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Indiana Michigan Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
AEP.com

March 30, 2007

AEP:NRC:7075
10 CFR 50.75(f)(1)

Docket Nos.: 50-315
50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2
DECOMMISSIONING FUNDING STATUS REPORT

In accordance with the requirements of 10 CFR 50.75(f)(1), Indiana Michigan Power Company, the licensee for Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, hereby submits the attached report on the status of decommissioning funding. The recovery of decommissioning funds for the eventual decommissioning of CNP Units 1 and 2 is fully assured through cost of service regulation and the resulting contribution of funds into an external trust.

When projected to the current license expiration date for each unit, the Nuclear Decommissioning Trust balance is greater than the escalated Nuclear Regulatory Commission minimum cost of decommissioning, confirming compliance with the financial assurance requirements of 10 CFR 50.75.

This letter contains no new commitments. If you have any questions on the report or decommissioning funding, please contact Ms. Susan D. Simpson, Regulatory Affairs Manager, at (269) 466-2428.

Sincerely,

Joseph N. Jensen
Site Vice President

JEN/rdw

Attachment

A001

c: J. L. Caldwell – NRC Region III
K. D. Curry – AEP Ft. Wayne, w/o attachment
J. T. King, MPSC, w/o attachment
MDEQ – WHMD/RMPWS, w/o attachment
NRC Resident Inspector
P. S. Tam – NRC Washington DC

ATTACHMENT TO AEP:NRC:7075

Indiana Michigan Power Company Donald C. Cook Nuclear Plant Units 1 and 2 2007 Nuclear Regulatory Commission Financial Assurance Requirements Report for Decommissioning Nuclear Power Reactors

This report is being submitted in accordance with 10 CFR 50.75(f)(1). The report is comprised of the following schedules and the general comments set forth herein:

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General Comments

While the Minimum Value Decommissioning Cost Estimate under 10 CFR 50.75(c) reported on Schedule A is the information the Nuclear Regulatory Commission (NRC) has specified as appropriate for its purposes, Indiana Michigan Power Company (I&M) believes a broader and more comprehensive definition of, and provision for, nuclear decommissioning expenses is needed for its purposes.

For the past several years, I&M has periodically provided the Indiana and Michigan utility regulatory commissions site-specific studies containing a broader definition of nuclear decommissioning requirements. These studies include the 10 CFR 50.75(b) and (c) costs, 10 CFR 50.54(bb) costs, and "greenfield" costs, versus only the required 10 CFR 50.75 costs. These costs have been commingled in the decommissioning trust funds. The site decommissioning studies have been presented in reports to the utility regulatory commissions. The commissions have accepted these studies and have authorized recoveries for nuclear decommissioning based on their determinations, considering the reports presented, of appropriate recoveries for nuclear decommissioning using the more comprehensive definition. The currently estimated annual fund collections authorized for decommissioning are reported on Schedule C.

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund
Donald C. Cook Nuclear Plant**

Decommissioning Cost Estimates
Minimum Value Per 10 CFR 50.75(c)

10 CFR 50.75(a) requires that each utility assure that there will be adequate funding for the decommissioning of the plant. 10 CFR 50.75(c) established a table of minimum values for the decommissioning funds, in January 1986 dollars, and it also set forth a method to adjust those values. Periodically, the NRC publishes NUREG-1307, "Report on Waste Burial Charges," and in that document, the data and more specific guidance is given regarding the method to be used to adjust the minimum amount to equivalent current amounts. The calculation in this report uses the burial cost escalation values and the method outlined in NRC NUREG-1307, Revision 12, to determine the minimum values.

<u>Estimated Decommissioning Cost – 10 CFR 50.75(c)</u>		
<u>Unit 1</u>	<u>Unit 2</u>	<u>Total</u>
\$367,778,975	\$370,958,620	\$738,737,595

Decommissioning Cost Estimate Calculation

The first step of the decommissioning cost estimate calculation is to determine the 1986 base cost. Donald C. Cook Nuclear Plant (CNP) Units 1 and 2 are rated at 3304 megawatt-thermal (MW_t) and 3468 MW_t , respectively. From 10 CFR 50(c)(1)(i), the cost is then based on the MW_t output of each unit. For reactor power greater than 3400 MW_t , the cost is \$105 million. For reactor power from 1200 to 3400 MW_t , the cost is calculated using this formula:

$$\text{Cost} = \$(75 + 0.0088P) \text{ million.}$$

Given P is the power level. So, for Unit 1 at 3304 MW_t the cost is:

$$\begin{aligned} \text{Cost} &= \$(75 + 0.0088 \times 3304) \text{ million} \\ &= \$104.1 \text{ million.} \end{aligned}$$

For Unit 2, since the power level is greater than 3400 MW_t , the cost is \$105 million which is taken directly from the NRC's model.

So, the total 1986 base decommissioning cost for CNP is \$104.1 + \$105 million or \$209.1 million.

The next portion of the analysis is to adjust the 1986 cost to the current year cost.

Using the formula:

$$\text{Estimated Cost (Year X)} = [1986 \$ \text{ Cost}][A L_x + B E_x + C B_x]$$

Where A, B, and C are the fractions of the total 1986 \$ costs that are attributable to labor (0.65), energy (0.13), and burial (0.22), respectively, and sum to 1.0. The factors L_x , E_x , and B_x are defined by:

L_x = labor cost escalation, January of 1986 to January of Year X

E_x = energy cost escalation, January of 1986 to January of Year X

B_x = burial cost escalation, January of 1986 to January of Year X, i.e., burial cost in January of Year X / burial cost in January of 1986.

The labor escalation factor is determined by U. S. Bureau of Labor Statistics (BLS) data using the "Employment Cost Index" and the NUREG-1307, Table 3.2, data for the Midwest region. No 2007 data has been published, so fourth quarter 2006 data is used for 2007.

The energy cost escalation is determined by BLS data by using "Producer Price Indexes." The energy term in the adjustment equation is made up of two components; industrial electric power (P), and light fuel oil (F). E_x is determined from the following equation for Pressurized Water Reactors:

$$E = 0.58P + 0.42F.$$

The values of P and F are taken from the BLS as described in NUREG-1307. The data from January were used, and is shown in Table 1. Also shown are the results of the calculations to determine E. The energy data for 2007 is BLS preliminary data.

Year	Labor Data (L)	Electric Power (P)	Light Fuel Oil (F)	Energy Data (E)
2007	102.8	170.8	180.3	174.79
2006	102.8	167.0	191.8	177.42
2005	100.0	148.9	138.5	144.53
2004		143.1	106.8	127.85
1986		114.2	82.0	100.68

The next step is to convert the cost index values into the adjustment factors, L_x and E_x .

The Labor adjustment factor is determined by multiplying the current year's cost index value by the applicable base labor adjustment factor, then dividing by the 2005 reference cost. Per NUREG-1307, Revision 12, Table 3.2, the Midwest Labor Adjustment Factor is 2.13824.

$$(L_{2006} = 102.8 * 2.08 / 100.0)$$

The energy adjustment factor is determined by dividing each year's electric power (P) and light fuel oil (F) cost by the respective 1986 reference cost, then applying the allocation of $.58P_x + .42F_x$ (2007 $P_x = 170.8/114.2$), (2007 $F_x = 180.3/82$), (2007 $E_x = .58 (170.8/114.2) + .42 (180.3/82 = 1.790948)$)

The values for B_x are taken directly from NUREG-1307, Revision 12, Table 2.1, using the data for South Carolina using waste vendors for disposition as a non-Atlantic Compact State. For years where no data is provided, the value of the most recent year is used with no escalation. The results are shown in Table 2.

The final step is to calculate the Estimated Cost for Year X using the equation given above and the L_x , E_x , and B_x values. The estimated cost is given in Table 2.

Year	Escalation Factors			Estimated Decommissioning Cost		
	L _x	E _x	B _x	Unit 1	Unit 2	Total
2007	2.13824	1.790948	8.683	\$367,778,975	\$370,958,620	\$738,737,595
2006	2.13824	1.83055	8.683	\$368,314,909	\$371,499,188	\$739,814,096

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund
Donald C. Cook Nuclear Plant**

Summary of Decommissioning Trust Fund Balances
December 31, 2006

	<u>Total</u>	<u>Unit 1</u>	<u>Unit 2</u>
Book Value	776,669,183	396,453,566	380,215,617
Unrealized Appreciation	195,205,400	104,215,324	90,990,076
Market Value	971,874,583	500,668,890	471,205,693
Accrued Interest	0	0	0
Accrued Contributions	2,872,007	1,501,642	1,370,365
Subtotal	974,746,590	502,170,532	472,576,058
Less: Taxes on Unrealized Appreciation	39,077,642	20,862,258	18,215,384
Total	935,668,948	481,308,274	454,360,674

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund**

Projected Future Funds to Be Collected For Decommissioning (a)

	Unit 1			Unit 1 Total	Unit 2			Unit 2 Total	Decommissioning Total
	Indiana Jurisdiction	Michigan Jurisdiction (b)	FERC Jurisdiction		Indiana Jurisdiction	Michigan Jurisdiction (b)	FERC Jurisdiction		
2005	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2006	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2007	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2008	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2009	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2010	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2011	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2012	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2013	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2014	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2015	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2016	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2017	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2018	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2019	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2020	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2021	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2022	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2023	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2024	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2025	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2026	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718

	Unit 1				Unit 2				Decommissioning Total
	Indiana Jurisdiction	Michigan Jurisdiction (b)	FERC Jurisdiction	Unit 1 Total	Indiana Jurisdiction	Michigan Jurisdiction (b)	FERC Jurisdiction	Unit 2 Total	
2027	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2028	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2029	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2030	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2031	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2032	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
2033	9,732,400	3,787,396	3,598,199	17,117,995	8,999,900	3,614,198	3,336,625	15,950,723	33,068,718
*2034	8,110,333	3,156,163	2,998,499	14,264,996	8,999,900	3,614,198	3,336,625	15,950,723	30,215,719
2035					8,999,900	3,614,198	3,336,625	15,950,723	15,950,723
2036					8,999,900	3,614,198	3,336,625	15,950,723	15,950,723
2037					8,999,900	3,614,198	3,336,625	15,950,723	15,950,723
Total	290,349,933	112,990,647	107,346,270	510,686,851	296,996,700	119,268,534	110,108,625	526,373,859	1,037,060,710

Notes:

- (a) Based on regulatory commission orders in effect on December 31, 2006. Assumes each unit operates over its current licensed life and that authorized collections are not changed.
- (b) Amount dependent on Kwh sales. Base amount is \$3,086,600 per year for Unit 1 and \$2,946,000 for Unit 2.
- * License for Unit 1 expires in October 2034. License for Unit 2 expires in December 2037.

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund
Donald C. Cook Nuclear Plant**

Cost Escalation Rate for 10 CFR 50.75(c)
Decommissioning Costs

Jurisdiction	Jurisdictional Allocation (a)	Projected Escalation (b, c, d)	Weighted Escalation
Indiana	71.3333%	6.50%	4.64%
Michigan	15.1651%	6.50%	0.99%
FERC	13.5016%	6.00%	0.81%
Total			6.43%

Notes:

- (a) Most recent jurisdictional demand allocation factors.
- (b) Indiana Utility Regulatory Commission Order in Case No. 39314.
- (c) Michigan Public Commission Order in Case No. U-10347.
- (d) Federal Energy Regulatory Commission Order in Case ER90-269-000.

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund
Donald C. Cook Nuclear Plant**

After Tax Rate of Return Assumed to be Earned on
Amounts Collected for Decommissioning

Jurisdiction	Jurisdictional Allocation (a)	Projected Earnings (b, c, d)	Weighted Earnings
Indiana	71.3333%	7.00%	4.99%
Michigan	15.1651%	7.00%	1.06%
FERC	13.5016%	7.27%	0.98%
Total			7.04%

Notes:

- (a) Most recent jurisdictional demand allocation factors.
- (b) Indiana Utility Regulatory Commission Order in Case No. 39314.
- (c) Michigan Public Commission Order in Case No. U-10347.
- (d) Federal Energy Regulatory Commission Order in Case ER90-269-000.

**Indiana Michigan Power Company
Nuclear Decommissioning Trust Fund
Donald C. Cook Nuclear Plant**

Nuclear Decommissioning Trust Fund Agreements
Summary of Significant Changes

A nuclear decommissioning trust fund agreement for the units at the Donald C. Cook Nuclear Plant (CNP) exists with the following trustee:

Mellon Bank
Pittsburgh, Pennsylvania.

Since the report dated March 23, 2005, filed with the Nuclear Regulatory Commission on Funding for CNP, Units 1 and 2, there have been no substantive changes made in the trust agreement.