pad). To fund the "transfer to dry storage" portion of spent fuel management costs, ENVY intends to establish two separate revolving credit facilities from third party banks totaling $145 million. The first facility is planned be a committed credit facility with

an expected duration of three years and a capacity of $60 million. This facility would be guaranteed by Entergy Corporation, parent company of ENVY and ENO. The committed facility is intended to provide working capital for ENVY from the time it pays an expenditure to the time it receives reimbursement from the trust fund, as well as dry storage costs that are not reimbursable from the trust fund. The second credit facility is planned to be an uncommitted facility with a capacity of $85 million.[8] This facility would also be guaranteed by Entergy Corporation. This facility is intended to cover the balance of costs related to transferring fuel from the spent fuel pool to the ISFSI.

Thus, considering the current fund balance of $655 million (as of October 31, 2014), projected fund earnings during the SAFSTOR period (assuming an annual 2% growth rate), and $145 million from the two planned external credit facilities to fund the transfer to dry fuel storage costs, the trust fund is expected to have an excess of $175.9 million over the estimated license termination and spent fuel management costs. As noted above, in Reference 5, ENVY committed to make a $127.017 million contribution to the VYNPS decommissioning trust fund in 2026 to ensure adequate funding for license termination and spent fuel management activities. As shown in the updated funding strategy for license termination and spent fuel management activities, this planned contribution is no longer necessary. As a result, ENO is hereby providing written notification on behalf of ENVY of ENVY's cancellation of this commitment.

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[8] A committed credit facility is a legal agreement between the lender and the borrower outlining the conditions of the credit facility. Once signed, the agreement requires the lender to lend money to the borrower, provided that the borrower satisfies the agreement's conditions (e.g., paying fees). Committed credit lines differ from uncommitted credit lines in that they legally bind the lender to provide the funds, rather than giving the lender the option of suspending or canceling the credit line based on market conditions.

## Table 4 - License Termination Expenditures
(thousands, 2014 dollars)

| Year | Labor | Equip. & Materials | Energy | Waste Disposal | Other | Total |
|---|---|---|---|---|---|---|
| 2014 | 0 | 0 | 0 | 0 | 15,165 | 15,165 |
| 2015 | 39,626 | 533 | 3,912 | 38 | 37,089 | 81,198 |
| 2016 | 15,512 | 442 | 1,004 | 22 | 19,145 | 36,126 |
| 2017 | 2,015 | 395 | 184 | 14 | 8,216 | 10,823 |
| 2018 | 1,898 | 395 | 184 | 14 | 7,057 | 9,548 |
| 2019 | 1,858 | 395 | 184 | 14 | 5,722 | 8,173 |
| 2020 | 5,716 | 1,234 | 1,288 | 1,200 | 8,326 | 17,763 |
| 2021 | 1,969 | 284 | 187 | 7 | 2,794 | 5,241 |
| 2022 | 1,969 | 284 | 187 | 7 | 2,744 | 5,191 |
| 2023 | 1,969 | 284 | 187 | 7 | 2,744 | 5,191 |
| 2024 | 1,974 | 285 | 187 | 7 | 1,196 | 3,650 |
| 2025 | 1,969 | 284 | 187 | 7 | 1,144 | 3,591 |
| 2026 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2027 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2028 | 1,974 | 285 | 187 | 7 | 1,288 | 3,742 |
| 2029 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2030 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2031 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2032 | 1,974 | 285 | 187 | 7 | 1,288 | 3,742 |
| 2033 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2034 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2035 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2036 | 1,974 | 285 | 187 | 7 | 1,338 | 3,792 |
| 2037 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2038 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2039 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2040 | 1,974 | 285 | 187 | 7 | 1,288 | 3,742 |
| 2041 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2042 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2043 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2044 | 1,974 | 285 | 187 | 7 | 1,288 | 3,742 |
| 2045 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2046 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2047 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2048 | 1,974 | 285 | 187 | 7 | 1,338 | 3,792 |
| 2049 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2050 | 1,969 | 284 | 187 | 7 | 1,286 | 3,733 |
| 2051 | 1,969 | 284 | 187 | 7 | 1,336 | 3,783 |
| 2052 | 1,974 | 285 | 187 | 7 | 1,288 | 3,742 |

**Table 4 - License Termination Expenditures** (cont'd)
(thousands, 2014 dollars)

| Year | Labor | Equip. & Materials | Energy | Waste Disposal | Other | Total |
|---|---|---|---|---|---|---|
| 2053 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2054 | 1,969 | 278 | 187 | 6 | 1,192 | 3,633 |
| 2055 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2056 | 1,974 | 279 | 187 | 6 | 1,144 | 3,591 |
| 2057 | 1,969 | 278 | 187 | 6 | 1,192 | 3,633 |
| 2058 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2059 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2060 | 1,974 | 279 | 187 | 6 | 1,194 | 3,641 |
| 2061 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2062 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2063 | 1,969 | 278 | 187 | 6 | 1,192 | 3,633 |
| 2064 | 1,974 | 279 | 187 | 6 | 1,144 | 3,591 |
| 2065 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2066 | 1,969 | 278 | 187 | 6 | 1,192 | 3,633 |
| 2067 | 1,969 | 278 | 187 | 6 | 1,142 | 3,583 |
| 2068 | 35,936 | 1,912 | 1,873 | 32 | 3,524 | 43,277 |
| 2069 | 53,909 | 14,320 | 1,821 | 12,174 | 9,806 | 92,030 |
| 2070 | 53,452 | 15,787 | 1,689 | 18,228 | 15,362 | 104,519 |
| 2071 | 46,489 | 8,170 | 1,401 | 10,716 | 17,749 | 84,524 |
| 2072 | 46,616 | 8,192 | 1,405 | 10,745 | 17,995 | 84,953 |
| 2073 | 38,409 | 3,090 | 599 | 2,488 | 5,554 | 50,139 |
| 2074 | 151 | 0 | 0 | 0 | 360 | 512 |
| 2075 | 71.35 | 0 | 0 | 0 | 224 | 295 |
| **Total** | **434,259** | **68,148** | **24,326** | **56,003** | **234,483** | **817,219** |

## Table 5 - Spent Fuel Management Expenditures
(thousands, 2014 dollars)

| Year | Labor | Equip. & Materials | Energy | Waste Disposal | Other | Total |
|---|---|---|---|---|---|---|
| 2014 | 0 | 0 | 0 | 0 | 4,753 | 4,753 |
| 2015 | 0 | 0 | 0 | 0 | 14,319 | 14,319 |
| 2016 | 9,093 | 0 | 1,622 | 0 | 18,790 | 29,506 |
| 2017 | 13,547 | 0 | 2,195 | 0 | 33,307 | 49,049 |
| 2018 | 13,547 | 0 | 2,195 | 0 | 46,588 | 62,330 |
| 2019 | 13,547 | 0 | 2,195 | 0 | 43,942 | 59,684 |
| 2020 | 6,755 | 0 | 1,092 | 0 | 12,898 | 20,745 |
| 2021 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2022 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2023 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2024 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2025 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2026 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2027 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2028 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2029 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2030 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2031 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2032 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2033 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2034 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2035 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2036 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2037 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2038 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2039 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2040 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2041 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2042 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2043 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2044 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2045 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2046 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2047 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2048 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2049 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2050 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |
| 2051 | 3,238 | 338 | 79 | 0 | 341 | 3,996 |

**Table 5 - Spent Fuel Management Expenditures** (cont'd)
(thousands, 2014 dollars)

| Year | Labor | Equip. & Materials | Energy | Waste Disposal | Other | Total |
|---|---|---|---|---|---|---|
| 2052 | 3,246 | 339 | 80 | 0 | 342 | 4,007 |
| 2053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2055 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2060 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2061 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2070 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2073 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2074 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2075 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **160,164** | **10,816** | **11,843** | **0** | **185,524** | **368,347** |

# Table 6 - Annual Cash Flow Analysis

## Vermont Yankee Nuclear Power Station - SAFSTOR Methodology

**Annual Cash Flow Analysis - Total License Termination, Spent Fuel Management less Transfer to Dry Fuel Storage Costs**

(In Thousands, 2014 Dollars)

| | Date | Amount |
|---|---|---|
| Current Value of Qualified Trust Fund | 10/31/2014 | $ 654,925 |
| Current Value of Non-Qualified Trust Fund | 10/31/2014 | $ 38 |
| Total Trust Fund Balance as of | 10/31/2014 | $ 654,963 |
| Start of Decommissioning | 12/29/2014 | |
| Decommissioning Funds value at Calculation Date | 10/31/2014 | $ 654,963 |
| Total Estimated Costs at Calculation Date | 10/31/2014 | $ 1,042,748 |

| | | |
|---|---|---|
| 0.000% | Cost Escalation Rate | Start of Decom to end of Decom - Assumes 0.0% Decom cost escalation rate |
| 2.000% | Fund Earnings Rate | Start of Decom to end of Decom - Assumes 2.0% Earnings Rate |

## Vermont Yankee Nuclear Power Station - SAFSTOR Methodology

**Annual Cash Flow Analysis - Total License Termination, Spent Fuel Management less Transfer to Dry Fuel Storage Costs (In Thousands in 2014 Dollars)**

| Year | Column 1 50.75 License Termination Cost | Column 2 50.54 (bb) Spent Fuel Management Cost | Column 3 Exclude Transfer to Dry Fuel Storage Cost | Column 4 License Termination Cost plus Spent Fuel Management Cost less Transfer to Dry Fuel Storage Cost | Column 5 Beginning of Year Trust Fund Balance | Column 6 Withdraw | Column 7 Contribute | Column 8 Trust Fund Earnings | Column 9 Year Ending Trust Fund Balance |
|---|---|---|---|---|---|---|---|---|---|
| 2014 | 15,165 | 4,753 | 4,753 | 15,165 | 654,963 | 15,165 | 0 | 2,183 | 641,981 |
| 2015 | 81,198 | 14,319 | 10,001 | 85,515 | 641,981 | 85,515 | 0 | 11,984 | 568,450 |
| 2016 | 36,126 | 29,506 | 7,613 | 58,018 | 568,450 | 58,018 | 0 | 10,789 | 521,221 |
| 2017 | 10,823 | 49,049 | 28,873 | 31,000 | 521,221 | 31,000 | 0 | 10,114 | 500,335 |
| 2018 | 9,548 | 62,330 | 41,644 | 30,235 | 500,335 | 30,235 | 0 | 9,704 | 479,805 |
| 2019 | 8,173 | 59,684 | 39,516 | 28,342 | 479,805 | 28,342 | 0 | 9,313 | 460,776 |
| 2020 | 17,763 | 20,745 | 10,420 | 28,088 | 460,776 | 28,088 | 0 | 8,935 | 441,622 |
| 2021 | 5,241 | 3,996 | | 9,237 | 441,622 | 9,237 | 0 | 8,740 | 441,125 |
| 2022 | 5,191 | 3,996 | | 9,187 | 441,125 | 9,187 | 0 | 8,731 | 440,669 |
| 2023 | 5,191 | 3,996 | | 9,187 | 440,669 | 9,187 | 0 | 8,722 | 440,204 |
| 2024 | 3,650 | 4,007 | | 7,657 | 440,204 | 7,657 | 0 | 8,728 | 441,274 |
| 2025 | 3,591 | 3,996 | | 7,587 | 441,274 | 7,587 | 0 | 8,750 | 442,437 |
| 2026 | 3,733 | 3,996 | | 7,729 | 442,437 | 7,729 | 0 | 8,771 | 443,480 |
| 2027 | 3,783 | 3,996 | | 7,779 | 443,480 | 7,779 | 0 | 8,792 | 444,493 |
| 2028 | 3,742 | 4,007 | | 7,749 | 444,493 | 7,749 | 0 | 8,812 | 445,557 |
| 2029 | 3,733 | 3,996 | | 7,729 | 445,557 | 7,729 | 0 | 8,834 | 446,662 |
| 2030 | 3,783 | 3,996 | | 7,779 | 446,662 | 7,779 | 0 | 8,855 | 447,738 |

## Vermont Yankee Nuclear Power Station - SAFSTOR Methodology

### Annual Cash Flow Analysis - Total License Termination, Spent Fuel Management less Transfer to Dry Fuel Storage Costs (In Thousands in 2014 Dollars)

| Year | Column 1 50.75 License Termination Cost | Column 2 50.54 (bb) Spent Fuel Management Cost | Column 3 Exclude Transfer to Dry Fuel Storage Cost | Column 4 License Termination Cost plus Spent Fuel Management Cost less Transfer to Dry Fuel Storage Cost | Column 5 Beginning of Year Trust Fund Balance | Column 6 Withdraw | Column 7 Contribute | Column 8 Trust Fund Earnings | Column 9 Year Ending Trust Fund Balance |
|---|---|---|---|---|---|---|---|---|---|
| 2031 | 3,733 | 3,996 | | 7,729 | 447,738 | 7,729 | 0 | 8,877 | 448,887 |
| 2032 | 3,742 | 4,007 | | 7,749 | 448,887 | 7,749 | 0 | 8,900 | 450,039 |
| 2033 | 3,783 | 3,996 | | 7,779 | 450,039 | 7,779 | 0 | 8,923 | 451,183 |
| 2034 | 3,733 | 3,996 | | 7,729 | 451,183 | 7,729 | 0 | 8,946 | 452,400 |
| 2035 | 3,733 | 3,996 | | 7,729 | 452,400 | 7,729 | 0 | 8,971 | 453,642 |
| 2036 | 3,792 | 4,007 | | 7,799 | 453,642 | 7,799 | 0 | 8,995 | 454,839 |
| 2037 | 3,733 | 3,996 | | 7,729 | 454,839 | 7,729 | 0 | 9,019 | 456,129 |
| 2038 | 3,733 | 3,996 | | 7,729 | 456,129 | 7,729 | 0 | 9,045 | 457,446 |
| 2039 | 3,783 | 3,996 | | 7,779 | 457,446 | 7,779 | 0 | 9,071 | 458,738 |
| 2040 | 3,742 | 4,007 | | 7,749 | 458,738 | 7,749 | 0 | 9,097 | 460,087 |
| 2041 | 3,733 | 3,996 | | 7,729 | 460,087 | 7,729 | 0 | 9,124 | 461,482 |
| 2042 | 3,783 | 3,996 | | 7,779 | 461,482 | 7,779 | 0 | 9,152 | 462,855 |
| 2043 | 3,733 | 3,996 | | 7,729 | 462,855 | 7,729 | 0 | 9,180 | 464,306 |
| 2044 | 3,742 | 4,007 | | 7,749 | 464,306 | 7,749 | 0 | 9,209 | 465,767 |
| 2045 | 3,783 | 3,996 | | 7,779 | 465,767 | 7,779 | 0 | 9,238 | 467,225 |
| 2046 | 3,733 | 3,996 | | 7,729 | 467,225 | 7,729 | 0 | 9,267 | 468,764 |
| 2047 | 3,733 | 3,996 | | 7,729 | 468,764 | 7,729 | 0 | 9,298 | 470,333 |
| 2048 | 3,792 | 4,007 | | 7,799 | 470,333 | 7,799 | 0 | 9,329 | 471,863 |
| 2049 | 3,733 | 3,996 | | 7,729 | 471,863 | 7,729 | 0 | 9,360 | 473,494 |
| 2050 | 3,733 | 3,996 | | 7,729 | 473,494 | 7,729 | 0 | 9,393 | 475,158 |
| 2051 | 3,783 | 3,996 | | 7,779 | 475,158 | 7,779 | 0 | 9,425 | 476,804 |
| 2052 | 3,742 | 4,007 | | 7,749 | 476,804 | 7,749 | 0 | 9,459 | 478,514 |
| 2053 | 3,583 | 0 | | 3,583 | 478,514 | 3,583 | 0 | 9,534 | 484,466 |
| 2054 | 3,633 | 0 | | 3,633 | 484,466 | 3,633 | 0 | 9,653 | 490,487 |
| 2055 | 3,583 | 0 | | 3,583 | 490,487 | 3,583 | 0 | 9,774 | 496,678 |
| 2056 | 3,591 | 0 | | 3,591 | 496,678 | 3,591 | 0 | 9,898 | 502,984 |
| 2057 | 3,633 | 0 | | 3,633 | 502,984 | 3,633 | 0 | 10,023 | 509,375 |
| 2058 | 3,583 | 0 | | 3,583 | 509,375 | 3,583 | 0 | 10,152 | 515,944 |
| 2059 | 3,583 | 0 | | 3,583 | 515,944 | 3,583 | 0 | 10,283 | 522,644 |
| 2060 | 3,641 | 0 | | 3,641 | 522,644 | 3,641 | 0 | 10,416 | 529,419 |
| 2061 | 3,583 | 0 | | 3,583 | 529,419 | 3,583 | 0 | 10,553 | 536,389 |
| 2062 | 3,583 | 0 | | 3,583 | 536,389 | 3,583 | 0 | 10,692 | 543,499 |
| 2063 | 3,633 | 0 | | 3,633 | 543,499 | 3,633 | 0 | 10,834 | 550,700 |
| 2064 | 3,591 | 0 | | 3,591 | 550,700 | 3,591 | 0 | 10,978 | 558,086 |

| Vermont Yankee Nuclear Power Station - SAFSTOR Methodology | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Annual Cash Flow Analysis - Total License Termination, Spent Fuel Management less Transfer to Dry Fuel Storage Costs (In Thousands in 2014 Dollars) | | | | | | | | | |
| Year | Column 1 50.75 License Termination Cost | Column 2 50.54 (bb) Spent Fuel Management Cost | Column 3 Exclude Transfer to Dry Fuel Storage Cost | Column 4 License Termination Cost plus Spent Fuel Management Cost less Transfer to Dry Fuel Storage Cost | Column 5 Beginning of Year Trust Fund Balance | Column 6 Withdraw | Column 7 Contribute | Column 8 Trust Fund Earnings | Column 9 Year Ending Trust Fund Balance |
| 2065 | 3,583 | 0 | | 3,583 | 558,086 | 3,583 | 0 | 11,126 | 565,630 |
| 2066 | 3,633 | 0 | | 3,633 | 565,630 | 3,633 | 0 | 11,276 | 573,273 |
| 2067 | 3,583 | 0 | | 3,583 | 573,273 | 3,583 | 0 | 11,430 | 581,120 |
| 2068 | 43,277 | 0 | | 43,277 | 581,120 | 43,277 | 0 | 11,190 | 549,033 |
| 2069 | 92,030 | 0 | | 92,030 | 549,033 | 92,030 | 0 | 10,060 | 467,064 |
| 2070 | 104,519 | 0 | | 104,519 | 467,064 | 104,519 | 0 | 8,296 | 370,841 |
| 2071 | 84,524 | 0 | | 84,524 | 370,841 | 84,524 | 0 | 6,572 | 292,889 |
| 2072 | 84,953 | 0 | | 84,953 | 292,889 | 84,953 | 0 | 5,008 | 212,944 |
| 2073 | 50,139 | 0 | | 50,139 | 212,944 | 50,139 | 0 | 3,757 | 166,563 |
| 2074 | 512 | 0 | | 512 | 166,563 | 512 | 0 | 3,326 | 169,377 |
| 2075 | 295 | 0 | | 295 | 169,377 | 295 | 0 | 3,385 | 172,466 |
| 2076 | 0 | 0 | | 0 | 172,466 | 0 | 0 | 3,449 | 175,915 |
| | | | | | | | | | |
| | 817,219 | 368,347 | 142,819 | 1,042,748 | | 1,042,748 | 0 | 563,701 | |

**Table 6 Definitions:**

**Column 1:** **50.75 License Termination Cost**

Reflects the Total Annual License Termination Plan cost in 2014 dollars at a 0.0% escalation rate

**Column 2:** **50.54 (bb) Spent Fuel Management Cost**

Reflects the Total Annual Irradiated Fuel Management Plan cost in 2014 dollars at a 0.0% escalation rate

**Column 3:** **Exclude Transfer to Dry Fuel Storage Cost**

Reflects the Transfer to Dry Fuel Storage Cost included in Column 2 that is planned to be funded by external credit facilities, in 2014 dollars at a 0.0% escalation rate

**Column 4:** **License Termination Cost plus Spent Fuel Management Cost less Transfer to Dry Fuel Storage Cost**

Reflects the Total Annual License Termination Plan cost plus Total Spent Fuel Management Plan cost less Transfer to Dry Fuel Storage cost all in 2014 dollars at a 0.0% escalation rate (Column 1 + Column 2 - Column 3)

**Column 5:** **Beginning of Year Trust Fund Balance**

Reflects the beginning of year Trust Fund balance in 2014 dollars at a 0.0% escalation rate and 2.0% Fund Earnings

**Column 6:** **Withdraw**

Reflects the annual expenditures from the Trust Fund in 2014 dollars at a 0.0% escalation rate (equals Column 4)

**Column 7:** **Contribute**

Reflects the annual contributions to the Trust Fund in 2014 dollars at a 0.0% escalation rate

**Column 8:** **Trust Fund Earnings**

Reflects earnings on funds remaining in the trust. A 2.0% earnings rate is used over a 0.0% cost escalation rate. The annual 2.0% earnings are calculated on the beginning balance less 50% of the projected annual expenditure for each year. (Column 5 - 50% of Column 6 * 2.0%)

**Column 9:** **Year Ending Trust Fund Balance**

Reflects the end of year Trust Fund balance after all projected earnings are added and all projected expenditures are deducted for year end specified at a 0.0% escalation rate and 2.0% Fund Earnings in 2014 dollars. (Column 5 - Column 6 + Column 7 + Column 8)

## V. Regulatory Activities

The Program assumes withdrawals from the VYNPS decommissioning trust fund for operational spent fuel management costs. ENO will make appropriate submittals to request an exemption in accordance with 10 CFR 50.12 from the requirements of 10 CFR 50.82(a)(8)(i)(A), which would permit the use of decommissioning trust funds for spent fuel management expenses. The availability of decommissioning funding sources will be periodically revisited to ensure that withdrawals from the fund do not inhibit the ability to complete license termination and spent fuel management activities.

In addition, in accordance with 10 CFR 50.82(a)(8)(vii), ENO will submit a report on the status of spent fuel management funding by March 31 of each year. The report will include, current through the end of the previous calendar year, the amount of funds accumulated to cover the cost of managing spent fuel, the projected cost of managing spent fuel until it is transferred to DOE, and if the funds accumulated do not cover the projected cost, a plan to provide additional funding assurance using one of the methods allowed by NRC regulations.

## VI. Summary

The spent fuel management activities described in this updated Program must be performed in conjunction with license termination activities. The annual cash flow analysis demonstrates that the VYNPS decommissioning trust fund with projected earnings, together with an additional $145 million in credit available for transfer to dry fuel storage activities, will be sufficient to cover the estimated license termination and spent fuel management costs.

## VII. References

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Report Pursuant to 10 CFR 50.54(bb)," BVY 07-007, dated March 21, 2007 (ML070860696)

2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Revised Spent Fuel Management Plan Pursuant to 10 CFR 50.54(bb)," BVY 08-077, dated October 14, 2008 (ML082910294)

3. Letter, USNRC to Entergy Nuclear Operations, Inc., "Safety Evaluation Re: Spent Fuel Management Program and Preliminary Decommissioning Cost Estimate (TAC NOs. MD8035 and MD8051)," dated February 3, 2009 (ML083390193)

4. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Update to Vermont Yankee Spent Fuel Management Plan," BVY 09-022, dated April 1, 2009 (ML091040287)

5. Letter, Entergy Nuclear Operations, Inc. to USNRC, "VY Spent Fuel Management Plan – RAI Response)," BVY 09-048, dated August 18, 2009 (ML092370298)

6. Letter, USNRC to Entergy Nuclear Operations, Inc., "Safety Evaluation Re: Update to Spent Fuel Management Program (TAC NO. ME1152)," dated October 8, 2009 (ML092740238)

7. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Notification of Permanent Cessation of Power Operations," BVY 13-079, dated September 23, 2013 (ML13273A204)

8. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Vermont Yankee Nuclear Power Station Post-Shutdown Decommissioning Activities Report," BVY 14-078, dated December 19, 2014

9. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Vermont Yankee Decommissioning Funding Status Report," BVY 14-082, dated December 19, 2014

Attachment 2

Vermont Yankee Nuclear Power Station

List of Cancelled Regulatory Commitments

## List of Cancelled Regulatory Commitments

This table identifies actions discussed in this letter for which ENVY no longer commits to perform.

| COMMITMENT | DATE OF ORIGINAL COMMITMENT | CHANGED DATE |
|---|---|---|
| Provide additional funding of $127.017 million dollars to trust fund for Spent Fuel Management.<br><br>Source: Letter BVY 09-048, dated August 18, 2009 (ML092370298) | December 31, 2026 | This commitment is cancelled. |