

May 26, 2016  
L-16-169

10 CFR 50.75

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

**SUBJECT:**

Perry Nuclear Power Plant  
Docket No. 50-440, License No. NPF-58  
Submittal of the Decommissioning Funding Status Report for Perry Nuclear Power Plant

By letter dated June 30, 2015, FirstEnergy Nuclear Operating Company (FENOC) submitted, to the Nuclear Regulatory Commission (NRC), an application for order consenting to the transfer of the Ohio Edison Company leased interests in the Perry Nuclear Power Plant (PNPP) to the FirstEnergy Nuclear Generation, LLC (Accession No. ML15181A366)<sup>1</sup>. In accordance with 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning," paragraph (f)(1), FENOC is submitting the attached decommissioning funding status report for PNPP.

In accordance with 10 CFR 50.75(b) and 10 CFR 50.75(e), the estimated cost of decommissioning can be based on either the NRC formula cost amount calculated in accordance with 10 CFR 50.75(c) or a site-specific decommissioning cost estimate. The site-specific cost estimate is based on a period of safe storage. Site-specific cash flows are based on the site-specific decommissioning cost estimate that was contained in letter dated March 31, 2015 (Accession No. ML15090A447).

FENOC has not made a final determination on the decommissioning approach for PNPP. FENOC uses either the NRC formula cost amount or the site-specific decommissioning cost estimate to demonstrate adequacy of funding to meet NRC requirements. FENOC may select a different decommissioning option in the future for PNPP, recognizing that the chosen option must meet NRC requirements for decommissioning funding.


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<sup>1</sup> By letter dated April 15, 2016, the NRC approved the Order with an implementation date for the transfer being May 31, 2016 (Accession No. ML16083A513).

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There are no regulatory commitments contained in this letter. If there are any questions, or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 315-6810.

Sincerely,



Gregory H. Halnon  
Vice President, Regulatory Affairs and Laboratory Services

Attachment:  
Decommissioning Funding Status Report – Perry Nuclear Power Plant

cc: NRC Region III Administrator  
NRC Resident Inspector (Perry)  
NRC Project Manager (Perry)  
Utility Radiological Safety Board

Attachment  
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Decommissioning Funding Status Report – Perry Nuclear Power Plant  
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This report reflects FirstEnergy Corp.'s consolidated share of ownership interest in Perry Nuclear Power Plant as of December 31, 2015.

1. The minimum decommissioning fund estimate, pursuant to 10 CFR 50.75(c) (see Schedule 1):

Ohio Edison Company	\$ 84,915,000
FirstEnergy Nuclear Generation, LLC	<u>590,085,000</u>
FirstEnergy Consolidated	<u>\$675,000,000</u>

2. The amount accumulated in external trust funds as of December 31, 2015:

	After-Tax
Ohio Edison Company	\$ 77,607,873
FirstEnergy Nuclear Generation, LLC	<u>395,835,852</u>
FirstEnergy Consolidated	<u>\$473,443,725</u>

3. There are no longer any funds to be collected from the ratepayers.
4. The assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections:

Consolidated Ownership Interest in Unit	100%
"Real" Rate of Return through Dismantlement	2.00%
Year of License Termination	2026

5. There are no contracts upon which the owners/licensees are relying pursuant to 10 CFR 50.75(e)(1)(v).
6. There has been no modification to the current method of providing decommissioning funding assurance since the last submitted report.
7. There have been no material changes to the applicable trust agreement(s) since the last submitted report.
8. Mathematical rounding was performed during the development of the supporting calculations.

## 9. Site-Specific Cost Analysis

10 CFR 50.75(e)(1)(i), states, in part, that:

A licensee that has prepaid funds based on a site-specific estimate under § 50.75(b)(1) of this section may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate.

In accordance with Regulatory Guide 1.159, Revision 2, a facility specific analysis may be used to demonstrate the adequacy of decommissioning funds, provided that:

NRC-required cost estimate for decommissioning costs, as defined in 10 CFR 50.2, is equal to or greater than the amount stated in the formulas in 10 CFR 50.75(c)(1) and (2).

Schedule 2 provides a FENOC analysis that provides cash flows based on the site-specific decommissioning cost estimate that includes the use of a safe storage period. The analysis is associated with the costs for the radiological decommissioning of the facility. The cash flow analysis assumes the yearly expenses are incurred at the beginning of year. A two percent yearly rate of return was assumed.

As a result of this analysis, FENOC has determined that there is reasonable assurance that adequate decommissioning funds will be available for the decommissioning process in compliance with NRC decommissioning funding assurance regulations.

## 10. References:

- A. *Decommissioning Cost Analysis for the Perry Nuclear Power Plant*, February 2015 (Accession No. ML15090A447)

**Schedule 1**  
**FIRSTENERGY CORP.**  
Calculation of Minimum Financial Assurance Amount  
December 31, 2015  
**PERRY NUCLEAR POWER PLANT**

**Ohio Regions**

Labor (L) = Midwest  
Energy (E) = National  
Waste Burial (B) = Generic

**For BWR Unit**

	Adjustment Factor	Ratio	Escalation Factor <sup>1</sup>
L =	2.55	0.65	1.658
E =	1.748	0.13	0.227
B =	14.160	0.22	3.115
BWR Escalation Factor =			5.000
Base Amount for BWR greater than 3400 MWt =			\$135,000,000
Escalated Amount for unit <sup>1</sup> =			
135,000,000	x	5.000	=
			<u><u>\$675,000,000</u></u>

<u>Owner/Licensee</u>	<u>Ownership</u>	
Ohio Edison Company	12.58%	\$ 84,915,000
FirstEnergy Nuclear Generation, LLC	87.42%	\$590,085,000
Total FirstEnergy Consolidated		<b>\$675,000,000</b>

Note 1: Mathematical rounding was performed during the development of the supporting calculations.

Schedule 2  
Calculation of a Site-Specific Cash Flow Analysis  
December 31, 2015  
Perry Nuclear Power Plant

The site-specific cost estimate for the radiological decommissioning of the Perry Nuclear Power Plant is \$1,083,329,401. The minimum decommissioning fund estimate, pursuant to 10 CFR 50.75(c) is \$675,000,000. Since RG 1.159 states that the site-specific cost should be equal to or greater than the cost calculated by 10 CFR 50.75(c), the RG is satisfied.

A two percent rate of return was used in the analysis. The analysis assumes a period of safe storage. These inputs to the analysis are consistent with 10 CFR 50.75(e)(1). The analysis is based on 2015 dollars.

The analysis contains expenses based on the site-specific decommissioning cost estimate. The analysis conservatively assumes that expenses during a year are incurred at the beginning of year. Mathematical rounding was performed during the development of the supporting calculations.

<b>Year</b>	<b>Beginning Balance</b>	<b>Deposits</b>	<b>Earnings</b>	<b>Withdrawal</b>	<b>Ending Balance</b>
2016	473,443,725	-	9,468,875	-	482,912,600
2017	482,912,600	-	9,658,252	-	492,570,851
2018	492,570,851	-	9,851,417	-	502,422,269
2019	502,422,269	-	10,048,445	-	512,470,714
2020	512,470,714	-	10,249,414	-	522,720,128
2021	522,720,128	-	10,454,403	-	533,174,531
2022	533,174,531	-	10,663,491	-	543,838,021
2023	543,838,021	-	10,876,760	-	554,714,782
2024	554,714,782	-	11,094,296	-	565,809,077
2025	565,809,077	-	11,316,182	-	577,125,259
2026	577,125,259	-	10,359,828	(59,133,858)	528,351,229
2027	528,351,229	-	8,990,841	(78,809,175)	458,532,896
2028	458,532,896	-	9,015,948	(7,735,498)	459,813,346
2029	459,813,346	-	9,041,989	(7,713,916)	461,141,418

<b>Year</b>	<b>Beginning Balance</b>	<b>Deposits</b>	<b>Earnings</b>	<b>Withdrawal</b>	<b>Ending Balance</b>
2030	461,141,418	-	9,068,550	(7,713,916)	462,496,052
2031	462,496,052	-	9,095,643	(7,713,916)	463,877,778
2032	463,877,778	-	9,122,846	(7,735,498)	465,265,126
2033	465,265,126	-	9,193,386	(5,595,827)	468,862,686
2034	468,862,686	-	9,276,292	(5,048,062)	473,090,916
2035	473,090,916	-	9,360,857	(5,048,062)	477,403,710
2036	477,403,710	-	9,446,846	(5,061,423)	481,789,134
2037	481,789,134	-	9,534,821	(5,048,062)	486,275,893
2038	486,275,893	-	9,624,557	(5,048,062)	490,852,387
2039	490,852,387	-	9,716,086	(5,048,062)	495,520,411
2040	495,520,411	-	9,809,180	(5,061,423)	500,268,168
2041	500,268,168	-	9,904,402	(5,048,062)	505,124,508
2042	505,124,508	-	10,001,529	(5,048,062)	510,077,974
2043	510,077,974	-	10,100,598	(5,048,062)	515,130,510
2044	515,130,510	-	10,201,382	(5,061,423)	520,270,469
2045	520,270,469	-	10,304,448	(5,048,062)	525,526,855
2046	525,526,855	-	10,409,576	(5,048,062)	530,888,369
2047	530,888,369	-	10,516,806	(5,048,062)	536,357,112
2048	536,357,112	-	10,625,914	(5,061,423)	541,921,604
2049	541,921,604	-	10,737,471	(5,048,062)	547,611,012
2050	547,611,012	-	10,851,259	(5,048,062)	553,414,209
2051	553,414,209	-	10,967,323	(5,048,062)	559,333,469
2052	559,333,469	-	11,085,441	(5,061,423)	565,357,488
2053	565,357,488	-	11,206,189	(5,048,062)	571,515,614
2054	571,515,614	-	11,329,351	(5,048,062)	577,796,902
2055	577,796,902	-	11,454,977	(5,048,062)	584,203,817
2056	584,203,817	-	11,582,848	(5,061,423)	590,725,242
2057	590,725,242	-	11,713,544	(5,048,062)	597,390,723
2058	597,390,723	-	11,846,853	(5,048,062)	604,189,514
2059	604,189,514	-	11,982,829	(5,048,062)	611,124,281
2060	611,124,281	-	12,121,257	(5,061,423)	618,184,115
2061	618,184,115	-	12,262,721	(5,048,062)	625,398,774
2062	625,398,774	-	12,407,014	(5,048,062)	632,757,726
2063	632,757,726	-	12,554,193	(5,048,062)	640,263,857
2064	640,263,857	-	12,704,049	(5,061,423)	647,906,483
2065	647,906,483	-	12,807,592	(7,526,875)	653,187,200

<b>Year</b>	<b>Beginning Balance</b>	<b>Deposits</b>	<b>Earnings</b>	<b>Withdrawal</b>	<b>Ending Balance</b>
2066	653,187,200	-	12,913,207	(7,526,875)	658,573,532
2067	658,573,532	-	13,020,933	(7,526,875)	664,067,590
2068	664,067,590	-	13,130,383	(7,548,457)	669,649,517
2069	669,649,517	-	13,242,453	(7,526,875)	675,365,095
2070	675,365,095	-	13,356,764	(7,526,875)	681,194,984
2071	681,194,984	-	13,473,362	(7,526,875)	687,141,472
2072	687,141,472	-	13,591,860	(7,548,457)	693,184,875
2073	693,184,875	-	13,713,160	(7,526,875)	699,371,161
2074	699,371,161	-	13,836,886	(7,526,875)	705,681,172
2075	705,681,172	-	13,963,086	(7,526,875)	712,117,383
2076	712,117,383	-	14,091,379	(7,548,457)	718,660,305
2077	718,660,305	-	14,222,669	(7,526,875)	725,356,099
2078	725,356,099	-	14,356,584	(7,526,875)	732,185,808
2079	732,185,808	-	14,493,179	(7,526,875)	739,152,112
2080	739,152,112	-	14,089,632	(34,670,487)	718,571,257
2081	718,571,257	-	12,763,465	(80,397,999)	650,936,724
2082	650,936,724	-	9,367,172	(182,578,099)	477,725,797
2083	477,725,797	-	7,000,147	(127,718,445)	357,007,499
2084	357,007,499	-	4,773,974	(118,308,824)	243,472,649
2085	243,472,649	-	3,303,588	(78,293,269)	168,482,967
2086	168,482,967	-	3,179,432	(9,511,364)	162,151,036
2087	162,151,036	-	3,241,048	(98,659)	165,293,424
2088	165,293,424	-	3,305,149	(35,970)	168,562,604
			<b>Total</b>	<b>(1,083,329,401)</b>	