



## Report of the Vermont State Auditor

August 31, 2010

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# ENTERGY NUCLEAR VERMONT YANKEE

## Monitoring and Management of the Decommissioning Trust Fund

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**Thomas M. Salmon, CPA**  
**Vermont State Auditor**  
**Rpt. No. 10-06**

## **Mission Statement**

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**THOMAS M. SALMON, CPA  
STATE AUDITOR**



**STATE OF VERMONT  
OFFICE OF THE STATE AUDITOR**

August 31, 2010

Addressees (see next page)

Dear Colleagues,

At the request of members of the legislature, we reviewed whether the Vermont Yankee Decommissioning Trust Fund is managed and used in a way that best benefits the State and its citizens.

Our review focused on (1) studying the extent to which the State has a systematic method for monitoring whether the decommissioning trust fund will have sufficient assets in the future to cover the costs of site cleanup required by the State and (2) considering the system of controls that Entergy and the State established to safeguard the assets of the decommissioning trust fund.

I would like to thank the management and staff of the Department of Public Service and Entergy for their cooperation and professionalism. If you would like to discuss any of the issues raised by this report, I can be reached at (802) 828-2281 or at [auditor@state.vt.us](mailto:auditor@state.vt.us).

Sincerely,

*Thomas M. Salmon CPA*

Thomas M. Salmon, CPA  
Vermont State Auditor

**ADDRESSEES**

The Honorable Shap Smith  
Speaker of the House of Representatives

The Honorable Peter Shumlin  
President Pro Tempore of the Senate

The Honorable James Douglas  
Governor

The Honorable Ann Cummings  
Vermont Senate

The Honorable Mark MacDonald  
Vermont Senate

The Honorable Ginny Lyons  
Vermont Senate

The Honorable Sarah Edwards  
Vermont House of Representatives

Mr. David O'Brien  
Commissioner  
Department of Public Service

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## Abbreviations

CalPERS	California Public Employees Retirement System
COSO	Committee on Sponsoring Organizations of the Treadway Commission
CFR	Code of Federal Regulations
CIF	Collective Investment Fund
DOE	Department of Energy
DTF	Decommissioning Trust Fund
ENOI	Entergy Nuclear Operations, Inc.
ENVY	Entergy Nuclear Vermont Yankee, LLC
ESI	Entergy Services, Inc.
MOU	Memorandum of Understanding
NRC	Nuclear Regulatory Commission
OCC	Office of the Comptroller of the Currency
OIG	Office of Inspector General
PSB	Public Service Board
PSD	Public Service Department
PSDAR	Post-shutdown Decommissioning Activities Report
SAS	Statement on Auditing Standards
SEC	Securities and Exchange Commission
VYNPC	Vermont Yankee Nuclear Power Corporation
VYNPS	Vermont Yankee Nuclear Power Station

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## Executive Summary

Following the shutdown of Entergy's nuclear power plant in Vernon, Vermont, a significant radioactive waste hazard will remain until the waste is removed and the plant site cleaned up. The cleanup of this radioactive waste hazard represents a significant financial obligation for Entergy. Based on a 2007 study, Entergy estimated site cleanup activities, including radiological decommissioning, spent nuclear fuel management and site restoration, will cost \$656 million to \$991 million (reported in 2006 dollars).<sup>1</sup>

At the time Entergy acquired Vermont Yankee Nuclear Power Station (VYNPS) from Vermont Yankee Nuclear Power Corporation (VYNPC) in 2002, Entergy established a decommissioning trust fund (DTF)<sup>2</sup> to set aside resources to cover the cost of cleaning up the site. As of December 31, 2009, the value of the DTF was approximately \$428 million. Entergy intends to manage the investment of the assets of the DTF so that there will be sufficient assets in the DTF in the future to cover all of the costs of site cleanup.

Multiple factors, including estimates of cleanup costs, timing of plant closure and estimates of the investment rate of return for DTF assets, complicate analyzing whether the resources in the fund will be sufficient to cover some or all of the site cleanup activities required by the State of Vermont. Given this uncertainty, at the request of five members of the Vermont General Assembly, our office undertook a review of certain aspects associated with monitoring and managing the DTF.

Our review did not constitute an audit. The objectives of our review encompassed (1) studying the extent to which the State has a systematic method for monitoring whether the trust fund will have sufficient assets in the future to cover the costs of site cleanup required by the State and (2) considering the system of controls that Entergy and the State established to safeguard the assets of the trust fund. Our observations are based upon

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<sup>1</sup>For purposes of our report, we consider site cleanup to encompass radiological decommissioning, spent nuclear fuel management and site restoration as these are the activities that must occur to return the site to a condition suitable for future non-nuclear activities. See Appendix I for definitions of the components of the site cleanup activities.

<sup>2</sup>Per the terms of the Purchase & Sale Agreement with VYNPC, Entergy acquired the assets in VYNPC's decommissioning trust fund and these assets were used as the source of the prepayment into the Entergy DTF.

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research we conducted, inquiry of officials at the Vermont Public Service Department, and written and verbal responses and documentation we received from Entergy. Appendix II provides more information regarding the scope and methodology used to conduct the review.

Throughout this report, Entergy is used as a generic term to encompass three Entergy Corporation subsidiaries, Entergy Nuclear Vermont Yankee, LLC, Entergy Nuclear Operations, Inc., and Entergy Services, Inc., involved in the operation of VYNPS and the management of the DTF. Appendix III contains an organization chart representing the legal entity relationship between the three subsidiaries and a narrative describing the relationship each entity has to VYNPS and the DTF.

Technical and specialized terms are utilized throughout this report. Appendix I contains a glossary with definitions of the terms.

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## Vermont's System for Monitoring Adequacy of Decommissioning Trust Fund

Vermont's Public Service Department (PSD) and the Vermont Public Service Board (PSB) required Entergy to provide periodic reports related to the estimated costs of site cleanup and the current asset value of the portfolio holdings in the decommissioning trust fund. However, these reports only allowed for limited systematic monitoring of the sufficiency of the fund because certain of the reports (1) lacked some elements of the cost of site cleanup or (2) were required infrequently. For example, Entergy was required to file the biennial Nuclear Regulatory Commission (NRC) certification report<sup>3</sup> with the PSD regarding the sufficiency of the trust fund as it related to radiological decommissioning. Although the NRC certification report provided data that could be used as part of a monitoring process, since the report did not address the significant site cleanup costs related to spent nuclear fuel management and site restoration, it did not provide sufficient data for a complete analysis. This limitation was highlighted by the December 31, 2008 certification report which identified an \$87 million shortfall in the DTF.<sup>4</sup> This

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<sup>3</sup>NRC required report defined in 10 CFR 50.75(f)(1). PSD requires that ENVY file a copy of the NRC report with them as well. It is required at least biennially up until five years of the end of expected operating life of the plant at which point it becomes an annual requirement. The report compares assets held by the decommissioning trust fund at December 31, assuming a growth factor, to the estimated cost of radiological decommissioning based upon a mathematical formula in 10 CFR 50.75(c)(1).

<sup>4</sup>Ultimately, in a February 19, 2010 letter from NRC to ENVY, NRC accepted ENVY's proposal to provide additional financial assurance in the form of a parent company guarantee equal to \$40 million to resolve the shortfall. NRC accepted a lower amount of financial assurance than the calculated shortfall, based in part on the increase in value of the DTF to \$419.8 million as of 9/30/09.

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shortfall may have been significantly higher at that time due to the significance of the spent fuel management and site restoration costs that were not required to be included in the NRC certification report. According to Entergy's 2007 decommissioning cost study,<sup>5</sup> estimates for spent nuclear fuel management and site restoration ranged from \$187 million to \$541 million.<sup>6</sup> Since PSD did not require that these costs be reported at the same time as the NRC certification report, no mechanism existed for PSD to calculate the shortfall incorporating all costs of cleanup. This deficiency was somewhat mitigated by PSD's requirement for a site-specific cost estimate every five years, incorporating all cleanup obligations required by Vermont and demonstrating that the DTF will be sufficient to cover the costs of all cleanup obligations. However, we believe that reviewing the adequacy of the DTF to cover the costs of site cleanup every five years is not frequent enough, especially given the recent market turmoil. A more prudent approach is to develop a monitoring process which would entail more frequent comparisons of estimates for all components of site cleanup costs to the resources of the DTF in order to ensure that adequate resources are available in the future.<sup>7</sup>

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## Entergy and State Practices for Safeguarding DTF Assets

Entergy's system of controls for safeguarding the DTF assets had many expected controls such as administration of the DTF by a trustee independent of Entergy to ensure appropriate segregation of the fund assets from Entergy's operating assets. Likewise, the State has adopted the Uniform Prudent Investor Act, regulating the responsibilities of trustees.

Some improvements could be made. For example, Entergy established broad investment guidelines in the Master Decommissioning Trust Agreement, such as requiring investment managers to adhere to the prudent investor standard and prohibiting investment in Entergy securities. In addition, for two of the three investment managers, Entergy specified additional policies in the investment manager agreements. However, the flexibility allowed by the broad

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<sup>5</sup>Report prepared for Entergy that analyzed the cost to perform site cleanup, including radiological decommissioning, spent nuclear fuel management, and site restoration under eight different scenarios.

<sup>6</sup>These cost estimates are provided to underscore the magnitude. The costs may not be added to the identified shortfall to create a new estimated shortfall since the methodology used to calculate costs in the NRC certification report varied from the approach used in Entergy's site-specific study. In addition, the growth assumptions for the assets in the trust fund differ under the two approaches as well.

<sup>7</sup>In testimony submitted to the Vermont Public Service Board on 7/17/2009 related to Docket 7440, PSD recommended increasing the frequency to every 2.5 years.

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guidelines in the Master Decommissioning Trust Agreement could subject the DTF to more risk than the State may be willing to accept.

Enhancements to Entergy's practices for safeguarding the assets of the DTF would provide greater assurance that the requisite resources will be available in the future to cover the costs of cleaning up the plant. Achieving these improvements may require implementing additional State guidelines or regulations to encourage Entergy to enhance existing practices which safeguard assets accumulated in the DTF.

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## Background

Entergy has owned and operated VYNPS in Vernon, Vermont since acquiring it from VYNPC in 2002.<sup>8</sup> Although the current license to own and operate the nuclear power plant expires in 2012, Entergy has submitted an application for re-licensing to NRC for an extension of operating life to 2032. Entergy also submitted a petition to the PSB<sup>9</sup> for amendment to its certificate of public good to extend operations through 2032.

Following the cessation of operations of VYNPS, in 2012 or 2032, significant resources will be expended to perform cleanup of the site, including the following:

- management of spent nuclear fuel for an indefinite period of time,
- removal of the plant's spent or used fuel,
- decommissioning the radioactive waste hazard resulting from nuclear power plant operations and,
- site restoration.

Removal of the plant's spent fuel and decommissioning radioactive waste are mandatory obligations of a nuclear power plant licensee and are regulated by the Nuclear Regulatory Commission<sup>10</sup>. The final order of the PSB approving the sale of the nuclear power plant to Entergy in 2002 included an additional requirement for Entergy to perform site restoration work.<sup>11</sup>

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<sup>8</sup>See Appendix III for an organization chart which illustrates the Entergy Corporation affiliates involved in owning and managing the nuclear power plant.

<sup>9</sup>The Vermont Public Service Board is a quasi-judicial board that supervises the rates, quality of service and overall financial management of Vermont's public utilities.

<sup>10</sup>Nuclear power plant operators are responsible for managing and providing funding for the caretaking of all irradiated fuel at reactor sites until title to the fuel is transferred to the Federal Department of Energy (DOE). DOE is responsible for disposing of the spent fuel from commercial nuclear power plants in a geologic repository. Pending the approval and completion of a repository project, owners of nuclear plants are storing spent fuel at plant sites.

<sup>11</sup>According to the PSB order, dated 6/13/2002, for Docket 6545, site restoration means that once the Vermont Yankee site is no longer used for nuclear purposes or non-nuclear commercial, industrial or other similar uses consistent with the orderly development of the property, the site will be restored by removal of all structures and, if appropriate, regraded and reseeded.

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At the time Entergy purchased the nuclear power plant from VYNPC, the NRC approved the transfer of the license to own and operate the nuclear plant to Entergy, concluding that Entergy's prepayment of \$310 million into a decommissioning trust fund met the NRC requirement to provide reasonable funding assurance for radiological decommissioning. Likewise, the PSB concluded<sup>12</sup> that the \$310 million prepayment into a decommissioning trust fund, combined with the potential for the value of the decommissioning trust fund to grow during SAFSTOR, met the State's requirement for assurance that adequate funds would be available in the future to cover the costs of radiological decommissioning, spent nuclear fuel management and site restoration.

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## Regulation of Adequacy of Funding for Site Cleanup

Both the NRC and the State of Vermont regulate and monitor the sufficiency of Entergy's accumulation of funds to cover the costs of site cleanup. Their assessments of whether adequate funds are being accumulated are complicated by multiple assumptions that have an impact on estimating site cleanup costs and projecting the future value of accumulated funds, including timing of cessation of plant operations, immediate versus delayed cleanup, date of removal of spent nuclear fuel for disposal by the Federal Department of Energy and investment rate of return for the DTF.

### **Federal Regulation**

For safety reasons, after a licensee retires a plant, the licensee must eventually dismantle it. After the spent fuel is removed from the plant's reactor vessel, the plant must be dismantled and the radioactive waste shipped to one or more disposal facilities. The spent fuel is usually stored at the plant site until the fuel can be removed for disposal. The other radioactive wastes from dismantling the plant are shipped to one or more off-site disposal facilities. Upon completion of this process, called "decommissioning," the plant site can be re-used for other purposes.

NRC allows some flexibility in the timeline for completing radiological decommissioning. Nuclear plant licensees may commence major site decontamination and dismantling activities shortly after termination of

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<sup>12</sup>PSB Order, dated 6/13/2002, Docket 6545, Sale of VYNPC to Entergy.

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operations (known as DECON) or maintain the plant and site in a safe condition up to several decades before dismantling the site (SAFSTOR).<sup>13</sup>

Regardless of the timeline for completion of radiological decommissioning, NRC regulations mandate that nuclear power plant licensees (1) provide reasonable assurance that adequate funding will be available to perform radiological decommissioning of the facility and (2) have a funding plan for the management of spent nuclear fuel.

*(1) Radiological decommissioning funding assurance*

Under NRC requirements, the owners of commercial nuclear power plants can choose from one or more methods, including prepayment of cash or other assets into a segregated account,<sup>14</sup> to provide decommissioning financial assurance.

The NRC utilizes various processes for reviewing the adequacy of nuclear power plant licensees' method(s) for ensuring the availability of funds to cover the costs of radiological decommissioning. See the following table for the reports required by the NRC to support its assessment of the adequacy of funding for radiological decommissioning costs.

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**Table 1: NRC Required Reports for Assessing Adequacy of Funding Mechanisms of Radiological Decommissioning**

<b>Regulation</b>	<b>Report Description</b>	<b>Timing</b>
10 Code of Federal Regulations (CFR) 50.33(k)(1)	Applicant for an operating license is required to submit information indicating how reasonable assurance will be provided that funds will be available to decommission the facility.	Application for operation of plant.  Transfer of existing license to another entity.
10 CFR 50.75(f)(1)	The Certification Report requires licensees to biennially report to the NRC on the status of their decommissioning funds as provided by 10 CFR 50.75(f). <sup>a</sup> The NRC utilizes this report to determine whether licensees are on track to provide adequate funds to cover the costs of decommissioning the plant.	Biennial during reactor operation and storage period, if any.  Annual within last 5 years of operating license.

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<sup>13</sup>There is a third approach, ENTOMB. However, to date, NRC has not approved ENTOMB for any nuclear licensees.

<sup>14</sup>In this instance segregated refers to segregation from the nuclear power plant owner's other assets and outside the owner's administrative control.

<b>Regulation</b>	<b>Report Description</b>	<b>Timing</b>
10 CFR 50.75(f)(2) and (4)	<u>Site Specific Study</u> of preliminary decommissioning cost estimate that includes plans for adjusting levels of funds assured for decommissioning to demonstrate a reasonable level of assurance that funds will be available when needed to cover the cost of decommissioning. <sup>b</sup>	5 years prior to end of operating license
10 CFR 50.82(a)(4)	<u>Post Shutdown Decommissioning Activities Report</u> which, among other items, must include a description of the planned decommissioning activities along with a schedule for accomplishment and an estimate of expected costs.	Prior to or within 2 years following permanent cessation of operations.
10 CFR 50.82(a)(9)(i) and (ii)	<u>License Termination Plan</u> must include updated estimate of remaining decommissioning costs and compare the estimated costs with present funds set aside for decommissioning. If there is a deficit in funding, must indicate the means for ensuring adequate funds to complete decommissioning.	2 years prior to termination of the license date

<sup>a</sup>The biennial certification report, required by 10 CFR 50.75, compares estimated radiological decommissioning costs based on a mathematical formula in 10 CFR 50.75(c)(1) to a projection of future value of the decommissioning trust fund.

<sup>b</sup>According to NRC Regulatory Guide 1.159, cost estimates must account for the entire decommissioning work scope, but not for items that are outside the scope of the decommissioning process, such as the maintenance and storage of spent fuel in the spent fuel pool, the design or construction of spent fuel dry storage facilities, or other activities not directly related to the long-term storage, radiological decontamination and dismantlement of the facility, or radiological decontamination of the site.

## *(2) Spent nuclear fuel management funding assurance*

The NRC requires that licensees submit a plan five years before expiration of the operating license demonstrating how the licensee will manage and pay for the caretaking of all spent fuel at the reactor site until the spent fuel is transferred to the U.S. Department of Energy for permanent or interim centralized disposal.<sup>15</sup>

Although the NRC requires that a funding plan be in place, it has not stipulated the mechanisms that should be used to fund management of spent nuclear fuel. NRC regulations specify that the use of decommissioning trust funds is limited to paying for the costs of radiological decommissioning unless there are funds in the decommissioning trust fund that are in addition to

<sup>15</sup>The U.S. Department of Energy has not identified a final disposal site. According to Secretary of Energy Steven Chu's March 11, 2009 statement to the U.S. Senate Committee on the Budget, funding is being eliminated for Yucca Mountain as a repository for nuclear waste.

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decommissioning funds and these funds have been earmarked for spent fuel management. However, NRC has indicated that licensees may seek exemption from these requirements in order to use decommissioning trust funds for spent fuel management expenses.

### **State Regulation**

The Vermont General Assembly, PSB and PSD regulate the ownership and operation of nuclear power plants via the mechanism of a certificate of public good.<sup>16</sup> The adjudication of requests for certificates of public good are managed via PSB dockets. The PSB acts with the authority of a court of record<sup>17</sup> and PSD acts as an advocate for the public and presents its position to the PSB in evidentiary filings and testimony.

While PSB may issue certificates of public good to nuclear power plants, approving transactions such as (1) transfer of ownership, (2) construction of a storage facility for spent fuel on a power plant's site, and (3) increased power production capacity of the plant, PSB may not issue a certificate of public good for re-licensing of a nuclear power plant without the approval and consent of the Vermont General Assembly.<sup>18</sup>

Vermont State statutes and the process for issuing a certificate of public good serve as the broad umbrella for regulating nuclear power plants in the state. PSB orders and PSD memorandums of understanding (MOU) contain additional guidelines specific to the operation of VYNPS. For example, at the time Entergy was issued a certificate of public good approving its acquisition of VYNPS from VYNPC in July 2002, Entergy made commitments to perform certain site cleanup activities and agreed to certain conditions, including periodic reporting to PSD of estimated costs of site cleanup and adequacy of resources set aside to pay for site cleanup. These commitments were documented in PSB order for Docket 6545 dated 6/13/2002 and a PSD MOU dated 3/11/2002. According to these documents, Entergy must file various reports with the Board and/or PSD to demonstrate that adequate funds

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<sup>16</sup>30 VSA §248 establishes ten criteria, including site-specific environmental criteria and a resulting economic benefit to the state and its residents, for the issuance of a Certificate of Public Good. Certain changes in operations and relicensing of nuclear plants require issuance of a Certificate of Public Good.

<sup>17</sup>As a quasi-judicial body, the PSB conducts evidentiary hearings and issues decisions (typically referred to as Orders) that can be appealed to the Vermont Supreme Court.

<sup>18</sup>According to 30 VSA §248(e)(2), PSB may not issue a Certificate of Public Good until the legislature determines that the continued operation of a nuclear energy generating plant will promote the general welfare and grants approval for that operation.

will be available in the future to cover the cost of radiological decommissioning, spent nuclear fuel management and site restoration. In addition, PSD has authority under 30 VSA §206 to request specific information regarding items such as the obligations and financial standing from Entergy.<sup>19</sup>

See Table 2 for a comparison of NRC and State of Vermont required cleanup activities, funding mechanisms and monitoring.

**Table 2: NRC and State of Vermont Requirements for Site Cleanup, Funding of Cleanup Activities, and Frequency of Monitoring**

Activity	NRC Requirement	State of Vermont Requirement
<i>Type of Cleanup Activity</i>		
Radiological decommissioning	Yes	Yes
Spent nuclear fuel management	Yes	Yes
Site restoration	No	Yes
<i>Funding of Cleanup Activities</i>		
Radiological decommissioning	Yes—Must provide reasonable assurance of availability of future funds. Entergy established a decommissioning trust fund to meet this requirement.	Yes—Must provide assurance of availability of future funds. Entergy and the State have agreed that the decommissioning trust fund may be used to provide this assurance. If the fund is found to be insufficient, Entergy would be required to provide additional funds or other financial assurances to ensure availability of future funds.
Spent nuclear fuel management	Yes—Required to have a funding plan. Entergy has indicated that it plans to use the decommissioning trust fund for this activity, but must obtain approval from NRC.	
Site restoration	N/A	
<i>Frequency of monitoring activities</i>		
Radiological decommissioning	(1) Biennial certification, (2) site specific cost study 5 years prior to end of operating license, (3) Post Shutdown Decommissioning Activities Report within 2 years following cessation of operations, and (4) license termination plan 2 years prior to termination of license.	Site specific study every 5 years <sup>a</sup>
Spent nuclear fuel management	Once - 5 years prior to end of operating license.	
Site restoration	N/A	

<sup>a</sup>PSD also receives copies of reports that Entergy provides to NRC, including the biennial certifications and spent nuclear fuel management plan.

<sup>19</sup>For example, Entergy currently must report the value of the DTF on a monthly basis.

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## More Systematic Monitoring by Vermont is Necessary to Ensure the Adequacy of the Decommissioning Trust Fund

With the exception of the site specific study that Entergy provided to PSD every five years, the myriad of reports received by PSD did not contain all of the data elements necessary for PSD to perform a complete assessment of the adequacy of the DTF on a systematic basis. As a result, PSD was only able to perform a complete assessment of the adequacy of the DTF once every five years. The current recommendation by the PSD to the PSB is for reporting to occur every two and one-half years.

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### Reports Received by PSD Did Not Contain All of the Data Necessary for Assessing the Adequacy of the Decommissioning Trust Fund

As part of its monitoring of the adequacy of the DTF, the PSD required Entergy to provide periodic reports which addressed the estimated cost of site cleanup and the status of the asset value of the DTF. These reports, while providing relevant information to PSD, in some cases only allowed for limited monitoring of the sufficiency of the DTF because certain of the reports lacked elements of the cost of site cleanup. See Table 3 for a list of the data elements included in each of the reports filed with PSD.

**Table 3: Data Elements Contained in Reports Required to be Filed with PSD**

Reports	Frequency	Elements of the estimated cost of site cleanup			Value of DTF	
		Radiological Decommissioning	Spent Nuclear Fuel	Site Restoration	Projected	Current
Portfolio holdings and market value	Semi-annual					X
PSD site specific study	Every 5 <sup>th</sup> year	X	X	X	X	
NRC certification	Biennial, annual within last 5 years of operating license	X			X	
NRC site specific study	5 years prior to end of operating license	X			X	
NRC spent nuclear fuel management plan	5 years prior to end of operating license		X			
NRC PSDAR	2 years subsequent to cessation of operations	X			X	
NRC License Termination Plan	2 years prior to completion of cleanup	X			X	

The cost reporting limitation was highlighted by the December 31, 2008 NRC certification report<sup>20</sup> which identified an \$87 million shortfall in the DTF.<sup>21</sup> This estimated shortfall did not take into account the costs of spent fuel management and site restoration, which may have significantly increased the amount of the estimated shortfall of the DTF. According to a 2007

<sup>20</sup>The report compares assets held by the decommissioning trust fund at December 31, assuming a growth factor, to the estimated cost of radiological decommissioning. Estimated cost is derived from a formula delineated in 10 CFR 50.75(c)(2).

<sup>21</sup>See Appendix IV for the 12/31/08 certification report.

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decommissioning cost study,<sup>22</sup> estimates for spent nuclear fuel management and site restoration ranged from \$187 million to \$541 million (2006 dollars). These cost estimates are provided to underscore the potential magnitude of the costs excluded from the estimated shortfall and to highlight the limitations of the current reporting structure. However, the costs for spent nuclear fuel management and site restoration from the 2007 decommissioning cost study cannot be added to the shortfall identified in the NRC certification report to create a new estimated shortfall. The methodology used in the NRC certification report to calculate radiological decommissioning costs was based upon a formula delineated in NRC regulations while the 2007 study was specific to VYNPS. Since PSD did not require that the cost of spent nuclear fuel management and site restoration be addressed at the same time the NRC certification report addressing radiological decommissioning was provided to PSD, PSD did not have all the data elements necessary to estimate a shortfall incorporating all costs of cleanup.<sup>23</sup>

With a significant recovery in value of the DTF as of 9/30/09, Entergy and NRC agreed to a revised calculation of the shortfall as \$40 million and Entergy proposed a \$40 million Entergy Corporation parent company guarantee to address the deficiency. Nevertheless, since the calculation only addressed the DTF's ability to cover radiological decommissioning, it still did not address whether the DTF would be sufficient to cover spent nuclear fuel management and site restoration.

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### Reports and Related Analyses were too Infrequent to Allow PSD to Systematically Monitor the Decommissioning Trust Fund

PSD required that every five years Entergy (1) provide a site-specific cost estimate incorporating all cleanup obligations, (2) demonstrate that the DTF will be sufficient to cover the costs of all cleanup obligations and (3) provide additional funding assurance if a shortfall was identified. Given that currently five years passes between each date that PSD has a complete picture of all the elements necessary to assess the adequacy of the DTF to cover the estimated costs of site cleanup, it is possible that costs will have escalated significantly or the value of the DTF will have plummeted, leaving significant gaps to be made up.

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<sup>22</sup>Report analyzed the cost to perform site cleanup, including decommissioning, spent nuclear fuel management and site restoration under eight different scenarios. This report was submitted to PSD in 2007 to meet PSD's requirement that Entergy file a site-specific cost study every five years.

<sup>23</sup>PSD hired a consultant in 2008 to assess the decommissioning fund adequacy for the case before the PSB regarding a certificate of public good for extended operations.

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The limitations of conducting a full review every five years were highlighted by the 2008 investment market turmoil. Although PSD's process for reviewing Entergy's 2007 site-specific cost report was rigorous, the analysis was completed during 2008 and was based upon assumptions that incorporated investment results prior to the significant downturn in the market which occurred in the fourth quarter of 2008 and first quarter of 2009.

PSD hired experts to review (1) various aspects of Entergy's report which presented estimated costs for site cleanup under eight different scenarios<sup>24</sup> for decommissioning and (2) Entergy's assertion that the DTF would be sufficient to fund most of these scenarios. In November 2008, the consultant hired to review the adequacy of the fund to cover the costs of site cleanup concluded that under many of the 8 scenarios, the DTF would be adequate to cover the costs. Among other analyses, the consultant calculated the investment return required to grow the assets in the DTF, based on an asset value of \$397,035,937 as of 9/30/2008, to a level sufficient to cover the estimated cost to perform site cleanup under each of the eight site cleanup scenarios.<sup>25</sup> The consultant compared these required investment returns to the 6.73 percent actual weighted average after-tax rate of return of the investments of the DTF through 09/30/07 and determined that the actual return exceeded the required return in many scenarios. See Table 4 for projected required returns calculated by the consultant.

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<sup>24</sup>The scenarios differed based upon various assumptions, including timelines for cessation of plant operations, immediate versus delayed decommissioning and timeline for removal of spent nuclear fuel. All of the scenarios addressed the costs of radiological decommissioning, spent nuclear fuel management and site restoration.

<sup>25</sup>The consultant calculated the required investment return assuming escalation rates of 3 percent and 4 percent. Escalation rate refers to assumed annual growth in costs to perform site cleanup.

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**Table 4: Projected Required Decommissioning Trust Fund Return Rate**

Scenario	Shutdown Date	Decom. Alternative	1st and Last Spent Fuel Pickup	Required Fund Return Rate at 3% Escalation <sup>a</sup>	Required Fund Return Rate at 4% Escalation <sup>a</sup>
1	2012	DECON	2017/2042	12.05%	13.50%
2	2032	DECON	2017/2057	5.07%	6.17%
3	2012	DECON	2057/2082	12.10%	13.53%
4	2032	DECON	2042/2082	5.61%	6.71%
5	2012	SAFSTOR	2017/2042	6.72%	7.89%
6	2032	SAFSTOR	2017/2057	4.60%	5.67%
7	2012	SAFSTOR	2057/2082	6.28%	7.42%
8	2032	SAFSTOR	2042/2082	4.82%	5.89%

<sup>a</sup>Escalation rate refers to the assumed annual growth in the costs to perform site cleanup activities.

This analysis was conducted at a point in time however, and when circumstances in the financial markets changed significantly, some of the inputs to the analysis became outdated. Specifically, the consultant reported that the weighted average after-tax rate of return of the investments held by the DTF was 6.73 percent through 09/30/07. However, utilizing investment results through 9/30/09, SAO calculated the weighted average after-tax rate of return of the investments in the DTF as 4.32 percent. This is not intended to suggest that the consultant's analysis was flawed, just that such dramatic changes demonstrate that more frequent monitoring would be prudent.

In its testimony submitted to the PSB in Docket 7440,<sup>26</sup> PSD suggested increasing the frequency of the site-specific study and PSD's review of DTF adequacy to every 2.5 years. We concur, but believe that this assessment should occur more frequently if circumstances, such as significant market turmoil, indicate that the DTF may be inadequate.

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<sup>26</sup>Docket 7440 addresses Entergy's petition to amend its Certificate of Public Good to extend operations to 2032.

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## Entergy's System of Controls for Safeguarding the Assets of the Decommissioning Trust Fund may Benefit from Additional State Guidelines

Generally, we observed that Entergy and the State had established a system of controls which included many of the expected controls necessary to ensure that the DTF assets were adequately safeguarded. However certain aspects of the system could benefit from additional State guidelines. For example,

- The overall DTF investment policy allowed for significant flexibility that could have exposed the DTF to greater risk than desirable.
- The checklist used to monitor investment managers' adherence to investment policy and performance results was at a summary level which made it difficult to ascertain whether a complete analysis was completed.
- Mellon Bank acted as trustee and an investment manager, posing a potential for conflicts of interest.

In addition, Entergy's controls over ensuring accurate record keeping by the trustee may benefit from enhancements.

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### Basic Controls in Place

Largely, the controls framework for administering the DTF was driven by NRC criteria for establishing a decommissioning trust fund. Among other things, these criteria (1) required that the DTF be segregated from Entergy's other assets (2) prohibited Entergy from having day-to-day involvement in investment management of the DTF assets and (3) required safeguards against improper payments from the trust.

Entergy established the framework to manage the DTF assets and had responsibility for overseeing the administration of the DTF, but delegated safekeeping, record keeping and investing the assets of the DTF to a trustee and three investment managers. The custodianship of assets, accounting, record keeping, and periodic reporting are managed by The Bank of New York Mellon (Mellon Bank), the fund's trustee. As trustee, Mellon Bank held the assets for the use and purpose defined in the Master Decommissioning Trust Agreement. Further, the terms of the agreement (1) limited the types of

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expenses that may be paid by the fund to those associated with site cleanup<sup>27</sup> and administrative costs<sup>28</sup> and (2) contained general restrictions and guidelines regarding the investment of the assets of the trust. For example, investment of the assets was required to meet the prudent investor standard as defined in 18 CFR 35.32(a)(3) and the DTF was prohibited from holding (1) securities below investment grade and (2) Entergy Corporation or Entergy Corporation affiliate equity securities. Mellon Bank was responsible for preventing certain prohibited securities from being purchased<sup>29</sup> and had some responsibility for ensuring that investments were generally in accordance with the terms of the trust agreement.

Entergy established some investment policies and implemented oversight mechanisms to monitor the investment managers' compliance with investment policies and performance results and to monitor the quality of controls systems at the trustee. For example, Entergy (1) executed contractual agreements which addressed investment policy and delegation of investment authority with each of the investment managers and the trustee, and (2) obtained an annual report issued under Statement on Auditing Standards (SAS) No. 70 Service Organizations<sup>30</sup> (SAS 70 report), to provide it with assurance over completeness and accuracy of the trustee's record keeping.

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## Investment Policies and Monitoring

Three investment managers, Duff & Phelps Investment Management Company (Duff & Phelps), Delaware Investment Advisors (Delaware) and Mellon Bank, had discretion to direct investment of the DTF assets, subject to the broad investment guidelines originally established by Entergy in the Master Decommissioning Trust Agreement and in some cases, additional policies in individual investment manager agreements.<sup>31</sup> Given the general nature of the investment policies in the Master Decommissioning Trust

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<sup>27</sup>The agreement states that once "radiological decommissioning is complete, the Trustee shall also disburse amounts ... for the purposes of paying costs, liabilities and expenses of Docket 6545 decommissioning activities, spent fuel costs and site restoration costs."

<sup>28</sup>Administrative costs are limited to taxes, trustee and investment manager fees.

<sup>29</sup>Prohibited transactions included investment in securities or other obligations of Entergy Corporate and its affiliates, securities settled or safekept outside the United States, and investment in any entity owning one or more nuclear power plants.

<sup>30</sup>Report on the design and effectiveness of the controls over the processing of transactions by service organizations.

<sup>31</sup>See Appendix V for summary of investment guidelines contained in the Master Decommissioning Trust Agreement and in each investment manager agreement.

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Agreement, Entergy had significant flexibility in the amount of discretion granted to the investment managers for managing DTF assets. In addition, the mechanisms utilized by Entergy to evaluate investment managers' adherence to investment policies and their performance results were at a summary level which made it difficult to ascertain whether a complete analysis was performed. As a result, DTF assets may have been exposed to greater risk than was in the State's best interest.

### **Investment policies**

The investment manager agreements for Duff & Phelps and Delaware incorporated additional investment guidelines, including asset diversification requirements such as limiting investments in (1) equity securities to 35 percent of the market value of the portfolio and (2) corporate bonds of any one industry to 30 percent of the market value of the portfolio. The Mellon Bank investment manager agreement did not contain additional investment guidelines, rather it confirmed Entergy's acceptance of the investment objectives and fees associated with investing in Mellon Bank's collective investment trusts, the DT Market Completion Stock Index Fund and the DT Stock Index Fund.

Absent more specific guidelines regarding types of securities, quality ratings of securities and diversification requirements, it is possible that the assets managed by Mellon Bank were subject to greater risk. For example, at 3/31/2008, Mellon Bank managed \$176 million of DTF assets in its collective investment trusts which represented 41 percent of the value of the DTF. Subsequent to market turmoil in the later part of 2008 and first part of 2009, as of 3/31/09, the value of the assets managed by Mellon Bank had decreased to \$120 million. The assets managed by Delaware and Duff & Phelps did not experience the same level of volatility. See Table 5 for a comparison of the value of the assets at 3/31/08 and 3/31/09 managed by the investment managers.

**Table 5: Comparison of Change in Asset Value from 3/31/2008 to 3/31/2009 by Investment Manager**

Investment manager	Investment Category	3/31/2008	% of total assets	3/31/2009	% of total assets	3/31/2008 to 3/31/2009 Increase (Decrease)
Duff & Phelps	Fixed income	119,355,410	28%	122,864,969	34%	3,509,559
Delaware	Fixed income	131,457,984	31%	116,770,873	33%	(14,687,111) <sup>1</sup>
Mellon	Equity index	176,593,052	41%	119,605,543	33%	(56,987,509) <sup>2</sup>
<b>TOTAL ASSETS</b>		<b>427,406,446</b>		<b>359,241,385</b>		<b>(68,165,061)</b>

<sup>1</sup>82% of the decrease in the asset value managed by Delaware was due to a transfer of \$12 million of assets to Mellon on 3/4/2009.

<sup>2</sup>\$12 million of assets were transferred to Mellon on 3/4/2009 from Delaware which reduced the overall loss in value for the assets under Mellon management.

In addition, the DT Market Completion Stock Index Fund participated in securities lending.<sup>32</sup> The pitfalls of securities lending, particularly with regard to the reinvestment of the cash collateral pool, were highlighted by market events in 2008, with significant high profile losses such as resulted from the CalPERS<sup>33</sup> securities lending program. Although the DT Market Completion Stock Index Fund continued to earn interest income from the reinvestment of the cash collateral pool in 2008, the value of the securities purchased with the cash collateral decreased, resulting in an unrealized loss of approximately \$321,000 related to securities lending. According to the Chair of the Securities and Exchange Commission, securities lending was once thought to be a way to earn a few extra points of return, with little or no risk, but the events of 2008 revealed that risk was present.

Entergy had significant flexibility with designing investment policies since (1) the NRC regulated investment policies only in a general sense and (2) Vermont had adopted the Uniform Prudent Investor Act regulating trustee

<sup>32</sup>See Appendix VI for an explanation of securities lending transactions.

<sup>33</sup>The California Public Employees Retirement System (CalPERS) is the nation's largest public pension fund with net assets of \$181.1 billion as of June 30, 2009. A CalPERS report to the Board of Directors Investment Committee dated August 17, 2009 noted unrealized losses of \$634 million related to its securities lending program.

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responsibilities, but had not established investment policies for the DTF. A 2006 NRC Office of Inspector General (OIG) audit report found that the NRC's investment restrictions were limited in scope<sup>34</sup> and that it would be prudent to promulgate investment restrictions applicable to all decommissioning trust funds to prevent situations where the amounts accumulated could diminish or be subject to undue risk.

Based upon NRC management's response to the OIG recommendation, there is no plan to further regulate investments of decommissioning trust funds. Nonetheless, some states have established additional investment policy guidelines for decommissioning trust funds.<sup>35</sup> In the absence of greater investment restrictions promulgated by NRC, the State should review other states' regulation of decommissioning trust fund investment policy and consider developing and enforcing stricter investment guidelines for the Entergy DTF.

### **Monitoring and evaluating investment managers**

Entergy had some good practices for monitoring the investment managers, such as holding annual meetings with the investment managers and reporting summary investment results to the Finance Committee of the Entergy Corporation Board of Directors.<sup>36</sup>

One of Entergy's key controls, a checklist and a quarterly portfolio holdings report prepared by the trustee, was used to review investment manager compliance with investment guidelines and investment manager performance. However, the checklist and portfolio holdings report were at a summary level and it was difficult to ascertain whether a complete analysis of compliance and performance was conducted.

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<sup>34</sup>NRC restrictions provide that decommissioning trust funds may not be invested in securities or other obligations of the licensee, any other owner or operator of a nuclear power reactor or their affiliates or a mutual fund where at least 50 percent of the fund is invested in securities of a licensee or parent company whose subsidiary is an owner or operator of a nuclear power plant.

<sup>35</sup>See Appendix VII for a summary of selected states' regulation of decommissioning trust fund investment policies.

<sup>36</sup>This was a summary level report, provided to the Board of Directors of Entergy Corporation, covering all of Entergy Corporation's decommissioning trust funds for all of its nuclear facilities. This particular report presented asset allocations, discussed market performance in general, and asserted that the decommissioning trust fund balances would be sufficient to cover decommissioning costs, including site restoration.

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The checklist, listing greater than 30 investment accounts for eight different nuclear decommissioning trust funds, including the DTF relevant to VYNPS, did not include reference to the particular portfolio characteristics documented in the investment manager agreements. For example, the sample checklist provided by Entergy showed that “quality rating” was an item reviewed and the quarterly portfolio holdings report included an average quality rating for most of the investment manager accounts. However, there was no reference on the checklist to the quality ratings required per the investment manager agreements. Since the required quality ratings weren’t noted in the checklist, it wasn’t clear how the checklist preparer concluded that the actual quality ratings in the portfolio holdings report were in compliance with policy.

In addition, it appeared to be missing certain investment policies delineated in the investment manager agreements. The investment manager agreements for Duff & Phelps and Delaware established requirements for diversification of the portfolio including a limitation of 35 percent of the portfolio in equity securities and no more than 20 percent of the portfolio market value in any one state, but these particular guidelines were not incorporated as items to be assessed via the checklist.

Finally, although the checklist had a column titled investment return rate, it lacked a reference to the investment return rates that were expected for the investment managers.

Overall, it appeared that the level of information provided to those conducting the quarterly review may not have been sufficient to enable them to conclude whether certain proscribed investment guidelines, such as quality ratings and portfolio diversification, were adhered to by investment managers and whether investment managers were meeting performance expectations. It was not apparent what other detail information may have been available in order to conclude that the investment managers were following Entergy’s policies and performing at expected levels.

Given that monitoring the investment managers for compliance with investment policies and evaluating investment manager performance is a critical part of ensuring appropriate and effective management for the DTF investments, processes should be in place to ensure that this monitoring occurs.

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## Segregation of Duties Among Professional Advisors

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In addition to its trustee position, Mellon Bank<sup>37</sup> was also an investment manager, and managed a significant portion of the trust assets, 40 percent at 12/31/09. Although the Master Decommissioning Trust Agreement specifically allowed for this relationship and both the trustee and investment manager roles entailed a fiduciary responsibility to the trust, having multiple functions in the investment process controlled by a single entity carries some potential for a conflict of interest.

Generally, there were safeguards in place which limited the risks associated with this dual role. For example, the trustee's fees were based in part upon transaction volume so there was some risk that the Mellon Bank investment manager would increase transaction volume to increase the trustee fees. However, this risk was mitigated by the structure of the investment account managed by Mellon Bank. The assets managed by Mellon Bank were invested in two of the bank's collective investment trust funds, not individual securities, so there was limited transaction volume. However, other risk remained since, under the terms of the Master Decommissioning Trust Agreement, Mellon Bank bore some responsibility for ensuring that investment managers were in compliance with the investment policy for the DTF which meant Mellon Bank was in the position of self-monitoring.

According to the Office of the Comptroller of the Currency,<sup>38</sup> as the trust business increasingly becomes an asset management business, the opportunities for a bank to find itself in a conflict of interest increase. When a bank provides these services, the best interests of the client and the bank are not always the same.

Having a conflict of interest in and of itself does not constitute a breach of fiduciary duty. However, given the potential of financial harm to the trust, an alternative that should be considered by the State is to require segregation of the trustee and investment management functions.

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<sup>37</sup> Formerly known as Mellon Bank, N.A., effective July 1, 2008 the trustee is The Bank of New York Mellon due to a renaming subsequent to a merger with The Bank of New York.

<sup>38</sup> Prior to the merger with The Bank of New York in 2008, the Office of the Comptroller of the Currency was the primary federal regulator for Mellon Bank, N.A. Currently, the Federal Reserve Board is the primary federal regulator for The Bank of New York Mellon and addresses conflict of interest in its Supervisors Manual.

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## Completeness and Accuracy of Trustee's Recordkeeping and Reporting

Mellon Bank reports periodically to Entergy, providing a quarterly report of the DTF's market value, broad asset categories held by the DTF and rate of return on investments, among other information.

As is common when engaging a service organization to perform a significant accounting function, Entergy obtained the annual SAS 70 report for BNY Mellon Asset Servicing (BNY Mellon)<sup>39</sup> to determine whether the controls in place at Mellon over record keeping and reporting were designed appropriately and operating effectively. According to the SAS 70 report for the period 1/1/2007 to 12/31/2007, controls were suitably designed and operating effectively for the group providing record keeping and reporting services for the DTF. The report also suggested certain controls that should be in place at user organizations such as Entergy in order to ensure complete and accurate record keeping and reporting.

According to Entergy, the same process it uses to assess the investment managers' compliance with investment policies and performance also addresses completeness and accuracy of BNY Mellon's record keeping and reporting.<sup>40</sup> This process, a review of the quarterly portfolio holdings report facilitated by a checklist, seems to be geared to assess fund characteristics and rates of return, not accuracy and completeness of record keeping. Neither a review of the report nor completion of the checklist appears to fully address the requisite user controls. See Table 6 for improvements that could be made to Entergy's design of the suggested user controls.

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<sup>39</sup> BNY Mellon Asset Servicing, a business unit of The Bank of New York Mellon Corporation, is the entity that processes transactions, including securities processing, safekeeping and reconciliation, income collections, security valuation and security lending, to customers contracted through multiple legal entities, including Mellon Bank, N.A.

<sup>40</sup> According to Entergy officials, this is the same checklist mentioned in the previous section used to monitor investment managers' compliance with investment policies and to evaluate their performance.

**Table 6: Entergy's Design of Suggested User Controls and Potential Improvements**

<b>Customer Control Consideration per SAS 70</b>	<b>Entergy controls</b>	<b>Improvements</b>
Instructions and information provided to BNY Mellon Asset Servicing from customers should be in accordance with the provisions of the servicing arrangement, trust agreement, or other applicable governing agreements or documents between BNY Mellon Asset Servicing and the customer.	Reviewed the Trustee's quarterly reports to ensure compliance with investment policies. A checklist was used to facilitate this process.	Entergy could consider a preventive control such as a management review and approval process to validate the accuracy and completeness of communications to BNY Mellon.
Customers should verify and reconcile securities and cash balances provided by BNY Mellon Asset Servicing and communicate discrepancies to BNY Mellon Asset Servicing personnel on a timely basis.	Relied on its review of the quarterly investment reports provided by Mellon. A checklist was used to facilitate this process.	Entergy could request that investment managers prepare and review reconciliations between investment manager and Mellon Bank records to ensure complete and accurate processing of investment transactions.
Timely review of reports provided by BNY Mellon of investment security and portfolio values and related activity should be performed by customers and investment managers and written notice of discrepancies should be provided to BNY Mellon.	Relied on its review of the quarterly investment reports provided by Mellon. A checklist was used to facilitate this process.	Entergy could require that the investment managers review periodic reporting by BNY Mellon to ensure that all activity was captured and to perform a review of the valuation of the portfolio as compared to expectations.

Although the SAS 70 report indicated that controls at Mellon related to complete and accurate record keeping were suitably designed and operating effectively, based on the information provided to us by Entergy, improvements could be made to the design of the user controls in place at Entergy. If the checklist is the primary tool utilized by Entergy to monitor the completeness and accuracy of the trustee record keeping, the additional procedures noted in the table should be considered by Entergy.

## Conclusion

We believe that reviewing the adequacy of the decommissioning trust fund to cover the costs of site cleanup every five years is not frequent enough, especially given the recent market turmoil. A more prudent approach is to develop a monitoring process which would entail recurring systematic comparisons of estimates for all components of site cleanup costs to the resources of the decommissioning trust fund in order to ensure that adequate resources are available in the future.

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In its testimony before the PSB in Docket 7440, VYNPS relicensing, PSD recommended, among other things, that fund adequacy reviews should occur every 2.5 years.<sup>41</sup> Increasing the frequency of fund adequacy reviews to every 2.5 years would improve PSD's capability to perform systematic monitoring and to require that additional funding assurance be provided, if needed. However, in periods of dramatically changing circumstances, such as stock market turbulence or significant inflation, every 2.5 years may not be sufficiently frequent. PSD should consider whether it would be prudent to require Entergy to provide an updated analysis based upon certain triggering events such as (1) a report submitted to NRC indicating a funding shortfall or (2) the value of the DTF decreasing by a certain percentage or below a set dollar amount. Using indicators like these to trigger a review of the adequacy of the DTF to fund the costs of site cleanup would provide PSD with a mechanism to perform additional levels of oversight when circumstances indicate that the DTF may be inadequate.

In addition to more frequent reviews of the adequacy of the DTF, we believe the State ought to consider whether the current DTF investment policy reflects an approach that is prudent and if not, suggest implementing guidelines for investment policies of decommissioning trust funds. In addition, since the design of one of Entergy's key tools used to monitor investment manager compliance with investment guidelines and performance appears to be at a summary level, at a minimum the State should consider requiring Entergy officials to demonstrate and certify that they are adequately performing this function. Alternatively, there are examples of other states, such as New Hampshire, taking a more active role in monitoring the investment advisors, which the State may wish to consider. New Hampshire utilizes an investment consultant, hired by the nuclear licensee with approval of the New Hampshire State Treasurer, to perform a quarterly review of compliance with investment guidelines and an annual evaluation of trustee and investment manager performance. See Appendix VII for examples of state regulation of decommissioning trust fund investment policies.

Finally, to avoid the possibility of conflicts of interest which may cause financial harm to the DTF, the State should consider whether the trustee and investment management roles should be segregated.

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<sup>41</sup>PSB will not be able to conclude this docket and issue an order until the Vermont General Assembly determines that operation of the plant will promote the general welfare and grants approval for that operation.

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## Managements' Responses and Our Evaluation

The Commissioner of the Department of Public Service and management of Entergy Nuclear Vermont Yankee<sup>42</sup> (ENVY) provided written comments on a draft of this report, which are reprinted in appendices VIII and IX, respectively.

The Commissioner of the Department of Public Service's August 17, 2010 response stated that generally the department agreed with our conclusions and will consider each recommendation relevant to the department. Specifically, the department is considering how our recommendation to require Entergy to provide updated analysis of the decommissioning fund adequacy based upon certain triggering events might be implemented and what triggering events would be most useful to the State. Further, the Commissioner noted that the department intends to review the practices of other states with regard to implementing guidelines for investment policies of decommissioning trust funds and stated that the department intends to review the practices that are allowed under existing investment guidelines.

In their August 4, 2010 response to our draft report, management for ENVY took issue with our observations regarding increasing the frequency of reviewing the adequacy of resources in the DTF, implementing State guidelines over investment policies, monitoring performance of investment managers and segregating the trustee and investment manager functions. However, although it was requested, management did not provide documentation in support of its positions and factual disagreements. Without such supporting documentation, we had no basis on which to revise the findings, conclusions, and suggestions in our report although we provided clarifying language where appropriate.

Appendix IX contains both ENVY's response and our detailed analysis. The following are summaries of certain of ENVY's major points and our evaluation.

- ENVY management indicated that they believe that retrospective reviews of their performance in managing the funds will demonstrate that (1) the funds have been managed prudently and (2) existing PSB procedures for monitoring performance of the DTF have worked well and should not be changed. As we noted in the report, our concern is

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<sup>42</sup>The response was provided to the State Auditor's Office by legal counsel to ENVY.

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that under the existing investment guidelines significant discretion is afforded the investment managers and this introduces the potential for greater risk-taking with investing the assets of the DTF than might be palatable to the State of Vermont. Further, the PSB and PSD procedures for monitoring investment performance of the DTF are limited, consisting of receipt of semi-annual performance reports of the DTF, which does not afford PSB and PSD the ability to have input regarding the level of acceptable risk in the investment portfolio.

- In addition, ENVY management seemed to suggest that analysis of adequacy of the assets in the DTF should exclude the costs of spent nuclear fuel management since the U.S. Court of Appeals for the Federal Circuit decisions have found the United States Department of Energy (DOE) liable for damages related to breach of its spent fuel disposal contracts with nuclear plant operators.<sup>43</sup> However, the issue of the amount of damages ENVY will recover from DOE remains to be litigated. Whether ENVY recovers monies from DOE is not germane to our point because (1) ENVY has publicly stated its intent<sup>44</sup> to utilize the assets of the DTF to pay for management of spent nuclear fuel up until the point at which DOE takes delivery of the spent nuclear fuel for disposal at a DOE-managed repository, (2) decisions from the U.S. Court of Federal Claims have included unfavorable aspects, such as authorizing damages less than those requested by utilities and awarding damages only in arrears and not prospectively and (3) there is no restriction or guarantee that we are aware of requiring ENVY to replenish the resources of the DTF with funds obtained from damages awarded by the courts. This leaves open the possibility that the resources in the DTF would be depleted for management of spent nuclear fuel with no protection in place to require ENVY to replenish the DTF with funds recovered through litigation against DOE.
- ENVY management also indicated that Vermont regulators should evaluate their legal authority to impose additional oversight requirements on ENVY since its management believes that the NRC

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<sup>43</sup>In *Vermont Yankee Nuclear Power Corp., et al. v. United States*, Nos. 02-898C, 03-2663C (Fed. Cl. Oct. 19, 2006), the Court stated that the U.S. Court of Appeals for the Federal Circuit already had determined that the Government breached every utility's Standard Contract, when DOE failed to begin accepting spent nuclear fuel on January 31, 1998. However, damages have yet to be awarded and are still being litigated.

<sup>44</sup>MOU with PSD dated March 31, 2002 states the intent to use the DTF resources to pay for spent nuclear fuel management and March 21, 2007 submission to NRC of the company's spent nuclear fuel management plan states ENVY's intent to utilize the assets of the DTF.

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has exclusive jurisdiction over radiological decommissioning of commercial, nuclear-power reactors as well as management of spent fuel. ENVY has postulated federal preemption arguments in various dockets before the PSB. PSB concluded that its regulation of adequate financial assurance for spent fuel management was within the scope of the regulation which Congress preserved to the states in the area of nuclear-powered generation. In particular, in Docket 7082, PSB found that considering financial assurances for management of spent fuel “falls squarely within the traditional economic and land use regulation reserved to the states.” Although the PSB has not addressed whether monitoring and requiring adequate financial assurance for radiological decommissioning is within the purview of the State, other states have implemented additional oversight of the adequacy of decommissioning trust funds to cover the cost of radiological decommissioning and we are not aware of any NRC objections. In fact, the NRC has pointed to this additional regulation as a positive additional control over nuclear decommissioning funding assurance.

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## Appendix I

### Glossary

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**Asset diversification:** An investment strategy that addresses the percentage of portfolio holdings that may be invested in a single class of securities, such as commercial paper, common stock or bonds.

**Asset management:** The management of third-party assets for a fee or commission – includes fiduciary services, investment advisory services, and agency agreements including custody of assets.

**Bond:** A bond is a loan that an investor makes to a corporation, government, federal agency or other organization. Consequently, bonds are sometimes referred to as debt securities. The issuer of the bond (the borrower) enters into a legal agreement to pay the bondholder interest. The bond issuer also agrees to repay the original sum loan at the bond's maturity date.

**Certificate of Public Good:** When determining whether to grant a certificate of public good for a proposed project, the Public Service Board considers whether the proposed project meets ten statutory criteria (30 VSA § 248). These criteria include site-specific environmental criteria, in addition to general issues such as need, reliability, and economic benefit.

**Collective Investment Funds:** A collective investment fund (CIF) is a bank-administered trust that holds commingled assets that meet specific criteria established by 12 CFR 9.18. The bank acts as a fiduciary for the CIF and holds legal title to the fund's assets. Participants in a CIF are the beneficial owners of the fund's assets. While each participant owns an undivided interest in the aggregate assets of a CIF, a participant does not directly own any specific asset held by a CIF.

**Conflict of Interest:** Conflicts of interest generally exist when someone in a position of trust, such as a pension consultant or investment advisor, has competing professional or personal issues. Competing interests can make it difficult for a plan's fiduciaries, in general, to fulfill their duties impartially and could cause them to breach their duty to act solely in the interest of plan participants and beneficiaries.

**Corporate actions:** A corporate action is an event related to capital reorganizations or restructures affecting a shareholder. Examples of corporate actions include stock dividends or stock splits.

**Custodian:** A custodian provides services such as settles trades, invests cash balances as directed, collects income, processes corporate actions, prices securities positions, and provides record keeping and reporting services.

**DECON:** The equipment, structures and portions of the facility and site that contain radioactive contaminants are removed or decontaminated to a level that permits termination of the license after cessation of operations.

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## Appendix I

### Glossary

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**Derivative:** A generic term often applied to a wide variety of financial instruments that derive their cash flows, and therefore their value, by reference to an underlying asset, reference rate, or index.

**Docket:** Dockets are the most common type of proceedings that are conducted by the Public Service Board (PSB). Dockets are quasi-judicial proceedings in which the PSB functions in a manner similar to a court. In a docket, the PSB conducts evidentiary hearings and issues decisions (typically referred to as Orders) that can be appealed to the Vermont Supreme Court.

**ENTOMB:** The method of decommissioning in which radioactive contaminants are encased in a structurally long-lived material, such as concrete. The entombed structure is appropriately maintained, and continued surveillance is carried out until the radioactivity decays to a level permitting release of the property in accordance with the NRC's definition of decommissioning.

**Fiduciary responsibility:** A fiduciary responsibility involves a duty on the part of the fiduciary to act for the benefit of the other party to the relationship concerning the matters within the scope of the relationship.

**Investment grade:** Refers to the credit quality of a bond and is based primarily on the likelihood of possible default, resulting in investors losing their principal. Investment grade refers to the range of bonds with minimal risk of payment default and extremely strong capacity to meet financial commitments to those with some potential of default in the long term.

**NRC Certification Report:** This is an NRC required report defined in 10 CFR 50.75(f)(1). It is required at least biennially up until five years prior to the end of the expected operating life of the plant at which point it becomes an annual requirement. The report compares assets held by the decommissioning trust fund at December 31, assuming a growth factor, to the estimated cost of radiological decommissioning. Estimated cost is derived from a formula delineated in 10 CFR 50.75(c)(2).

**NRC Site-Specific Study:** 10 CFR 50.82(a)(8)(iii) requires licensees to provide a site-specific decommissioning cost estimate for radiological decommissioning within two years of the cessation of operations. This requirement may be satisfied by including a site-specific estimate of costs as part of the post-shutdown decommissioning activities report.

**Portfolio diversification:** The mix of different types of assets (i.e. cash, government bonds, corporate bonds, equity securities) and different instances of the same type of assets (i.e. different equity securities) held in an investment portfolio.

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## Appendix I

### Glossary

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Post-shutdown decommissioning activities report (PSDAR): A PSDAR is required to be filed with the NRC (with copy to affected state) prior to or within two years following permanent cessation of operations. Report must include a description of the planned decommissioning activities along with a schedule for accomplishment of the activities and an estimate of expected costs among other information. The cost estimate may be the amount of decommissioning funds estimated to be required per the certification calculation pursuant to 10 CFR 50.75(b) and (c) as currently reported on a calendar year basis at least once every two years to the NRC or the cost estimate may be site-specific.

Prudent investor standard: Standard of care, whether investing or otherwise, that a prudent investor would use in the same circumstances.

PSD Site-specific study: Study covering all cleanup costs including radiological decommissioning, spent nuclear fuel management and site restoration.

Radiological decommissioning: The Nuclear Regulatory Commission defines radiological decommissioning to mean removing a facility or site safely from service and reducing residual radioactivity to a level that permits release of the property for restricted or unrestricted use and termination of the license, 10 CFR 50.2.

Quality ratings: This refers to the risk associated with an investment, typically a bond. These ratings are developed by entities with expertise in evaluating risk associated with potential default.

SAFSTOR: The facility is placed in a safe, stable condition and maintained in that state (safe storage) until it is subsequently decontaminated and dismantled to levels that permit license termination. During SAFSTOR, a facility is left intact or may be partially dismantled, but the fuel has been removed from the reactor vessel and radioactive liquids have been drained from systems and components and then processed. SAFSTOR includes the decontamination and dismantlement of the facility at the end of the storage period and may total up to 60 years.

Sector weightings: Companies are subdivided by industry or sector. A sector is a large section of the economy, such as industrial companies, utility companies or financial companies. Industries, which are more numerous, are part of a specific sector. For example, banks are an industry within the financial sector. A sector weighting refers to the percentage of an investment portfolio that may be invested in a certain sector.

Securities and Exchange Commission (SEC): Congress established the Securities and Exchange Commission in 1934 to enforce securities laws, to promote stability in the markets and to protect investors. The SEC is the primary federal regulator of the U.S. securities markets.

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## Appendix I

### Glossary

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**Security:** A security is a fungible, negotiable instrument representing financial value. Securities are broadly categorized into debt securities (such as banknotes and bonds) and equity securities, e.g., common stocks and derivative contracts.

**Site restoration:** According to paragraph 3 of the Memorandum of Understanding, dated 1/7/02, between the Public Service Department and Entergy Nuclear Vermont Yankee, Inc., site restoration means that, once the site is no longer used for nuclear purposes or non-nuclear commercial, industrial or similar uses consistent with the orderly development of the property, the site will be restored by removal of all structures, and if appropriate, the land will be regraded and reseeded.

**Spent nuclear fuel:** Spent nuclear fuel means fuel that has been withdrawn from a nuclear reactor following irradiation (i.e. fuel that has been used in a nuclear reactor to produce electricity). The spent fuel must be stored and managed until title and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository, 10 CFR 50.54(bb).

**Stocks:** Also known as equity shares, stocks represent an ownership share in a company. The return on investment depends on the success or failure of that company.

**Trust:** A trust is a fiduciary relationship in which a person or entity, the holder of the legal title to property, is subject to an equitable obligation to keep or use the property for the benefit of another person or entity. A trust agreement is the formal written document that sets forth the terms of the trust.

**Trustee:** The trustee is the holder of the legal title to the trust property. The role of the trustee is to hold the trust property and administer it as directed by the trust provisions.

**Uniform Prudent Investor Act:** The Act promotes uniformity of state trust law and regulates the investment responsibilities of trustees. Addresses the obligations of trustees with regard to management of trust funds, including the standard of care, loyalty, portfolio diversification and delegation of investment and management functions.

**Unrealized loss:** Loss which has occurred but has not yet been realized through a transaction, such as a stock which has fallen in value but is still being held.

**User organization:** An organization that utilizes the services of another entity to perform a significant function, such as record keeping for a trust fund.

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## Appendix II

### Scope and Methodology

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In general, to address our objectives, we reviewed applicable federal regulations, NRC Regulatory Guides, Vermont State statutes, PSB orders, PSB dockets and an MOU between PSD and Entergy. We also obtained information from Entergy about the management of the DTF by submitting inquiries to Entergy via PSB Dockets 7404 and 7440. In addition, we held discussions with officials at PSD and participated in conference calls with officials at the NRC and Entergy. Specifically, we participated in a public conference call held in August 2009 hosted by the NRC in which they explained their approach to assessing decommissioning funding assurance. In conjunction with PSD, we held follow-up telephone calls with the NRC to discuss NRC's review of decommissioning funding assurance relative to the VYNPS DTF.

In order to gain an understanding of the system in place for monitoring the adequacy of the DTF, we compared NRC's and PSD's requirements for site cleanup, funding of cleanup activities and frequency of monitoring the DTF. To prepare this comparison analysis, we reviewed federal regulations 10 CFR 50.75, 10 CFR 50.82, 10 CFR 50.54bb and NRC Regulatory Guides 1.1.59. In addition, we reviewed PSB's order related to Docket 6545 and the MOU between Entergy and PSD regarding certain terms and conditions of the sale of VYNPS to Entergy.

We held discussions with PSD regarding the required reporting by Entergy and obtained an understanding of PSD's evaluation of adequacy of the DTF by reviewing certain aspects of PSD's testimony under PSB Dockets 7404 and 7440. We obtained copies of the Entergy reports received by PSD since Entergy acquired VYNPS in 2002, including (1) NRC certification reports, (2) semi-annual investment holdings reports and (3) the 2007 site-specific study.

We gained an understanding of Entergy's controls related to administering and monitoring the DTF by submitting inquiries to Entergy via Docket 7404 and 7440 and reviewing Entergy's written responses and any accompanying documentation, such as the Master Decommissioning Trust Agreement, the SAS 70 Report for Mellon Bank, Entergy's contracts with investment managers and Entergy's checklist for monitoring compliance with investment policies and evaluating investment manager performance. In some cases, we held follow-up conference calls with Entergy in conjunction with PSD. We also reviewed NRC's regulations related to investment policies for decommissioning trust funds and researched other state's practices for regulating investment policies for decommissioning trust funds.

We reviewed Entergy's responses and documentation specific to segregation of duties, completeness and accuracy of trustee reporting, disbursements from the DTF, investment policies and investment manager monitoring.

To assess controls in these areas, we considered guidance in the internal control model developed by the Committee on Sponsoring Organizations of the Treadway

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## **Appendix II**

### **Scope and Methodology**

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Commission (COSO). In addition, we considered NRC regulations related to the establishment, administration and investment of decommissioning trust funds.

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## **Appendix III**

### **Summary of Entergy Affiliate Relationships**

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Entergy was used as a generic term in the report to encompass the Entergy affiliate entities relevant to the operation of VYNPS or the administration of the DTF.

Entergy Corporation is the parent company for Entergy Nuclear Vermont Yankee, LLC (ENVY), Entergy Nuclear Operations, Inc. (ENOI), and Entergy Services, Inc (ESI).

ENVY owns Vermont Yankee Nuclear Power Station and is the organization that acquired Vermont Yankee Nuclear Power Station in 2002 and established the decommissioning trust fund. ENVY is party to a Memorandum of Understanding with the PSD and is party to contractual arrangements with the decommissioning trust fund trustee and investment managers.

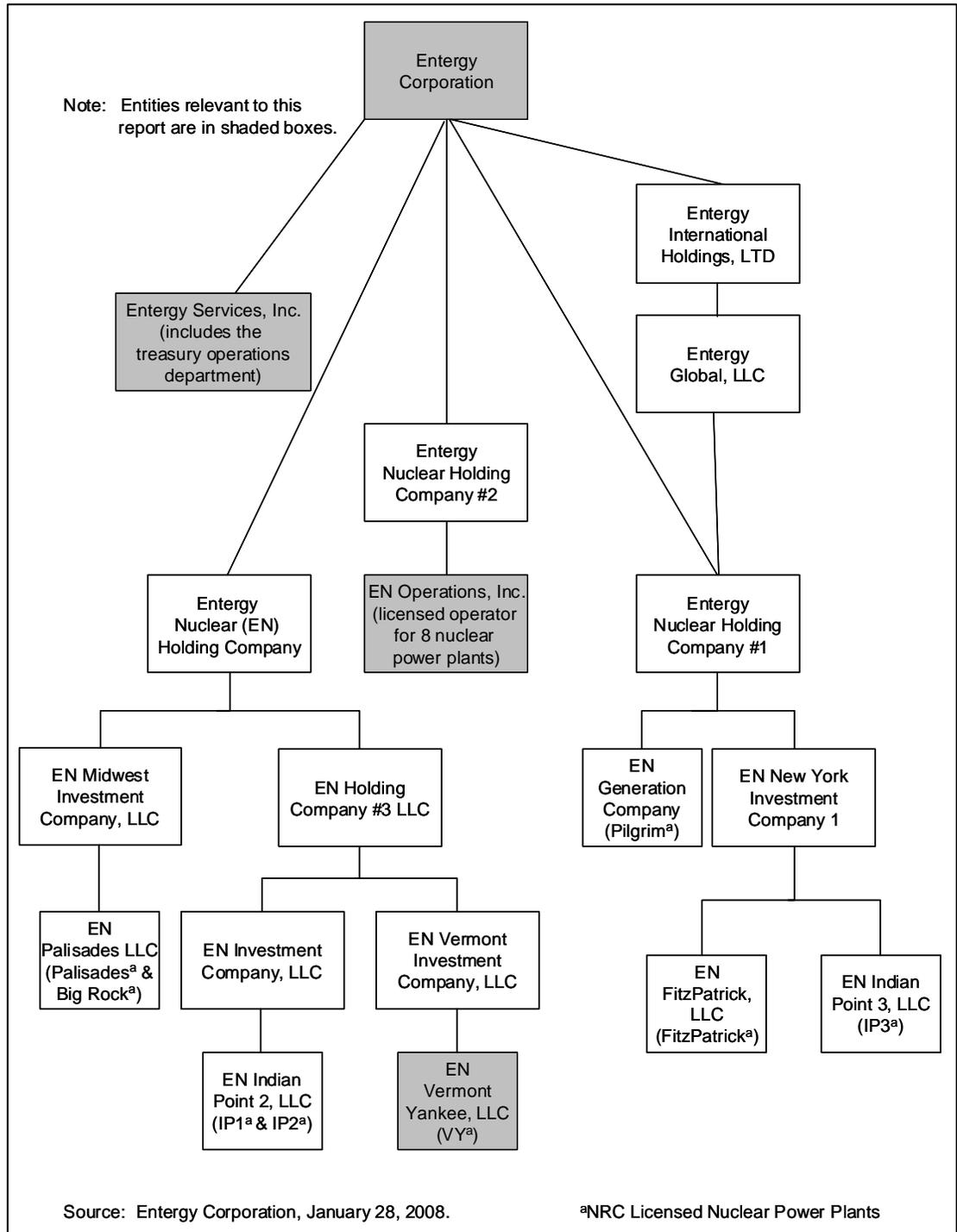
ENOI operates Vermont Yankee Nuclear Power Station as well as seven other non-regulated nuclear power plants owned by various subsidiaries of Entergy Corporation. Generally, ENOI is the entity that files required reports with the NRC and PSD.

Although ENVY is the legal entity that entered into contractual relationships with the trustee and investment managers, the corporate treasury department of ESI oversees the administration of the DTF and the relationship with the professional advisors. ESI provides administrative management and oversight for the decommissioning trust fund.

# Appendix III

## Summary of Entergy Affiliate Relationships

The following organization chart shows the legal affiliate relationship between the entities that are involved in the management of VYNPS and the DTF.



## Appendix IV

# Entergy's NRC Certification Report as of 12/31/08

The following document is Entergy's NRC Certification Report for 12/31/08. It shows a funding shortfall of \$86.48 million which is calculated as the estimated costs of \$513.80 million for radiological decommissioning less the projected value of the DTF of \$427.32 million.<sup>45</sup>

Attachment 4 ENOC-09-00007		
Entergy Nuclear Operations, Inc. Status of Decommissioning Funding – Vermont Yankee For Year Ending December 31, 2008 – 10 CFR 50.75(f)(1)		
Plant Name: <b>Vermont Yankee Nuclear Power Station</b>		
1.	Amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (b) and (c).	\$ 513.80 million
2.	Amount accumulated to the end of the calendar year preceding the date of the report (December 31, 2008).	\$ 372.01 million
	Fund balance with 2.0% annual growth to the midpoint of decommissioning (December 2015) based on current operating license.	\$ 427.32 million
	Fund balance with 2.0% annual growth to the midpoint of decommissioning (December 2035) based on 20 year license renewal.	\$ 634.98 million
3.	A schedule of the annual amounts remaining to be collected.	None.
4.	Assumptions used in determining rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections.	2% annual real rate of return on funds per 10 CFR 50.75(e)(1)(i)
5.	Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).	None.
6.	Modifications occurring to a licensee's current method of providing financial assurance since the last submitted report.	None.
7.	Any material changes to trust agreements.	None.

<sup>45</sup>The NRC performed its review of Entergy's report and recalculated the shortfall as \$87 million.

## Appendix V

### Summary of Investment Policies for the DTF

Source	Investment Objective	Guidelines
Master Decommissioning Trust Agreement	N/A	<p>Trustee and investment managers shall adhere to a prudent investor standard.</p> <p>Permitted investments include investment grade securities, investments tied to market indices, mutual funds or common trust funds.</p> <p>Prohibited investments include investments in real estate, securities or other obligations of Entergy Corporation and its affiliates and any entities owning one or more nuclear power plants.</p>
Duff & Phelps and Delaware Investment Advisors	Primary objective is preservation of accumulated principal and maximization of after tax (real) returns consistent with prudent investment practices.	<p>Management of the trust assets shall be subject to prudent practices with regard to quality, liquidity and diversification of risk.</p> <p>No more than 35% of the funds market value shall be invested in equity securities.</p> <p>Corporate bonds of any one industry may not exceed 30% of the market value of the portfolio.</p> <p>No more than 20% of the portfolio market value in any one state.</p> <p>Permitted securities are corporate bonds, mortgage-backed securities, asset-backed securities, municipal bonds and US Treasury and agency securities.</p> <p>Average rating of all issuers shall not be lower than the equivalent of an Aa or AA from Moody's or Standard and Poor's. No issuer shall be rated below Baa/BBB.</p> <p>Short term liquidity investments should not exceed 10% of the portfolio without prior written approval.</p> <p>No more than 10% of the portfolio market value may be invested in any one issuer. When market value reaches \$40 million, this limit is reduced to 5%.</p>
Mellon Bank	Portfolio managed by Mellon Bank is held in two common collective trusts, DT Stock Index Fund and DT Market Completion Fund. The investment objective for DT Stock Index Fund is to approximate the S&P 500 Stock Index. The investment objective for the DT Market Completion Fund is to approximate performance of the Wilshire 4500 Index.	Mellon Bank provided a letter to Entergy which stated that the DTF assets managed by Mellon Bank would be invested in the DT Stock Index Fund, financial futures may be purchased or sold from time to time, and the DT Market Completion Fund, financial futures may be sold from time to time. In addition, the DT Market Completion Fund participates in securities lending. Entergy signed the letter acknowledging that it agreed that the DTF assets managed by Mellon Bank would be invested in these two funds.

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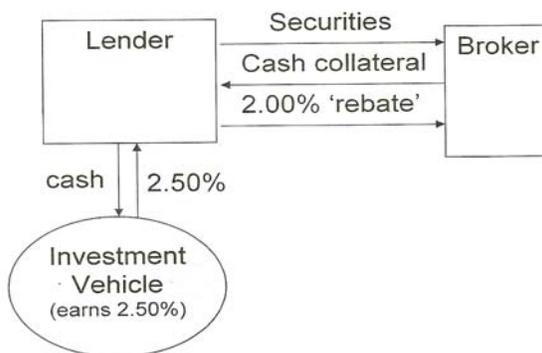
## Appendix VI

### Diagram and Explanation of Securities Lending Transactions

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Securities lending is essentially the temporary, collateralized loan of securities by the owner (lender) to a borrower, for a fee. It is the temporary transfer (“lending”) of a security by one party to another in exchange for cash collateral that can in turn be reinvested to produce income for the lender. Generally, the lender owes a percentage of the income from investing the collateral to the borrower.

The following diagram is of a typical securities lending flow. The securities lender delivers the securities to the borrower for cash collateral. The securities lender reinvests the cash which earns the lender a return. The lender pays a portion of the cash reinvestment income earned to the securities borrower, known as a “rebate.”



## Appendix VII

# Examples of Selected States' Regulation of Decommissioning Trust Fund Investment Policies

The following table presents examples of state regulation of the investment management, including investment guidelines and oversight responsibility for monitoring investment manager compliance with guidelines and performance results.

	<b>Texas</b>	<b>New Hampshire</b>	<b>Arkansas</b>
Statute/Regulation or Public Utility Commission Order	Public Utility Commission rules, Chapter 25 Subchapter L, Nuclear Decommissioning	State statute, Title 12 Section 162-F, Seabrook Nuclear Decommissioning Financing Fund Master Trust Agreement, Investment Guidelines for Seabrook Nuclear Decommissioning Financing Fund	Arkansas Public Service Commission Docket No. 96-341-U, Order No. 3 and Docket No. 87-166-TF Order No. 50
<b>Investment Policy Criteria</b>			
Prohibited Securities	Examples include certain derivatives, purchase of securities on margin, and corporate or municipal debt securities below investment grade.	Examples include securities denominated in foreign currencies and convertible securities. Financial derivatives will only be used with express written permission of FPL Seabrook and State Treasurer.	Examples include foreign investments, futures and derivatives, real estate, limited partnerships, penny stocks, junk bonds.
Asset Diversification	No more than 5% of the securities held may be issued by one entity. Portfolio shall contain at least 20 different issues of securities. Municipal and real estate investments shall be diversified as to geographic region. Varying limits on percentage of portfolio that may be invested in equity securities, ranges from 60% to 0%, dependent upon timeline to commencement of decommissioning activities.	No more than 5% of the portfolio value may be invested in securities issued by any one entity.  Fixed income: Foreign securities may not exceed 20% of the portfolio. No more than 35% of the portfolio's market value may be invested in mortgage-backed securities.  Equities: No more than 15% of the total equity investments in portfolio will be invested in any one industry as classified by Standard and Poor's.	No more than 20% of the portfolio's market value shall be municipal securities from one state. No more than 5% of the portfolio's market value may be invested in any one issuer. Market value of corporate bonds of any one industry shall not exceed 20% of the market value of the portfolio.  Maximum of 60% of portfolio may be invested in equity securities.

## Appendix VII

### Examples of Selected States' Regulation of Decommissioning Trust Fund Investment Policies

	<b>Texas</b>	<b>New Hampshire</b>	<b>Arkansas</b>
Quality Ratings	<p>Overall portfolio of debt investments shall have a quality level not below "AA" grade by Standard and Poor's or "Aa2" by Moody's.</p> <p>At least 70% of aggregate market value of equity securities shall have a quality ranking from a major rating service, such as the earnings and dividend ranking for common stock by Standard and Poor's.</p>	<p>Weighted average quality of the overall debt portfolio must be at least AA. Corporate and municipal bonds must be rated at least BBB by Standard and Poor's and/or Baa2 by Moody's.</p>	<p>Average rating of all issuers shall not be lower than the equivalent of A2 or A from Moody's or Standard and Poor's. Up to 10% of the portfolio may be rated Baa/BBB. No issuer shall be rated below Baa/BBB.</p>
<b>Monitoring</b>			
Compliance with investment policy	Yes	Yes	Yes
Performance of Investment Managers	Yes	Yes	Yes
Entity conducting monitoring	Fund administrator <sup>1</sup>	Investment Consultant <sup>2</sup> reviews compliance. Investment Consultant and Nuclear Decommissioning Financing Committee <sup>3</sup> review performance.	Nuclear licensee

<sup>1</sup>Fund administrator may be the nuclear licensee.

<sup>2</sup>Investment consultant is appointed by FPL Energy Seabrook, LLC with approval of New Hampshire State Treasurer.

<sup>3</sup>Nuclear Decommissioning Financing Committee is comprised of one resident of town in which the facility is located, chair of the public utilities commission, one senator, one house member, state treasurer or designee and three other state department commissioners or designees.

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# Appendix VIII

## Reprint of the Commissioner of the Public Service Department Response

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State of Vermont  
Department of Public Service  
112 State Street  
Drawer 20  
Montpelier, VT 05620-2601  
TEL: 802-828-2811

FAX: 802-828-2342  
TTY VT: 800-734-8390  
email: [vt dps@state.vt.us](mailto:vt dps@state.vt.us)  
<http://publicservice.vermont.gov/>

August 17, 2010

Thomas M. Salmon, CPA  
Vermont State Auditor  
132 State Street  
Montpelier, VT 05633-5101

Re: Response to Audit Findings re Decommissioning Fund for Entergy Nuclear Vermont Yankee

Dear Mr. Salmon:

Your office has released a draft of your office's report on "Entergy Nuclear Vermont Yankee, Monitoring and Management of the Decommissioning Trust Fund" ("Report") to my Department. Thank you for the opportunity to comment on that report as it pertains to the Department of Public Service.

First, it was a pleasure working with your office. Your staff was extremely professional and worked hard to understand all aspects of the Vermont Yankee Decommissioning Trust Fund. That hard work is evident in your Report. For the most part we agree with the conclusions that were reached and are going to consider each recommendation that includes the role of this Department very carefully. I wanted to touch base on a couple of the Report's observations and provide some feedback as to our thinking.

One of the observations of the Report is that the current review of the decommissioning trust fund is somewhat piecemeal with all the pieces coming together only every five years. The Report also acknowledges our testimony before the Public Service Board ("PSB") in Docket 7440, where we have asked the PSB to place a condition on the Certificate of Public Good, if one is issued, that requires a review of decommissioning funding adequacy in all its components every two and a half years instead of every five years. The Report states that the "PSD should consider whether it would be prudent to require Entergy to provide an updated analysis based upon certain triggering events such as (1) a report submitted by NRC indicating a funding shortfall or (2) the value of the DTF decreasing by a certain percentage or below a set dollar amount." We are considering this recommendation and how it might be implemented. We are discussing what triggers would be most useful to the State.



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## Appendix VIII

# Reprint of the Commissioner of the Public Service Department Response

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A second observation of note is the suggestion that “the State ought to consider whether the current DTF investment policy reflects an approach that is prudent and if not, suggest implementing guidelines for investment policies of decommissioning trust funds. Appendix VII citing examples of what Texas, New Hampshire and Arkansas are doing in this respect was very helpful. I am instructing my staff to look at these states and other possibilities to ensure the three components of dismantling the plant at the end of its life (radiological decommissioning, site restoration, and spend nuclear fuel management) are all adequately funded. That is precisely why in Docket 7440, we structured additions to the decommissioning fund or funds to cover all components. However, there is always room for further discussion on this subject to make sure Vermont is confident in the adequacy of the funds for dismantlement.

Finally, we will also look at practices currently allowed by the current investment guidelines. For example, the current practice of allowing “securities lending” seemed like added value a few years ago but the markets downward spiral in 2008, demonstrates the need for this practice to be totally reevaluated. How to do that without running into the jurisdictional boundaries between federal and state entities will be part of that discussion, but inquiry will be made into that area as well as other highlighted by the Report regarding investment issues.

Thank you again for allowing me the opportunity to comment. Please let me know if I can be of any further assistance to you.

Very truly yours,



David O'Brien  
Commissioner

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# Appendix IX

## Reprint of Entergy Nuclear Vermont Yankee's Management Response and Our Evaluation

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JOHN H. MARSHALL  
jmarshall@drm.com

August 4, 2010

Ms. Tanya Morehouse  
Chief Auditor  
State Auditor's Office  
132 State Street  
Montpelier, VT 05602

SUBJ: Entergy Nuclear Vermont Yankee's Management Response

Dear Ms. Morehouse:

Enclosed is a copy of Entergy Nuclear Vermont Yankee's Management Response to the draft report of the Vermont State Auditor on Monitoring and Management of the Decommissioning Trust Fund at Vermont Yankee, which was sent to you by electronic transmittal on August 3, 2010.

Very truly yours,

John H. Marshall

JHM:lm  
Enclosure  
c: William B. Glew, Jr., Esq.

3814626.1

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## Appendix IX

# Reprint of Entergy Nuclear Vermont Yankee's Management Response and Our Evaluation

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See report section  
"Managements'  
Response and Our  
Evaluation

### Management's Response

Entergy Nuclear Vermont Yankee (ENVY) is pleased to be afforded this opportunity to respond to the draft report of the Vermont State Auditor on Monitoring and Management of the Decommissioning Trust Fund at Vermont Yankee (VY). The company welcomes oversight by regulators of its management of funds in the trusts. It believes that review of its performance in managing the funds, in context and over time, will demonstrate that these funds have been managed prudently and that the existing Public Service Board (PSB) procedures for monitoring performance have worked well and should not be changed.

Before providing the specifics of management's response to the report, several points should be highlighted:

- Fund performance must be measured over the long term. From July 31, 2002, until September 30, 2009, the fund's trustee reported a 5.52% average annual rate of return, which compares favorably to the Consumer Price Index of 2.38% for the same period.
- Nearly 60% of the trusts' holdings are invested in fixed-income funds under specific guidelines, which cushioned the trusts during the market downturn in 2008.
- Like many retirement funds, the VY trusts' equity holdings are invested in stock-index funds. When the market rebounded in 2009, the trust's equity funds kept pace and returned 28% to match its respective benchmark index.

Comment 9

Comment 2

Comment 1

The draft report notes the company's range of estimates for the cost of post-shutdown, spent-fuel management. The U.S. Department of Energy (DOE) has been held legally responsible for these costs under its contract with the company to dispose of spent fuel from VY, while ENVY is obligated to pay for radiological decommissioning and site restoration at VY, estimated in 2007 to cost about \$500 million.

Comment 1

Policy judgments about management of the VY Decommissioning Trusts should not be based on the assumption that courts will not require DOE to comply with the law. Nuclear operators are regularly obtaining judgments in the U.S. Court of Federal Claims directing DOE to pay for management of spent fuel; a trial court decision on ENVY's first spent-fuel-damages claims is expected by the end of 2010.

See report section  
"Managements'  
Response and Our  
Evaluation

In view of the NRC's oversight of VY, noted in the draft report, regulators should evaluate carefully their legal authority to impose additional requirements on VY, as proposed in the draft report. The NRC has exclusive jurisdiction over the radiological decommissioning of commercial, nuclear-power reactors in the United States as well as management of spent fuel. The U.S. Supreme Court has said that the NRC has been "given exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession and use of nuclear materials," that upon "these subjects no role was left to the states" and state requirements that have "some direct and substantial effect on decisions made by those who build or operate nuclear facilities concerning radiological safety levels" are preempted. *See, e.g., Pacific Gas & Elec. Co. v. State Energy*

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# Appendix IX

## Reprint of Entergy Nuclear Vermont Yankee's Management Response and Our Evaluation

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*Resources Conservation and Development Comm n.*, 461 U.S. 190, 207 (1983); *English v. General Elec. Co.*, 496 U.S. 72, 85 (1990).

The draft report addresses concerns related both to (1) the frequency of and requirements for decommissioning-cost studies as well as (2) the VY Decommissioning Trusts' performance and controls. This management response accordingly provides comments, clarification and additional information in both areas of concern.

Comment 2

*Frequency of and Requirements for Studies:* Citing stock market turbulence, the draft report (pages 26-27) concurs with a recommendation by the Department of Public Service (DPS) that decommissioning costs should be studied every two-and-one-half years, not every five years as required by the terms of the PSB's final order in its Docket No. 6545. Volatility in financial markets, however, does not materially affect decommissioning costs, which have experienced only moderate rates of inflation.

Comment 2

The five-year period, moreover, for preparing updated, decommissioning-cost estimates is appropriate, based on the complexity and cost of the studies as well as the long-term perspective associated with the issues addressed in the estimates. For example, the prompt-decommissioning and site-restoration costs for VY increased 8% between the plant's 1998 and 2001 studies but decreased between 2001 and 2007.

Comment 2

Between five-year studies, however, it may be reasonable to escalate the previous estimate by applying applicable inflation factors, such as for labor, energy and radioactive-waste-burial cost changes since the previous estimate to the costs in those categories. Keeping in mind the five-year, decommissioning-cost-study requirement ordered in PSB Docket No. 6545, Entergy would consider escalating the previous five-year estimate as just described at the two-and-one-half-year mark.

Comment 3

The draft report (page 15) also notes that the NRC's methodology to estimate radiological-decommissioning costs is based on a formula and not on a site-specific study. The report does not point out, however, that, over a wide range of scenarios, the NRC formula has produced a higher estimated cost for radiological decommissioning at VY for this category of costs than the site-specific cost studies developed for Entergy and reviewed by the DPS and PSB.

Comment 1

The draft report (page 15) further notes that the NRC formula does not include information about spent-fuel management and that VY's 2007 decommissioning-cost study reported that spent-fuel management and site-restoration costs ranged from \$187 million to \$541 million. These costs do not reflect, however, the success nuclear operators are having against the federal government in lawsuits brought to enforce DOE's legal obligation to manage spent fuel.

Comment 1

DOE had contractual and statutory obligations to begin accepting and disposing of spent-nuclear fuel in 1998 but did not do so. The courts have now confirmed the federal government's financial responsibility for DOE's continuing performance failures, and the state of the law has matured to the point where eventual recovery of the bulk of VY's spent-fuel-storage costs cannot seriously be doubted. In fact, by Order issued on October 19, 2006, the U.S. Court of Federal

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# Appendix IX

## Reprint of Entergy Nuclear Vermont Yankee's Management Response and Our Evaluation

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See report section  
"Managements'  
Response and Our  
Evaluation

Claims held DOE liable for damages for breach of VY's spent-fuel-disposal contract, leaving only the determination of damages.

In the meanwhile, trial courts have continued uniformly to apply basic recovery principles and to provide compensation for nuclear-plant operators' on-site, spent-fuel-storage costs. At the recent trial for recovery of costs incurred at VY through April 30, 2008, and after the court granted certain pretrial and in limine motions by Entergy Nuclear Vermont Yankee, LLC, the federal government did not even contest the majority of direct expenditures for construction of VY's dry-storage facility and cask-purchase costs.

ENVY has the following additional comments on the draft report's findings about decommissioning to clarify the report or provide additional information:

Comment 4

1. The draft report (page 4) refers to "significant site cleanup costs related to spent nuclear fuel management and site restoration." Please note that site cleanup costs relating to spent-fuel management are minimal, consisting principally of demolition of the concrete pad on which the spent-fuel casks are placed.

Comment 5

2. The draft report (page 7) suggests that "removal of the plant's spent or used fuel" is an "obligation[] of a nuclear power plant operator." That is incorrect. As described above, removal of spent fuel is an obligation of DOE, paid either through ongoing fees or a one-time fee.

Comment 6

3. The third item in Table 1 in the draft report (page 10), referring to 10 CFR § 50.75(f), conflates two separate requirements found in 10 CFR §§ 50.75(f)(3) and (f)(4). The preliminary, decommissioning-cost estimate is due five years before the end of operations, but the preliminary, decommissioning plan is not due until two years before the end of the operating license.

Comment 7

4. The fourth item in Table 1 in the draft report (page 10) refers to 10 CFR § 50.75(f) but should refer to 10 CFR § 50.82(a)(4).

Comment 8

5. The draft report (page 10) states that the license-termination plan is due two years prior to "completion of cleanup." That should be two years prior to "termination of the license."

*Performance and Controls:* ENVY reviewed the draft report from the perspective of its findings and comments on trust performance and controls, and the comments on the language quoted below are the results of that review:

Comment 9

1. The draft report (page 5) states: "However, the flexibility allowed by the broad guidelines in the Master Decommissioning Trust Agreement could subject the DTF to more risk than the State may be willing to accept." The two fixed-income managers of the VY trust funds must follow very specific investment guidelines, which are reflected in a document (Investment Management Agreement or "IMA") outside of the Master Decommissioning Trust Agreement. More specifically, the IMA mandates each portfolio maintain an AA average-quality rating and cannot hold an issue rated below BBB. Permitted investments and performance benchmarks narrow a manager's security choices, while diversification parameters limit risk. These

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## Appendix IX

# Reprint of Entergy Nuclear Vermont Yankee's Management Response and Our Evaluation

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- guidelines are outlined in Exhibit B of the IMA. Further, the equity manager, Mellon Capital Management (a subsidiary of BNY Mellon), manages two accounts for the VY fund, both of which are invested in stock-index funds (S&P 500 Index and Wilshire 4500 Index), and Mellon Capital is required to replicate characteristics and rates of return of the respective index of the fund. The investment guidelines are therefore not "broad," but very specific.
- Comment 10 2. Regarding the DPS's review of the 2007 VY study, the draft report (page 16) states that "the analysis was completed during 2008 and was based upon assumptions that incorporated investment results prior to the significant downturn in the market which occurred in the fourth quarter of 2008 and the first quarter of 2009" and therefore if done later, the analysis would not have been as favorable. Immediately after the first quarter of 2009, however, markets rallied, and the equity market returned about 28% for the year 2009; the trusts' funds returned similarly. Equity markets will have volatility continually. It is not useful to pick an arbitrary point in time and conclude that if the analysis had been done at that time, the results would be different. Markets will continue to have volatility, but over the past decades the overall, long-term trend has been upward. The VY funds are managed for the long term and not in reaction to short-term market volatility.
- Comment 11 3. The draft report (page 17) states: "SAO calculated the weighted average return of the investments in the DTF as 4.32 percent" using information through September 30, 2009. The VY fund's trustee reported, however, a 5.52% average annual rate of return since inception through that date. ENVY is uncertain as to what the differences are between the two estimated returns.
- Comment 12 4. The draft report (first bullet point on page 18 see pages 18-20) states that "The overall DTF investment policy allowed for significant flexibility in the fund that could have exposed the DTF to greater risk than desirable." ENVY does not agree with this statement because, as discussed earlier, the two fixed-income managers have very specific guidelines designed to control risk as outlined in the IMA. Likewise, the equity funds are indexed and also have specific guidelines to match the characteristics and rate of return of its respective index. Mellon Capital is prohibited from buying securities outside the fund index of the fund and must buy securities in proportion to the fund index.
- Comment 13 5. The draft report (bullet point three on page 18 see page 24) suggests a potential conflict of interest between Mellon Bank as trustee and Mellon Capital as investment manager. Any risk of a conflict is negligible because Mellon Capital manages accounts that invest only in stock-index funds for the VY trusts: It is prohibited from investing in securities outside the characteristics of a fund's specific index. Additionally, the funds Mellon Capital invests in are a Decommissioning Collective Trust Investment Fund, which is monitored by both the Office of the Comptroller of the Currency and the Securities and Exchange Commission ("SEC"). These regulatory agencies, in addition to Mellon Capital's own internal auditors, ensure that the funds comply with the stated investment guidelines and regulations. Form ADV, Part II, 9.A., filed with the SEC by Mellon Capital, specifically states that principal transactions are prohibited. If Mellon were to engage in them, it would be in violation of filings made at the SEC. Finally, revising the trustee or investment manager for the funds could result in either an increase in fees or adverse tax consequences, both of which would tend to reduce the available trust funds.

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Comment 14

6. The draft report (page 20) states that "the mechanisms utilized by Entergy to evaluate investment managers' adherence to investment policies and their performance results were at a summary level which made it difficult to ascertain whether a complete analysis was performed" and therefore may have exposed the fund to a greater risk. While the checklist that is used to summarize the company's review is at a summary level, it is in itself not a stand-alone document. It is supported by the quarterly performance report and the investment manager's guidelines, which must be referenced in completing the checklist. The checklist is intended to ensure that the appropriate personnel review the underlying numbers related to the items stated on the checklist.

Comment 15

7. The draft report (page 20) states that "[a]bsent more specific guidelines regarding types of securities, quality ratings of securities and diversification requirements, it is possible that the assets managed by Mellon Bank are subject to greater risk . . . The assets managed by Delaware and Duff & Phelps did not experience the same level of volatility." This is not accurate as to the guidelines because every dollar managed by Mellon Bank is indexed to specific characteristics of the index, invested in proportion and managed to match the return of the index. Further, Mellon Capital is prohibited from buying securities outside the index of the fund. The comparison of these characteristics and returns to each other are clearly demonstrated in the quarterly performance reports, which are provided to the DPS. Entergy also notes—relative to the observation (page 20) of the draft report that the Mellon Capital assets experienced more volatility than other asset classes in the trusts—that equity securities are expected to have somewhat greater risk and thus greater volatility than the fixed-income funds managed by Delaware and Duff & Phelps. Therefore, the comparison made on page 20 of the draft report may be misleading. In this regard, in the same paragraph (page 20) the draft report points out that there was a significant drop in the market value of the Mellon Capital-managed funds between March 31, 2008, and March 31, 2009. That was the result of short-term volatility, and by December 31, 2009, the fund increased by 19% over the value on March 31, 2009. When the market rebounded in 2009, returning 28% for the year, the S&P 500 Index equity fund managed by Mellon Capital performed the same.

Comment 16

8. The draft report (page 23) states that " although the checklist had a column titled investment return rate, it lacked a reference to the investment return rates that were expected for the investment managers." The checklist is merely that: a checklist. The actual rates of return are compared to benchmark returns, which are listed under each manager's return in the quarterly performance report. The company also compares the returns to returns for similar portfolios on a quarterly basis.

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The following table contains our evaluation of select remarks made by management of Entergy Nuclear Vermont Yankee:

Comment 1.	The U.S. Department of Energy (DOE) has been held legally responsible for breach of the contracts that were entered into with nuclear plant operators to dispose of spent nuclear fuel (Maine Yankee, 223 F.3d at 1342) and in October 2006 the U.S. Court of Federal Claims reaffirmed this as it relates to ENVY, Vermont Yankee Nuclear Power Corp., et al. v. United States, Nos. 02-898C, 03-2663C (Fed. Cl. Oct. 19, 2006). The matter of damages is still being litigated. However, management’s characterization of these circumstances implies that DOE will be settling up with ENVY for the prospective cost of maintaining spent nuclear fuel until such time as DOE takes title to and removes the spent nuclear fuel. This is unlikely as the PSB noted in Docket 7082, “initial decisions in a similar case from the Court of Federal Claims have included unfavorable aspects, such as authorizing damages less than those requested by utilities and damages only in arrears and not prospectively.” In addition, ENVY has only pursued damages for recovery of costs through April 30, 2008, which does not include the range of estimated costs for managing spent nuclear fuel in the future (\$142 million to \$501 million), which will be incurred subsequent to end of operations. Lastly, there is no restriction or guarantee that we are aware of requiring ENVY to utilize monies from damages awarded by the courts to pay for spent nuclear fuel management at the Vermont Yankee site.
Comment 2.	On page 26-27, we point out that in periods of dramatically changing circumstances, such as stock market turbulence, reviewing the adequacy of the DTF every 5 or even every 2.5 years may not be sufficient and that PSD should consider whether it would be prudent to require ENVY to provide updated analysis of the adequacy of the DTF to cover the costs of site cleanup based upon triggering events, such as stock market turbulence or significant inflation. While management seems to have misconstrued our reference to stock market turbulence on page 26-27, they did acknowledge that it would be possible to apply escalation factors to a decommissioning cost study performed every 5 years in order to provide updated cost estimates every 2.5 years.
Comment 3.	We concur that the NRC methodology resulted in a slightly higher estimate for the cost of radiological decommissioning than the range of estimates in the site specific study. The site specific study reported estimated radiological decommissioning costs as 2% to 6% lower than resulted from the NRC methodology (a range of \$450 million to \$469 million versus \$478 million ). However, given that the differences were relatively small, this would not change our observation that if the other costs related to cleanup, namely the cost of site restoration and spent nuclear fuel management, were taken into consideration at 12/31/08, the shortfall in the DTF would have been greater than identified in the NRC report.
Comment 4.	For purposes of our report, we consider site cleanup to encompass radiological decommissioning, spent nuclear fuel management and site restoration as these are the activities that must occur to return the site to a condition suitable for future non-nuclear activities. We added clarification to the report regarding our use of the term site cleanup. The important point

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	as it relates to this report is that Entergy intends to utilize the assets of the DTF to cover the costs of radiological decommissioning, spent nuclear fuel management and site restoration, therefore these are the categories of costs that must be included when considering the adequacy of the DTF.
Comment 5.	Added a footnote to clarify that Entergy is responsible for managing and providing funding for the caretaking of irradiated fuel at the reactor site until such time as DOE accepts title to the fuel and it is removed for storage at a DOE repository.
Comment 6.	As we intended, the third item in Table 1 highlights the requirements in 10 CFR 50.75(f)(2) which requires a site specific study of the estimated costs of decommissioning 5 years prior to the expected end of the operating license. We added an additional cross reference to 10 CFR 50.75(f)(4) which requires that the site specific study address plans for adjusting level of funds assured for decommissioning to demonstrate that a reasonable level of assurance will be provided that funds will be available to when needed to cover the costs of decommissioning. We did not meld the requirements of 10 CFR 50.75(f)(3) and 10 CFR 50.75(f)(4), since 10 CFR 50.75(f)(3) relates to non-power reactor licensees and is not relevant.
Comment 7.	Corrected reference to 10 CFR 50.82(a)(4).
Comment 8.	We conformed the description of the due date in the report to the language in the 10 CFR 50.82(a)(9)(i).
Comment 9.	<p>NRC investment restrictions that are limited in scope and the broad guidelines in the Master Decommissioning Trust Agreement are the foundation for the investment policy of the DTF. As we specified in the report, existing investment manager agreements add some additional criteria for the investment of the DTF, but these agreements may be modified within the context of a very broad foundation. The investment manager agreements reflect Entergy’s current strategy for managing the DTF assets which may not reflect a risk appetite acceptable to the State of Vermont. Given that the NRC disagreed with an OIG’s recommendation to adopt additional investment guidelines<sup>46</sup> for DTF’s, we have suggested that the Department of Public Service review the practices in other states and consider whether additional guidelines should be adopted in Vermont.</p> <p>In this comment, ENVY management indicates that Mellon Capital Management (Mellon), manager of DT Market Completion Fund and DT Stock Index Fund, is required to manage these index funds to replicate characteristics and rates of return of the respective index of the fund in order to emphasize their point that the investment guidelines are specific, not broad. While we agree that the agreement that ENVY signed with Mellon for management of a portion of the DTF specifies that the DTF will be invested in these two index funds, we disagree with ENVY managements’ characterization that Mellon is required to replicate the characteristics and</p>

<sup>46</sup>In a policy issue prepared by NRC Executive Director for Operations in response to an Office of Inspector General (OIG) audit report, the Executive Director disagreed with the OIG view that specific investment restrictions were needed and recommended no further action.

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	<p>rates of return of the respective indices of the funds. According to documentation provided to us by ENVY management (12/31/08 audited financial statements and footnotes), the objective of these funds is to track the performance of the funds’ relevant index. However, a stated objective is not a prescriptive requirement. Further, according to the audited financial statements, the DT Market Completion Fund may use any and all of the securities held in the fund for securities lending and the DT Stock Index Fund may invest in financial futures.</p>															
<p>Comment 10</p>	<p>We believe that reviewing the adequacy of the fund once every five years, as is the current regulatory model, is not adequate for monitoring the way in which VY manages the funds for growth, nor does it provide the ability to incorporate updated information regarding market conditions as a consideration for the likelihood of achieving the rates of return that ENVY management predicts will be realized. The recent experience with the decrease in the value of the DTF and current performance of the equities markets demonstrates the need for continuous monitoring of fund value and rates of return and the potential for additional contributions to the fund, if conditions warrant.</p>															
<p>Comment 11.</p>	<p>We have clarified in our report that the weighted average return for the investments in the DTF of 4.32% was calculated based upon after tax returns. We do not know how the fund’s trustee calculated a 5.52% average annual rate of return since inception, nor did ENVY provide documentation supporting the calculation. The trustee’s September 30, 3009 Vermont Yankee Decommissioning Trust Fund report shows after tax rates of return since inception below 5.52% for three of the four managed portfolios. See the following table for after tax rates of return since inception for Delaware, Duff &amp; Phelps and the two index funds managed by Mellon.</p> <table border="1" data-bbox="669 1213 1484 1444"> <thead> <tr> <th>Investment manager/index fund</th> <th>% of portfolio at 9/30/09</th> <th>After tax rate of return</th> </tr> </thead> <tbody> <tr> <td>Delaware</td> <td>30.9%</td> <td>4.62%</td> </tr> <tr> <td>Duff &amp; Phelps</td> <td>30.7%</td> <td>4.60%</td> </tr> <tr> <td>DT Stock Index Fund</td> <td>30.1%</td> <td>3.02%</td> </tr> <tr> <td>DT Market Completion Fund</td> <td>8.3%</td> <td>6.73%</td> </tr> </tbody> </table>	Investment manager/index fund	% of portfolio at 9/30/09	After tax rate of return	Delaware	30.9%	4.62%	Duff & Phelps	30.7%	4.60%	DT Stock Index Fund	30.1%	3.02%	DT Market Completion Fund	8.3%	6.73%
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<p>Comment 12.</p>	<p>Similar to our point in Comment 9 above, based on the information they provided to us, we disagree with ENVY managements’ characterization of the investment requirements/restrictions of the index funds. We are uncertain, based on the audited financial statements provided to us by ENVY management, the basis for ENVY’s comment that Mellon Capital is prohibited from buying securities outside the fund index and must buy securities in proportion to the fund index. The footnotes of the audited financial statements for both funds state that the assets of the fund may be invested in securities and a combination of other collective funds that together are designed to track the funds’ respective index, however this is not a prescriptive requirement. Further, the footnotes go on to describe other investments that the funds may opt for, such as securities lending and financial futures, which are outside the fund index.</p>															

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Comment 13.	<p>We acknowledged in our report that many of the potential conflicts posed by having Mellon as trustee and investment manager were mitigated by various factors, including investment of the funds in two of Mellon's collective investment trust funds. However, we believe that some risk remains, particularly with regard to Mellon, in its trustee position, having some responsibility for monitoring Mellon, in its investment advisor role. In their response, ENVY management represents that since the index funds are prohibited from investing outside the characteristics of the indices' specific characteristics, this reduces the risk of a conflict of interest. However, as we have stated in comment 9 and 12, based upon the documentation that ENVY management provided to us, we believe that the two funds stated investment objective is to track the performance of the relevant stock index, however this is not equivalent to a prohibition, merely stated intent and the fund managers have greater discretion with respect to investment decisions than described by ENVY management. In addition, ENVY management comments on regulatory oversight by the Securities Exchange and Commission (SEC) and the Office of the Comptroller of the Currency (OCC) relative to the two index funds and seems to confuse SEC and OCC regulatory oversight of Mellon Capital's investment management practice with regulatory oversight of the two index funds. To our knowledge, there is no recurring regulatory oversight by the SEC, nor the OCC, specific to the two index funds in the DTF investment portfolio. The SEC and OCC have regulatory oversight of Mellon Capital's investment management business, but do not have recurring monitoring of the specific funds. For example, the Form ADV, Part II referenced in ENVY's response is an application for investment advisor registration which relates to Mellon Capital's authorization to operate an investment advisor practice, but based on the information provided to us and the OCC Handbook, it does not appear that the funds are subject to annual filing requirements with the SEC. In addition, although OCC may perform recurring reviews of banks that administer collective investment trust funds, these reviews cover the bank's operations and do not evaluate whether these particular funds comply with stated investment guidelines and regulations. ENVY's response also mentioned oversight by their own internal auditors, but they did not provide evidence of internal audit's oversight role relative to the index funds.</p>
Comment 14.	<p>ENVY management did not provide any new documentation that would alter our conclusion.</p>
Comment 15.	<p>While the stated objective of the index funds is to track the performance of the relevant index, we are not certain why ENVY management interprets this as a prohibition against buying securities outside the index particularly since the footnotes to the financial statements describe investment vehicles, such as securities lending and financial futures, which appear to be securities outside the index. Additionally, ENVY management takes issue with the discussion in the report regarding the greater volatility experienced by the two index funds in comparison to the fixed income funds managed by Duff &amp; Phelps and Delaware. However, they also acknowledge that equity securities have greater risk and thus greater. Therefore, we do not believe the comparison in the report is misleading as ENVY management claims, rather it reflects actual results and illustrates our point that there is the</p>

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	potential for greater volatility in the index funds and PSD should consider whether the current DTF investment policy reflects a prudent approach and if not, suggest implementing guidelines for investment policies of DTFs.
Comment 16.	ENVY management did not provide any new documentation that would alter our conclusion.