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U. S. Nuclear Regulatory Commission

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCHIn the Matter of
CPC Midland Plant
Units 1 & 2Docket Nos.
329-OL
330-OL

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

STAMIRIS RESPONSE TO NRC 8/31/82 INTERROGATORIES

9/18/82

- Q 1a 1. The basis for my statement that Midland's decommissioning costs have been underestimated at \$235 million is a comparison between CPC estimates decommissioning estimates for Big Rock and Palisades and those for Midland.
2. Big Rock (63 MW) and Palisades (635 MW) are estimated by CPC to cost \$111 million to decommission in 1980 dollars (CPC decommissioning pamphlet MP 6/81-50M). Consumer's thus tells us that it would cost \$159 thousand/MW to decommission a nuclear plant in 1980. Yet Consumer's estimates Midland (2452 MW) decommissioning in 1982 dollars to be only \$235 million. By this estimate Consumer's tells us it would cost \$95 thousand/MW to decommission a nuclear plant in 1982.
3. When the 1980 dollar estimates are converted to 1982 dollar values to make the comparison valid, the discrepancy is even larger. Big Rock and Palisades decommissioning costs were projected by CPC in 1978 dollars to be \$90 million (1/21/80 Saginaw News). The inflation rise between the 1978 \$90 million estimate and the 1980 \$111 million estimate represents an annual increase of 11%. So using that same 11% annual inflation rate to estimate the inflation rise between 1980 and 1982, the \$111 million 1980 estimate becomes \$136 million in 1982 dollars for Big Rock and Palisades. By this extrapola-

tion, the Big Rock and Palisades' decommissioning costs are \$195 thousand/Mw, while Midland's are only \$95 thousand/MW in the same year. Even allowing for a higher per MW decommissioning cost for smaller reactors such as Big Rock, as compared to dual reactors like Midland, this large discrepancy is not accounted for.

4. Consumer's estimates they will need \$526 million to decommission Big Rock and Palisades at the end of full life expectancy in the years 2000 and 2007 (MPSC case U-6041, A/S exhibit 1) due to inflation. This represents a year 2003 cost of \$753 thousand/MW. At this rate Midland's decommissioning would cost the public \$1.8 billion if it took place in the year 2003, after 20 years operation.

5. Big Rock cost \$25.8 million upon completion in 1962, Palisades cost \$180 million upon completion in 1971, for a combined \$205.8 construction cost. So their \$526 million ultimate decommissioning estimate represents 200% + of their original construction costs. Yet the public is told Midland can be decommissioned for 7% its construction costs.

6. In using such widely divergent standards to represent decommissioning costs to the public according to Consumer's various purposes (ie promotion vs. collection) Consumer's Power Co. is deceiving the public and proving all their estimates to be unreliable.

7. Aside from Consumer's estimates for decommissioning, I presently have knowledge of one decommissioning experience. The Elk River Reactor (22.5 MW) cost \$6.148 million to decommission in 1973. Elk Rivers \$6 million decommissioning cost represents 28% of Elk Rivers \$12 million construction cost, allowing for inflation.

Through discovery and on my own, I hope to obtain more decommissioning data on which to base my analysis. I will supplement this discovery response accordingly.

Q 1b REASONABLE ESTIMATE OF MIDLAND'S DECOMMISSIONING COSTS

1. According to Consumer's own current decommissioning cost estimates for Big Rock and Palisades (par. 3, q. 1a), Midland's decommissioning cost should be at least \$478 million in 1982 dollars.

2. A more accurate representation of Midland's decommissioning costs would be \$952 million (1982 dollars) at 28% its original construction cost (based on the Elk River Experience, par. 7 q. 1a).

3. The most accurate decommissioning estimate is one which reflects what the actual cost will be to the public of decommissioning at the end of the full life expectancy.

4. In computing the "benefits" to the public operating the Midland plant, inflation increases over the years for replacement energy (coal, oil, and purchased power) are taken into account to result in an increased cost savings (table 2.1 (4) p. 2-3 DES, table 2.1 (d) p. A-32 FES).

5. Therefore, in computing the "costs" to the public of operating the Midland plant, actual decommissioning costs at the time of decommissioning should be projected taking inflation into account.

6. I do not presently have a basis for projecting Midland's ultimate decommissioning cost taking inflation into account other than Consumer's Big Rock and Palisades model, as presented to the MPSC in case U-6041, by which Midland's ultimate decommissioning would be about \$7 billion at full life expectancy. I am uncertain of the validity of this model.

Q 1c The calculations as explained in b are my own based upon CPC or Elk River data as cited.

Respectfully Submitted,

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cc. ASLB members; M. Miller, CPC; W. Paton, NRC; Secretary, NRC

Costs may hit \$1 billion for N-plant dismantlings

Some 227,000 regional customers of Consumers Power Co. in 14 area counties will be hit by more than \$1 billion in costs sought by Consumers into the next century to pay for dismantling nuclear power plants in Michigan — when their time comes.

Any increases for dismantling the Big Rock nuclear plant at Charlevoix and the Palisades plant near South Haven, and then the Midland nuclear plant in the year 2012 or later, will hinge on rate increases on which hearings for operating plants are pending before the Michigan Public Service Commission.

At the Midland nuclear plant, for example, Consumers, in an environmental report submitted two years ago, estimated total decommissioning and site restoration will cost \$121 million for a plant expected to cost \$1.67 billion to construct.

But that \$121 million figure for the Midland plant is preliminary, and could

change.

The \$121 million includes restoration of an 880-acre cooling pond to the same condition prior to construction. Decommissioning of the Midland plant itself has been estimated at \$81 million.

Consumers went to the PSC last summer to propose rate increases of \$115 million over 30 years to pay for retiring the Charlevoix plant in the year 2000 and the Palisades plant in 2007.

A company spokesman today said decommissioning costs for Palisades are estimated at \$60 million while Big Rock is \$30 million.

But those are 1978 dollar figures, and current estimates, plus inflation and technology, make it "accurate to say" that in the 21st century the company is looking at a \$1 billion cost to shut down the two plants, the spokesman said.

The proposed charges of \$1 billion over the next 20 years have come under attack by the state attorney general's

office and consumer groups, including the Michigan Citizens Lobby.

While hearings have been under way, the PSC has not acted on the final rate increases. And the hearings thus far have involved only the two plants and not the Midland plant.

Joseph Tuckinsky, director of Michigan Citizens Lobby, was quoted during the weekend as saying that if the PSC approves Consumers' plan, Michigan customers might have to pay another \$10 million to close the Midland plant and Detroit Edison's Fermi Two plant at Monroe, scheduled to start operation in 1982.

The state and consumer groups claim Consumers' figures, based on a shut-down estimate of 20 percent of construction costs, are too low and 200 percent of construction costs will be needed to shut the plants down.

The local spokesman said pending hearings on estimated shutdown costs

"have absolutely nothing to do with Midland."

As part of its environmental report submitted two years ago, the company was required to submit a decommissioning statement outlining how the nuclear reactor can be deactivated and making sure operating parts, fuel or site won't pose any threat to humans.

The Midland plant's license, if approved, would be for 40 years, after which decommissioning plans would be used.

While that is not expected to happen prior to the year 2012, "and probably much later" according to a spokesman, a plan must be submitted to the Nuclear Regulatory Commission.

Roderick Coy, an assistant attorney general at Lansing, said today he had no idea when the PSC will act on the rate increase.

Every nuclear power plant must be decommissioned at the end of its useful lifetime.

Decommissioning can be done in several different ways: mothballing (putting the plant in protective storage), entombment, dismantlement (taking the plant apart), or some combination of those three.

We Will Dismantle

Consumers Power Company plans to dismantle both its Big Rock Point and its Palisades nuclear plants at the ends of their lifetimes. Dismantlement is the only method which allows unrestricted reuse of the land on which the reactor was sited.

We plan to start dismantling our Big Rock plant after the year 2000. We estimate dismantlement of that plant will cost \$38 million in 1980 dollars. We plan to dismantle Palisades beginning in 2007 at a cost of \$73 million in 1980 dollars.

Who Will Pay?

Because decommissioning is a necessary part of operating a nuclear reactor, in the long run all our customers—they're the ones who benefit from electricity generated at Big Rock and Palisades—must end up sharing the costs of dismantling the plants.

Recovering the costs of dismantling a property is nothing new. Just like any other business, Consumers Power Company normally recovers, through depreciation, the total cost of any project—including dismantlement cost. But the depreciation rates we use now—by order of the Michigan Public Service Commission (MPSC)—do not take into account any of the costs of decommissioning our operating nuclear facilities.

We believe it to be in the best interest of our customers to allow us to recover the decommissioning costs in rates over the next 20 to 25 years. We believe they would benefit most if each year we collected and invested some of the money to cover the costs.

The MPSC must approve such a plan before we can implement it. The Commission is currently conducting a proceeding to consider the funding of nuclear plant decommissioning.

How the Company's Plan Works

Under the Company's recommended plan, each year we would collect an amount of money equivalent to the total needed to dismantle the plant divided by the number of years of remaining plant life. Anticipated inflation would be added in.

The decommissioning funds would not be simply placed in an escrow fund to wait until it's time to decommission a plant. Instead, as the money was collected, we would invest it in new—and necessary—utility facilities. That way, our customers would get the most for their money. When the time comes for decommissioning a plant, we would sell securities to raise the money we needed. That procedure is typical of how business operates.

We believe that our plan for decommissioning our nuclear power plants is the best for our customers. MPSC consideration of decommissioning financing methods is proceeding. Prompt approval of a plan to provide the necessary funds is crucial.