Entergy Nuclear Operations, Inc
1340 Echelon Parkway
Jacksn, MS 39213
Tel: 601-368-5776

John F. McCann
Vice President , Regulatory Assurance

ENOC-16-00008
March 30, 2016

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 205555-0001

SUBJECT: Status of Funding for Managing Irradiated Fuel For Year Ending December 31, 2015 – 10 CFR 50.82(a)(8)(vii)

Entergy Nuclear Operations, Inc.

Indian Point Nuclear Generating Station 1
Docket No. 50-003
License No. DPR-5

Big Rock Point
Docket No. 50-155
License No. DPR-6

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

Dear Sir or Madam:

10 CFR 50.82(a)(8)(vii) requires that after submitting its site-specific decommissioning cost estimate pursuant to 10 CFR 50.82(a)(4)(i), a licensee must annually submit to the NRC, by March 31, a report on the status of its funding for managing irradiated fuel. On behalf of Entergy Nuclear Indian Point 2, LLC, and Entergy Nuclear Palisades, LLC, and Entergy Nuclear Vermont Yankee, LLC, Entergy Nuclear Operations, Inc. hereby submits the information requested for Indian Point 1, Big Rock Point, and Vermont Yankee. All or most of the spent fuel mananagement costs are a liability of the U.S. Government as a result of its breach of the spent fuel disposal contract. However, this report takes no credit for recoveries on that liability.

There are no new commitments made in this letter. If you have any questions, please contact Mr. Guy Davant, Manager, Fleet Licensing Programs at 601-368-5756.

Sincerely,

JFM/ghd/ljs

Attachments:
1. Entergy Nuclear Operations, Inc. Status of Funding for Managing Irradiated Fuel - Indian Point 1, for Year Ending December 31, 2015 – 10 CFR 50.82(a)(8)(vii)
2. Entergy Nuclear Operations, Inc. Status of Funding for Managing Irradiated Fuel - Big Rock Point, for Year Ending December 31, 2015 – 10 CFR 50.82(a)(8)(vii)
3. Entergy Nuclear Operations, Inc. Status of Funding for Managing Irradiated Fuel - Vermont Yankee, for Year Ending December 31, 2015 – 10 CFR 50.82(a)(8)(vii)

cc:
Mr. J.A. Aluise (ENT)
Mr. C. Bakken (ECH)
Mr. B.E. Green (TMBR)
Mr. D.J. Mannai (WPO)
Mr. T.G. Mitchell (ECH)
Mr. L. Coyle (IPEC)
Mr. A. Vitale (PAL)
Mr. J. Ventosa (ECH)
Mr. L. Jager Smith (ECH)
Mr. C.J. Wamser (VTY)

USNRC Regional Administrator, Region I
USNRC Regional Administrator, Region III
USNRC Project Manager, Indian Point 1
USNRC Project Manager, Indian Point 2
USNRC Project Manager, Indian Point 3
USNRC Project Manager, Big Rock Point
USNRC Project Manager, Palisades
USNRC Project Manager, Vermont Yankee
USNRC Resident Inspector, Indian Point 2
USNRC Resident Inspector, Indian Point 3
USNRC Resident Inspector, Palisades

Michigan Department of Environmental Quality
Michigan Public Service Commission

Ms. Bridget Frymire
NYS Department of Public Service
3 Empire State Plaza
Albany, NY 12223

Attachment 1
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Entergy Nuclear Operations, Inc.
Status of Funding for Managing Irradiated Fuel – Indian Point 1
For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

Plant Name: **Indian Point Nuclear Generating Unit No. 1**

1.	Funds accumulated to cover the cost of managing irradiated fuel as of 12/31/2015	$ 169.72 million [Note 1]
2.	Projected costs to manage fuel until DOE removal (2015$)	$ 52.61 million
3.	Plan as required	See Note 2

Note 1: This amount represents the excess funds available in the Unit 1 decommissioning trust fund less an amount necessary to decommission the Independent Spent Fuel Storage Installation (ISFSI). Per Unit 1's updated decommissioning cost analysis, the present value (2015$) of excess funds in Unit 1's decommissioning trust at the end of decommissioning in 2073, after considering license termination expenses, is $170.36 million ($526.73 million/$(1.02)^{(2073-2016)}$). See Ending DTF Balance for 2073, Table 12-1, Decommissioning Funding Status Report per 10 CFR §50.75(f)(1) and 10 CFR 50.82(a)(8)(v) -- Entergy Nuclear Operations, Inc., filed March 2016. The estimated cost for decommissioning Indian Point 1 and 2's share of the site ISFSI is $6.79 million. Of the 53 casks from Indian Point 1 and 2 on the ISFSI, 5 are attributable to Unit 1, or 9.4%. Unit 1's share of ISFSI decommissioning cost is calculated as 9.4% x $6.79 million, or $0.64 million. Thus, the present value of Unit 1 trust funds available for spent fuel management is $170.36 million minus $0.64 million, or $169.72 million. For purposes of this report only, Indian Point 1 trust funds are being considered separately from Indian Point 2 trust funds; however, both funds are covered by a single trust agreement, and will likely be handled together upon decommissioning.

Note 2: The excess currently existing in Unit 1's decommissioning trust is sufficient to cover the estimated costs of spent fuel management. The licensee acknowledges the need for an exemption pursuant to 10 CFR §50.12(a) to use radiological decommissioning trust funds for costs other than decommissioning activities as defined in 10 CFR 50.2.

Attachment 2
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(Page 1 of 1)
Entergy Nuclear Operations, Inc.
Status of Funding for Managing Irradiated Fuel – Big Rock Point
For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

Plant Name: **Big Rock Point**

1.	Funds accumulated to cover the cost of managing irradiated fuel as of 12/31/2015	See Note 1
2.	Projected costs to manage fuel until DOE removal (2015$)	$ 57.47 million
3.	Plan as required	See Note 1

Note 1: Spent fuel management costs have been paid for out of Entergy Nuclear Palisades, LLC operating funds since Big Rock Point was acquired from Consumers Energy on April 11, 2007. Entergy Nuclear Palisades, LLC plans to continue paying for spent fuel management costs from said operating funds. Therefore, no funds are specifically accumulated for the cost of managing irradiated fuel at Big Rock Point as of 12/31/2015.

Attachment 3
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Entergy Nuclear Operations, Inc.
Status of Funding for Managing Irradiated Fuel – Vermont Yankee
For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

Plant Name: **Vermont Yankee**

1.	Funds accumulated to cover the cost of managing irradiated fuel as of 12/31/2015	$ 235.51 million [Note 1]
2.	Projected costs to manage fuel until DOE removal (2015$)	$ 360.86 million
3.	Plan as required	See Note 2

Note 1: This amount represents the excess funds available in the Vermont Yankee decommissioning trust fund less an amount necessary to decommission the Independent Spent Fuel Storage Installation (ISFSI). Per Vermont Yankee's updated decommissioning cost analysis (Reference 1), the present value of excess funds in the decommissioning trust at the end of decommissioning in 2075, after considering license termination expenses, is $240.56 million ($773.81 million/$(1.02)^{(2075-2016)}$). See Table 3-1 below. Table 3-1 has been constructed by removing spent fuel management expenses from Table 13-1, Decommissioning Funding Status Report per 10 CFR §50.75(f)(1) and 10 CFR 50.82(a)(8)(v) -- Entergy Nuclear Operations, Inc. filed March 2016, to yield the surplus at the end of decommissioning that would otherwise be available for spent fuel management and ISFSI decommissioning. This calculated surplus takes into account available funds in the decommissioning trust. The estimated cost for decommissioning Vermont Yankee's ISFSI is $5.05 million. Thus, the present value of Vermont Yankee trust funds available for spent fuel management is $240.56 million minus $5.05 million, or $235.51 million.

Note 2: Reference 3, Attachment 13 demonstrates that the Vermont Yankee decommissioning trust fund is sufficiently funded for all license termination activities and certain spent fuel management activities (i.e., operational costs shown in Column 2 less Column 3 of Table 13-1 of Reference 3). As discussed in the Irradiated Fuel Management Program Update (Reference 2) costs related to spent fuel management operations (e.g., operations and maintenance costs for the spent fuel and Independent Spent Fuel Storage Installation, totaling approximately $223 million) will be funded from the decommissioning trust fund. Entergy Nuclear Operations, Inc. obtained an exemption that allows the use of trust funds for spent fuel management activities (NRC Approval of Exemption Request for Spent Fuel Management, 80 Fed. Reg. 35992, Reference 4). The licensee acknowledges the need for an exemption pursuant to 10 CFR §50.12(a) to use radiological decommissioning trust funds for costs other than decommissioning activities as defined in 10 CFR 50.2. The remaining $138 million is associated with transfer of spent fuel to dry storage (e.g., procurement of dry storage systems, transfer of fuel from the spent fuel pool to the Independent Spent Fuel Storage Installation (ISFSI), and construction of the second ISFSI pad). To fund the "transfer to dry storage" portion of spent fuel management costs, Entergy Nuclear Vermont Yankee, LLC has established two separate revolving credit facilities from third party banks totaling $145 million.

Entergy Nuclear Operations, Inc.
Status of Funding for Managing Irradiated Fuel – Vermont Yankee
For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

Table 3-1

Vermont Yankee Nuclear Power Station - SAFSTOR Methodology

Annual Cash Flow Analysis - Total License Termination

(In Thousands in 2015 Dollars)

Year	Column 1 50.75 License Termination Cost ($000's)	Column 2 50.54 (bb) Spent Fuel Management Cost ($000's)	Column 3 Exclude Dry Fuel Spent Fuel Management Cost ($000's)	Column 4 License Termination Cost plus Spent Fuel Management Cost less Dry Fuel Cost ($000's)	Column 5 Beginning of Year Trust Fund Balance ($000's)	Column 6 Withdraw ($000's)	Column 7 Contribute ($000's)	Column 8 Trust Fund Earnings ($000's)	Column 9 Year Ending Trust Fund Balance ($000's)
2016	48,305	0	0	48,305	595,443	48,305	0	10,943	558,081
2017	11,007	0	0	11,007	558,081	11,007	0	10,941	558,015
2018	9,704	0	0	9,704	558,015	9,704	0	10,966	559,278
2019	8,299	0	0	8,299	559,278	8,299	0	11,020	561,998
2020	17,779	0	0	17,779	561,998	17,779	0	10,884	555,104
2021	5,303	0		5,303	555,104	5,303	0	10,996	560,798
2022	5,251	0		5,251	560,798	5,251	0	11,111	566,657
2023	5,251	0		5,251	566,657	5,251	0	11,228	572,634
2024	3,676	0		3,676	572,634	3,676	0	11,379	580,337
2025	3,616	0		3,616	580,337	3,616	0	11,534	588,255
2026	3,761	0		3,761	588,255	3,761	0	11,690	596,184
2027	3,812	0		3,812	596,184	3,812	0	11,847	604,219
2028	3,770	0		3,770	604,219	3,770	0	12,009	612,458
2029	3,761	0		3,761	612,458	3,761	0	12,174	620,871
2030	3,812	0		3,812	620,871	3,812	0	12,341	629,400
2031	3,761	0		3,761	629,400	3,761	0	12,513	638,152
2032	3,770	0		3,770	638,152	3,770	0	12,688	647,069
2033	3,812	0		3,812	647,069	3,812	0	12,865	656,122
2034	3,761	0		3,761	656,122	3,761	0	13,047	665,408
2035	3,761	0		3,761	665,408	3,761	0	13,233	674,880
2036	3,821	0		3,821	674,880	3,821	0	13,421	684,480
2037	3,761	0		3,761	684,480	3,761	0	13,614	694,334
2038	3,761	0		3,761	694,334	3,761	0	13,811	704,384
2039	3,812	0		3,812	704,384	3,812	0	14,011	714,583
2040	3,770	0		3,770	714,583	3,770	0	14,216	725,030
2041	3,761	0		3,761	725,030	3,761	0	14,425	735,694
2042	3,812	0		3,812	735,694	3,812	0	14,638	746,519
2043	3,761	0		3,761	746,519	3,761	0	14,855	757,613
2044	3,770	0		3,770	757,613	3,770	0	15,077	768,920

Entergy Nuclear Operations, Inc.
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For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

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2045	3,812	0		3,812	768,920	3,812	0	15,302	780,410
2046	3,761	0		3,761	780,410	3,761	0	15,533	792,182
2047	3,761	0		3,761	792,182	3,761	0	15,768	804,189
2048	3,821	0		3,821	804,189	3,821	0	16,007	816,375
2049	3,761	0		3,761	816,375	3,761	0	16,252	828,867
2050	3,761	0		3,761	828,867	3,761	0	16,502	841,608
2051	3,812	0		3,812	841,608	3,812	0	16,756	854,551
2052	3,770	0		3,770	854,551	3,770	0	17,016	867,797
2053	3,608	0		3,608	867,797	3,608	0	17,284	881,473
2054	3,659	0		3,659	881,473	3,659	0	17,556	895,370
2055	3,608	0		3,608	895,370	3,608	0	17,835	909,598
2056	3,617	0		3,617	909,598	3,617	0	18,120	924,101
2057	3,659	0		3,659	924,101	3,659	0	18,409	938,851
2058	3,608	0		3,608	938,851	3,608	0	18,705	953,948
2059	3,608	0		3,608	953,948	3,608	0	19,007	969,347
2060	3,668	0		3,668	969,347	3,668	0	19,314	984,993
2061	3,608	0		3,608	984,993	3,608	0	19,628	1,001,013
2062	3,608	0		3,608	1,001,013	3,608	0	19,948	1,017,353
2063	3,659	0		3,659	1,017,353	3,659	0	20,274	1,033,968
2064	3,617	0		3,617	1,033,968	3,617	0	20,607	1,050,958
2065	3,608	0		3,608	1,050,958	3,608	0	20,947	1,068,298
2066	3,659	0		3,659	1,068,298	3,659	0	21,293	1,085,932
2067	3,608	0		3,608	1,085,932	3,608	0	21,646	1,103,970
2068	43,690	0		43,690	1,103,970	43,690	0	21,206	1,081,486
2069	93,039	0		93,039	1,081,486	93,039	0	19,769	1,008,216
2070	105,681	0		105,681	1,008,216	105,681	0	18,051	920,586
2071	85,618	0		85,618	920,586	85,618	0	16,699	851,668
2072	86,055	0		86,055	851,668	86,055	0	15,312	780,925
2073	50,949	0		50,949	780,925	50,949	0	14,600	744,576
2074	523	0		523	744,576	523	0	14,881	758,934
2075	302	0		302	758,934	302	0	15,173	773,805

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For Year Ending December 31, 2015 - 10 CFR 50.82(a)(8)(vii)

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	740,517	0	0	740,517	595,443	740,517	0	918,879	773,805

REFERENCES:

1. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Post Shutdown Decommissioning Activities Report," BVY 14-078, dated December 19, 2014 (Accession No. ML14357A110)
2. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Update to Irradiated Fuel Management Program Pursuant to 10CFR 50.54(bb)," BVY14-085, dated December 19,2014 (Accession No. ML14358A251)
3. Letter, Entergy Nuclear Operations, Inc. to USNRC, "Decommissioning Funding Status Report per 10 CFR §50.75(f)(1) and 10 CFR 50.82(a)(8)(v), Filed March 2016
4. NRC Approval of Exemption Request for Spent Fuel Management, 80 Fed. Reg. 35992 (June 23, 2015)