



Energy Harbor Nuclear Corp.  
341 White Pond Drive  
Akron, Ohio 44320

**Darin M. Benyak**  
Vice President, Nuclear Support & Regulatory Affairs

330-436-1380

April 27, 2020  
L-20-136

10 CFR 50.75

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

**SUBJECT:**

Beaver Valley Power Station, Unit No. 1  
Docket No. 50-334, License No. DPR-66

Notice of Planned Disbursement of Funds from the Provisional Decommissioning Trust  
Fund for Beaver Valley Power Station, Unit No. 1

In accordance with Section 4.05(d) of the Provisional Decommissioning Trust Agreement (Accession No. ML19268A053) for Beaver Valley Power Station, Unit No. 1 (BVPS-1), "Notice to the NRC," this letter serves as a 30 working-day notice to the U.S. Nuclear Regulatory Commission (NRC) of the intention of Energy Harbor Nuclear Corp. [reorganized FirstEnergy Nuclear Operating Company (FENOC)] to make a disbursement from the trust. The disbursement would include a full withdrawal of the funds within the provisional trust fund. The planned disbursement of funds is based upon the completion of an "Alternate Funding Determination" by Energy Harbor Nuclear Corp. in accordance with Section 4.05(a), "Distribution in the Event of an Alternate Funding Determination." As explained further below, the Provisional Trust can be terminated if the fund balances in the Master Trust are adequate to provide financial assurance in compliance with NRC's regulations.

On March 15, 2019 (Accession No. ML19074A242), FENOC submitted the 10 CFR 50.75 Decommissioning Funding Status Reports for Beaver Valley Power Station, Unit Nos. 1 and 2, Davis-Besse Nuclear Power Station, and Perry Nuclear Power Plant. This submittal was referenced within the April 26, 2019 (Accession No. ML19116A087) application supporting a proposed license transfer for FENOC and FirstEnergy Nuclear Generation, LLC. As noted within the 10 CFR 50.75 report, the financial analyses were based upon the planned early cessation of power operation of each of the aforementioned nuclear units in 2020 and 2021, and specifically for the BVPS-1 by May 31, 2021.

Based upon the then expected cessation of operation of the BVPS-1, a shortfall in funding was noted. A commitment was made to reconcile the shortfall in accordance with methods described in 10 CFR 50.75(e) by March 31, 2020.

On May 31, 2019 (Accession No. ML19151A531), FENOC supplemented the license transfer application, proposing a condition to the NRC Order which would approve the license transfer that “(o)n or by the closing date of the license transfer transaction, the Applicants would take all necessary steps to ensure that the decommissioning funding assurance mechanism to address any shortfall identified for BVPS-1 is implemented and maintained consistent with the Safety Evaluation supporting this Order.” By letter dated September 25, 2019 (Accession No. ML19268A053), FENOC notified the NRC that a provisional trust was being established to fund the shortfall. Subsequently on December 2, 2019 (Accession No. ML19193A002), the NRC issued an Order consenting to the proposed license transfer. Within the Order the NRC imposed the condition proposed in the May 31, 2019 license transfer application supplement.

On February 20, 2020 (Accession No. ML20054B733), FENOC notified the NRC that \$55 million had been deposited into the provisional trust consistent with the Safety Evaluation supporting the Order. On February 27, 2020 (Accession No. ML20058D315), the license transfer was consummated, and Energy Harbor Nuclear Corp. emerged as the reorganized FENOC.

On March 13, 2020 (Accession No. ML20073N415), Energy Harbor Nuclear Corp. notified the NRC that the decision to permanently cease operations at Beaver Valley Power Station, Unit Nos. 1 and 2 had been reversed by the new board of Directors of Energy Harbor Corp. and withdrew the “Certification of Permanent Cessation of Operations” letter.

The withdrawal of the “Certification of Permanent Cessation of Operations” letter changed the financial conditions associated with the BVPS-1 nuclear decommissioning trust. The decommissioning funding report for the BVPS-1 nuclear decommissioning trust has been revised to reflect the operation of the nuclear unit to the end of its operating license in 2036. The results of the analysis confirmed that the existing funds of the Master Trust are sufficient to provide decommissioning funding assurance and the provisional trust established to support the planned early decommissioning of BVPS-1 was no longer required.

Section 4.05(a) of the Provisional Decommissioning Trust Agreement for BVPS-1 permits distributions from the trust in the event of an “Alternate Funding Determination.” An “Alternate Funding Determination” is defined in Section 1.01(c) as:

- (i) a determination by the Company that the fund balances of the Master Trust fully satisfy the NRC's requirements for financial assurance for Decommissioning of the Unit, or

(ii) a determination that the conditions of the Funding Regulation have been satisfied using an alternative method of financial assurance for Decommissioning of the Unit in accordance with NRC requirements.

Energy Harbor Nuclear Corp. has determined that the fund balances of the Master Trust fully satisfy the NRC's requirements for financial assurance for decommissioning of the unit. The details of the analysis supporting this determination are provided in the decommissioning funding status report attached to this letter. The decommissioning trust balances used within the attached decommissioning funding status report are as of April 10, 2020 reflecting the current status of the BVPS-1 nuclear decommissioning trust.

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 – Nuclear Licensing and Regulatory Affairs, at (330) 315-6810.

Sincerely,



Benyak, Darin C6416  
Apr 27 2020 1:56 PM

DocuSign

Darin M. Benyak

Attachment:

Beaver Valley Power Station, Unit No. 1 Decommissioning Funding Status Report –  
April 10, 2020

cc: NRC Region I Administrator  
NRC Project Manager  
NRC Resident Inspector  
Director BRP/DEP  
Site BRP/DEP Representative  
Director, Office of Nuclear Reactor Regulation (NRR)  
Director, Office of Nuclear Material Safety and Safeguards (NMSS)

Attachment  
L-20-136

BEAVER VALLEY POWER STATION UNIT NO. 1  
Decommissioning Funding Status Report  
April 10, 2020

Page 1 of 4

The following notes and assumptions were used in developing the Decommissioning Funding Status Report:

1. Energy Harbor Nuclear Generation LLC has a 100% ownership interest in BVPS-1.
2. Formal decommissioning has not started at BVPS-1. No disbursement of decommissioning trust funds has occurred through April 10, 2020 except for ordinary administrative costs.
3. Schedule 1 provides the minimum decommissioning fund estimate, pursuant to 10 CFR 50.75(c).
4. The after-tax amount accumulated in the BVPS-1 external trust funds for radiological decommissioning as of April 10, 2020 is provided in Schedule 1.
5. There are no funds to be collected from the ratepayers.
6. There are no contracts upon which Energy Harbor Nuclear Generation LLC are relying pursuant to 10 CFR 50.75(e)(1)(v).
7. There has been no modification to the current method of providing decommissioning funding assurance since the last submitted report, except for the planned termination of the Provisional Trust.
8. There have been no material changes to the applicable trust agreement(s) since the last submitted report.
9. Mathematical rounding was performed during the development of the supporting calculations.
10. The site-specific cost estimate is based on: *Decommissioning Cost Analysis for the Beaver Valley Power Station*, December 2014 (Accession No. ML15090A447), performed in 2014 dollars and escalated to 2020 dollars. This DCE is the same DCE used for the License Transfer Application except for the year of shutdown and spent fuel scenario. The December 2014 DCE represents current license conditions with a license expiration date of January 29, 2036.
11. The site-specific cost estimate for the radiological decommissioning of BVPS-1 utilizing SAFSTOR exceeds the minimum decommissioning fund estimate, pursuant to 10 CFR 50.75(c) (Schedule 1). As the site-specific cost estimate is greater than the formula cost calculated per 10 CFR 50.75(c), the Regulatory Guide (RG) 1.159, Revision 2, guidance to utilize a facility specific analysis to demonstrate the adequacy of decommissioning funding assurance is followed.
12. A 2% annual real rate of return is used through dismantlement.
13. BVPS-1 is assumed to shut down in 2036, with license termination by 2096.
14. Schedule 2 provides a BVPS-1 analysis that provides cash flows based on the site-specific decommissioning cost estimate that includes the use of SAFSTOR. 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.

Schedule 1  
BEAVER VALLEY POWER STATION UNIT NO. 1

Calculation of Minimum Financial Assurance Amount<sup>1</sup>  
April 10, 2020

For BVPS-1 (PWR) Unit:

BVPS-1 Nuclear Decommissioning Trust Balance (After Tax) as of April 10, 2020 =  
**\$292,102,106**

<u>Pennsylvania Region</u>	<u>Adjustment Factor</u>	<u>Ratio</u>	<u>Escalation<sup>4</sup> Factor</u>
Labor (L); Northeast <sup>2</sup>	3.04	0.65	1.976
Energy (E): National <sup>2</sup>	2.030	0.13	0.264
Waste Burial (B): Generic <sup>3</sup>	12.853	0.22	<u>2.828</u>
PWR Escalation Factor			5.068

Base Amount for a PWR between 1200 MWt and 3400 MWt =  $\$75 + 0.0088P$  (millions)  
Where, P = power in megawatts thermal (MWt) = 2900 MWt  
Base Amount =  $\$75 + 0.0088(2900)$  millions = \$100,520,000

Escalated Amount for Unit = Base Amount x Escalation Factor  
=  $\$100,520,000 \times 5.068 =$  **\$509,435,360**

<sup>1</sup>Minimum financial assurance formula is based on 10 CFR 50.75(c).

<sup>2</sup>Labor and Energy factors were obtained from U.S. Department of Labor, Bureau of Labor Statistics (4Q '19 for Labor and March 2020 for Energy).

<sup>3</sup>Waste burial factors were obtained from NRC report NUREG-1307, Rev. 17, "Report on Waste Burial Charges."

<sup>4</sup>Mathematical rounding was used in this calculation.

Schedule 2  
BEAVER VALLEY POWER STATION UNIT NO. 1

Calculation of a Site-Specific Cash Flow Analysis in 2020 Dollars  
April 10, 2020

<b>Year</b>	<b>Beginning Balance</b>	<b>Deposits</b>	<b>Earnings</b>	<b>Withdrawal</b>	<b>Ending Balance</b>
2020	292,102,106	-	4,381,532	-	296,483,637
2021	296,483,637	-	5,929,673	-	302,413,310
2022	302,413,310	-	6,048,266	-	308,461,576
2023	308,461,576	-	6,169,232	-	314,630,808
2024	314,630,808	-	6,292,616	-	320,923,424
2025	320,923,424	-	6,418,468	-	327,341,893
2026	327,341,893	-	6,546,838	-	333,888,730
2027	333,888,730	-	6,677,775	-	340,566,505
2028	340,566,505	-	6,811,330	-	347,377,835
2029	347,377,835	-	6,947,557	-	354,325,392
2030	354,325,392	-	7,086,508	-	361,411,900
2031	361,411,900	-	7,228,238	-	368,640,138
2032	368,640,138	-	7,372,803	-	376,012,940
2033	376,012,940	-	7,520,259	-	383,533,199
2034	383,533,199	-	7,670,664	-	391,203,863
2035	391,203,863	-	7,824,077	-	399,027,940
2036	399,027,940	-	6,839,545	(57,050,676)	348,816,810
2037	348,816,810	-	5,807,456	(58,443,997)	296,180,270
2038	296,180,270	-	5,840,364	(4,162,072)	297,858,562
2039	297,858,562	-	5,873,930	(4,162,072)	299,570,420
2040	299,570,420	-	5,907,939	(4,173,475)	301,304,884
2041	301,304,884	-	5,942,856	(4,162,072)	303,085,668
2042	303,085,668	-	5,978,472	(4,162,072)	304,902,069
2043	304,902,069	-	6,021,446	(3,829,789)	307,093,725
2044	307,093,725	-	6,065,623	(3,812,598)	309,346,750
2045	309,346,750	-	6,110,891	(3,802,181)	311,655,460
2046	311,655,460	-	6,157,066	(3,802,181)	314,010,344
2047	314,010,344	-	6,204,163	(3,802,181)	316,412,327
2048	316,412,327	-	6,251,995	(3,812,598)	318,851,723
2049	318,851,723	-	6,300,991	(3,802,181)	321,350,533
2050	321,350,533	-	6,350,967	(3,802,181)	323,899,319
2051	323,899,319	-	6,401,943	(3,802,181)	326,499,081
2052	326,499,081	-	6,453,730	(3,812,598)	329,140,212
2053	329,140,212	-	6,506,761	(3,802,181)	331,844,792
2054	331,844,792	-	6,560,852	(3,802,181)	334,603,463
2055	334,603,463	-	6,616,026	(3,802,181)	337,417,307
2056	337,417,307	-	6,672,094	(3,812,598)	340,276,804
2057	340,276,804	-	6,729,492	(3,802,181)	343,204,115

<b>Year</b>	<b>Beginning Balance</b>	<b>Deposits</b>	<b>Earnings</b>	<b>Withdrawal</b>	<b>Ending Balance</b>
2058	343,204,115	-	6,788,039	(3,802,181)	346,189,973
2059	346,189,973	-	6,847,756	(3,802,181)	349,235,547
2060	349,235,547	-	6,908,459	(3,812,598)	352,331,408
2061	352,331,408	-	6,970,585	(3,802,181)	355,499,812
2062	355,499,812	-	7,033,953	(3,802,181)	358,731,583
2063	358,731,583	-	7,098,588	(3,802,181)	362,027,990
2064	362,027,990	-	7,164,308	(3,812,598)	365,379,700
2065	365,379,700	-	7,231,550	(3,802,181)	368,809,069
2066	368,809,069	-	7,300,138	(3,802,181)	372,307,026
2067	372,307,026	-	7,370,097	(3,802,181)	375,874,942
2068	375,874,942	-	7,441,247	(3,812,598)	379,503,591
2069	379,503,591	-	7,514,028	(3,802,181)	383,215,438
2070	383,215,438	-	7,588,265	(3,802,181)	387,001,522
2071	387,001,522	-	7,663,987	(3,802,181)	390,863,328
2072	390,863,328	-	7,741,015	(3,812,598)	394,791,744
2073	394,791,744	-	7,819,791	(3,802,181)	398,809,355
2074	398,809,355	-	7,900,143	(3,802,181)	402,907,317
2075	402,907,317	-	7,982,103	(3,802,181)	407,087,239
2076	407,087,239	-	8,062,566	(3,958,951)	411,190,854
2077	411,190,854	-	8,144,854	(3,948,134)	415,387,574
2078	415,387,574	-	8,228,789	(3,948,134)	419,668,229
2079	419,668,229	-	8,314,402	(3,948,134)	424,034,497
2080	424,034,497	-	8,401,511	(3,958,951)	428,477,058
2081	428,477,058	-	8,490,578	(3,948,134)	433,019,502
2082	433,019,502	-	8,581,427	(3,948,134)	437,652,796
2083	437,652,796	-	8,674,093	(3,948,134)	442,378,755
2084	442,378,755	-	8,768,396	(3,958,951)	447,188,201
2085	447,188,201	-	8,864,801	(3,948,134)	452,104,868
2086	452,104,868	-	8,963,135	(3,948,134)	457,119,869
2087	457,119,869	-	9,063,435	(3,948,134)	462,235,170
2088	462,235,170	-	9,079,156	(8,277,379)	463,036,947
2089	463,036,947	-	8,241,857	(50,944,082)	420,334,722
2090	420,334,722	-	6,016,934	(119,488,008)	306,863,648
2091	306,863,648	-	3,675,525	(123,087,415)	187,451,758
2092	187,451,758	-	2,363,442	(69,279,666)	120,535,534
2093	120,535,534	-	1,377,768	(51,647,153)	70,266,149
2094	70,266,149	-	1,336,253	(3,453,502)	68,148,900
2095	68,148,900	-	859,286	(25,184,619)	43,823,567
2096	43,823,567	-	830,047	(2,321,226)	42,332,388
2097	42,332,388	-	843,922	(136,265)	43,040,045
				(763,128,724)	