

Entergy Nuclear Operations, Inc.

Vermont Yankee P.O. Box 0250 320 Governor Hunt Road Vernon, VT 05354 Tel 802 257 7711

> Michael J. Colomb Site Vice President

BVY 09-048

August 18, 2009

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

Reference:

Letter, NRC to VY, Request for Additional Information to Support the Review of the Vermont Yankee Nuclear Power Station Update to VY Spent Fuel Management Plan (TAC No. ME1152), dated May 20, 2009

Subject:

VY Spent Fuel Management Plan – RAI Response

Vermont Yankee Nuclear Power Station

Docket No. 50-271 License No. DPR-28

Dear Sir or Madam,

In the referenced letter, NRC requested additional information pertaining to our previous submittals regarding how Entergy Nuclear Vermont Yankee (ENVY) intends to manage and provide funding for irradiated fuel until title to the irradiated fuel is transferred to the Department of Energy. The attachment to this letter provides ENVY's response to the staff's questions.

This letter includes one new commitment, which is included in the enclosure.

Should you have any questions concerning this submittal, please contact Mr. David Mannai at (802) 451-3304.

Sincerely,

Chaplue for MIC

[MJC/JTM]

Enclosures: Response to RAI for VY Spent Fuel Management Plan (2 pages)

List of Regulatory Commitments (1 page)

VY Decommissioning Funding Plan – Scenario 5 (3 pages)

A 001 NRR cc: Mr. Samuel J. Collins, Region 1 Administrator U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406-1415

Mr. James S. Kim, Project Manager U.S. Nuclear Regulatory Commission Mail Stop O 8 C2A Washington, DC 20555

USNRC Resident Inspector Entergy Nuclear Vermont Yankee 320 Governor Hunt Road Vernon, Vermont 05354

Mr. David O'Brien, Commissioner VT Department of Public Service 112 State Street – Drawer 20 Montpelier, Vermont 05620

Response to Request for Additional Information VY Spent Fuel Management Plan

RAI No. 1

The NRC regulations allow a licensee to take a 2% real rate of return credit on investments unless a higher rate is authorized by a regulated licensee's public utility commission. Vermont Yankee applied a 2% real rate of return on the trust fund balance plus the additional projected contributions/reimbursement from Department of Energy (DOE) and deducted the decommissioning and spent fuel management costs identified in the Attachment 1: Scenario 5. The contributions from DOE are based on an assumption that liability was established based on the fact that the U.S. Court of Federal Claims entered a judgment in favor of VY and against DOE. Since VY's analysis indicates sufficient funds are not available to address the decommissioning costs and spent fuel management costs without the DOE's reimbursement, what mechanism has VY established to address the funding shortfall since the liability judgment does not guarantee the payment of damages in any certain amount or any payment date, and it could be overturned?

Response:

The extended spent fuel management costs in Entergy Nuclear Vermont Yankee's (ENVY) spent fuel management plan are caused by the Department of Energy's (DOE) failure to pick up the spent fuel in accordance with ENVY's contract with the DOE. If the DOE were performing in accordance with its legal obligations, these spent fuel management costs would not be projected. ENVY believes it is a reasonable assumption to make, that DOE will have to comply with its contractual obligation, either through actual performance, or as assumed by ENVY in its April 1, 2009 submittal, through damage payments. This assumption is strengthened by the fact, as noted in this RAI, that the court has already found DOE liable for breach of contract.

Nevertheless, ENVY understands the NRC Staff's position, and to respond to the Staff's concerns, amends its spent fuel management plan as reflected in this response. To respond to the Staff's concerns, ENVY will return to the spent fuel management funding approach set out in its October 14, 2008 submittal (ML082910294), that was approved by the NRC in its Safety Evaluation dated February 3, 2009 (ML083390193). The current plan is amended as follows. The DOE Reimbursement column in the funding plan has been removed, and replaced by a column entitled Contributions to Trust Fund. In the October 14, 2008 submittal, ENVY had committed to a \$60 million contribution to the trust fund in 2026. For purposes of this amended plan, ENVY now commits to make a \$127.017 million contribution to the trust fund in 2026, based upon a July 31, 2009 decommissioning trust fund balance of \$402,169,338. This revision results in the trust fund having a near zero balance by the end of the decommissioning project after the 2% real rate of return is applied to the trust funds. See attached revised Scenario 5 Funding Plan.

ENVY has filed for license renewal for Vermont Yankee, and expects a decision on that application later in 2009. ENVY expects that the addition of a renewed license term for Vermont Yankee will materially change the required additional contribution amount for the spent fuel management plan, and accordingly expects to submit a revised plan if license renewal is granted, that should eliminate or substantially reduce any required future contributions to the trust fund.

RAI No. 2

While Entergy's submittal (BVY 09-022) for Vermont Yankee dated April 1, 2009, included a cost estimate for a 2012 shutdown and an extended SAFSTOR period, the submittal did not include the plan, as required by 10 CFR 50.75(f)(5), to adjust funding levels to demonstrate a reasonable level of financial assurance, when the plan appears to be necessary. Due to the recent drop in the Trust Fund to \$372.01 million as of December 31, 2008, documented in the March 30, 2009, submittal (ENOC-09-0007), the plan should reflect the mechanism for adjusting funding.

Response:

Please see ENVY's response to RAI No. 1 above. The mechanism for adjusting funding will be a contribution to the trust fund of \$127.017 million in 2026.

Regulatory Commitments Table

This table identifies actions discussed in this letter for which Entergy Nuclear Vermont Yankee commits to perform. Any other actions discussed in this submittal are described for the NRC's information and are **not** commitments.

Letter Number/Title: BVY 09-048, VY Spent Fuel Management Plan - RAI Response

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE
	ONE-TIME ACTION	CONTINUING COMPLIANCE	(If Required)
Provide additional funding of \$127.017 million dollars to trust fund for Spent Fuel Management	Х		December 31, 2026

Vermont Yankee Nuclear Power Station Decommissioning Funding Plan Scenario 5: 2012 Shutdown, Extended SAFSTOR Alternative, 2020 DOE Start Date

Basis Ye	or	2008				
Fund Ba		\$402.169	million (July 3	1 2000 setual)	······································	
Fund Ba	·	\$402.109	million (July 31, 2009, actual) million (December 31, 2009, projected)			
	Escalation	0.00%	immon (December 31, 2009, projected)			
Annual I		2.00%				
Aimuai I	zarnings	2.00%				
	A	В	С	D	E	F
	A	D	Total License	ע	E	Г
			Termination			
	50.75	50.54(bb)	and			Decommissioning
	License	Spent Fuel	Spent Fuel	Total Cost		Trust Fund
	Termination	Management	Management	Escalated at	Contributions	Escalated at 2%
	Cost	Cost	Cost	0%	to Trust Fund	(minus expenses)
Year	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
						(11111111111111111111111111111111111111
2009						405.521
2010					***************************************	413.631
2011						421.904
2012	32.682	13.607	46.289	46.289		384.053
2013	40.282	27.400	67.682	67.682		324.052
2014	3.935	29.322	33.257	33.257	······································	297.276
2015	3.935	29.322	33.257	33.257		269.964
2016	3.946	29.402	33.348	33.348		242.016
2017	3.935	23.217	27.152	27.152		219.704
2018	3.933	2.553	6.486	6.486		217.612
2019	3.933	2.553	6.486	6.486		215.478
2020	3.943	6.310	10.253	10.253		209.535
2021	3.933	2.943	6.876	6.876		206.850
2022	3.933	2.553	6.486	6.486		204.501
2023	3.933	2.787	6.720	6.720		201.871
2024	3.943	2.872	6.815	6.815		199.093
2025	3.933	2.865	6.798	6.798		196.277
2026	3.933	2.787	6.720	6.720	127.017	320.499
2027	3.933	2.709	6.642	6.642		320.267
2028	3.943	2.716	6.659	6.659		320.013
2029	3.933	2.709	6.642	6.642		319.772
2030	3.933	2.709	6.642	6.642		319.525
2031	3.933	2.709	6.642	6.642		319.274
2032	3.943	2.638	6.581	6.581		319.078
2033	3.933	2.709	6.642	6.642		318.818
2034	3.933	2.709	6.642	6.642		318.552
2035	3.933	2.553	6.486	6.486		318.437

Vermont Yankee Nuclear Power Station Decommissioning Funding Plan Scenario 5: 2012 Shutdown, Extended SAFSTOR Alternative, 2020 DOE Start Date

Basis Ye	^	2008				
Fund Ba	lance	\$402.169	million (July 31, 2009, actual)			
Fund Ba	lance	\$405.521	million (December 31, 2009, projected)			
Annual I	Escalation	0.00%				
Annual Earnings		2.00%				
		-				
	A	В	С	D	Е	F
			Total License			
			Termination			
	50.75	50.54(bb)	and			Decommissioning
	License	Spent Fuel	Spent Fuel	Total Cost		Trust Fund
	Termination	Management	Management	Escalated at	Contributions	Escalated at 2%
	Cost	Cost	Cost	0%	to Trust Fund	(minus expenses)
Year	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
					,	
2036	3.943	2.638	6.581	6.581		318.225
2037	3.933	2.631	6.564	6.564	-	318.025
2038	3.933	2.787	6.720	6.720		317.666
2039	3.933	2.631	6.564	6.564		317.455
2040	3.943	2.716	6.659	6.659		317.145
2041	3.933	2.709	6.642	6.642		316.846
2042	3.933	2.709	6.642	6.642		316.541
2043	3.933	2.709	6.642	6.642		316.230
2044	3.943	2.638	6.581	6.581		315.973
2045	3.933	2.936	6.869	6.869		315.424
2046	3.931	-	3.931	3.931		317.801
2047	3.931	-	3.931	3.931		320.226
2048	3.942	-	3.942	3.942		322.689
2049	3.931	-	3.931	3.931		325.212
2050	3.931	-	3.931	3.931		327.785
2051	3.931	-	3.931	3.931		330.410
2052	3.942	-	3.942	3.942		333.076
2053	3.931	-	3.931	3.931		335.806
2054	3.931	_	3.931	3.931		338.592
2055	3.931	_	3.931	3.931		341.432
2056	3.942	_	3.942	3.942		344.319
2057	3.931	-	3.931	3.931		347.274
2058	3.931	_	3.931	3.931		350.289
2059	3.931	_	3.931	3.931		353.364
2060	3.942	_	3.942	3.942		356.489
2061	3.931	_	3.931	3.931		359.688
2062	3.931	-	3.931	3.931		362.950

Vermont Yankee Nuclear Power Station Decommissioning Funding Plan Scenario 5: 2012 Shutdown, Extended SAFSTOR Alternative, 2020 DOE Start Date

Basis Ye	ear	2008				
Fund Ba	lance	\$402.169	million (July 31, 2009, actual)			
Fund Ba	lance	\$405.521	million (December 31, 2009, projected)			
Annual 1	Escalation	0.00%				
Annual Earnings		2.00%	·			
	,					
	A	В	С	D	E	F
			Total License			
			Termination		•	
	50.75	50.54(bb)	and			Decommissioning
	License	Spent Fuel	Spent Fuel	Total Cost		Trust Fund
	Termination	Management	Management	Escalated at	Contributions	Escalated at 2%
	Cost	Cost	Cost	0%	to Trust Fund	(minus expenses)
Year	(millions)	(millions)	(millions)	(millions)	(millions)	(millions)
2063	3.931	-	3.931	3.931		366.278
2064	3.942	_	3.942	3.942		369.662
2065	3.931	_	3.931	3.931		373.124
2066	27.779	_	27.779	27.779		352.808
2067	81.017	_	81.017	81.017		278.847
2068	108.329	0.512	108.841	108.841		175.583
2069	62.090	1.026	63.116	63.116		115.978
2070	62.090	1.026	63.116	63.116		55.182
2071	47.745	0.492	48.237	48.237		8.049
2072	7.634	0.272	7.906	7.906		0.304
2073	0.060	0.249	0.309	0.309		0.001
	674.328	235.335	909.663	909.663	127.017	

Calculations:

Column C = A + B

Column D = $(C)*(1+0\%)^{(current year - 2008)}$ or for 0%, D = C

Column E = Contributions to trust fund

Column F = (Previous year's fund balance) * (1 + .02) - D (current year's decommissioning expenditures) + E (contributions)