122 Varner Court
Midland, MI 48640
April 4, 1982

Ronald W. Hernan
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

re: NUREG-0537
dockets 50-329 & -330
Draft Environmental Statement
Consumers Power Co.
Midland, Michigan

Dear Sir:

In a time of high unemployment and depression, it is highly inappropriate that government funds should have been spent to prepare this report. Instead, it should have been prepared by CPCo at its own expense. The report itself is prepared to tranquilize the unsuspecting public. Unmeaningful terms of reference are used, invalid assumptions are made, risks are diluted by excessive areas, and certain problems have been ignored.

The estimated capital cost of the project is now $3.44 billion, a stupendous and unjustified overrun. And yet more expenditure will be required. Over 30 years, by linear calculation, the capital cost is $113,111,111 per year. Similarly, interest at 10% on the capital cost is $340,000,000 per year. False costs are given in sec. 2.1. In reality, for the two significant years:

	1984	1988
Interest, at 1% /yr.	340,000,000	$340,000,000
Principal/yr.	113,111,111	113,111,111
Taxes/yr.	121,700,000	121,700,000
Fuel + O & M /yr.	135,000,000	179,000,000
decommission, once,/yr.	263,000	263,000
Total cost/year	$ 710,074,111	$754,074,111

The report blandly ignores all costs except taxes + O & M! These other costs will be paid by the ratepayers and stockholders. The report assumes a savings in fuel cost to the company, but this comes out of the ratepayer's hide.

Alleged replacement energy	$267,000,000	$466,000,000
fuel + O & M	135,000,000	287,000,000
alleged savings	$132,000,000	$287,000,000

These figures are meaningless. They are but part of the cost to the hapless ratepayer. Using figures of mills/kw from the same table, we find the costs to be: 710 x21/135= 111 mills/kw 754x28/179=117 mills/kw
The power will cost in 1984 111x100/21=5.3 117 x100/28=4.15 times the costs from table 2.2. Steam costs will be proportionate. The steam cost to Dow is excessive, and the ratepayer and stockholder cannot be expected to subsidize this to the extent of the difference between these figures and those in 2.2. I recall that when the plant was proposed that the projected steam cost was six times that then in effect in the Dow Co.

A factor not touched upon in the statement is the demonstrated unreliability of stainless steel heat exchanger and condenser tubes. This is obvious in plants all over the country. This causes environmental risk due to leakage, and adds to plant unreliability. The CPCo Palisades plant is a case in point. COR 2 B 1/0

Stainless steel properly heat treated and of suitable composition has some corrosion resistance, but under conditions of high temperature, high velocity and in the presence of gases the passive film is eroded and intercrystalline corrosion occurs. The passivity cannot be restored if the steel is pitted. While I do not have direct inform-

mation on very high temperature corrosion tests, tantalum, Durichlor, Durimet, Hastelloy and Duriron are much more suitable materials. As repeated replacement may be necessary anyway, a steel clad on both sides with high chromium-nickel alloy containing some copper might be usable. There is also probability of corrosion of tube sheets and baffles. These certainly should be of the same material as the cladding, and in no circumstances should dissimilar metals touch. Any electrolysis must be avoided.
The practice of inserting a smaller tube within a corroded tube reduces heat transfer surface and increases liquid velocity. It should not be permitted.
Indeed no further installation or startup of nuclear facilities should be permitted until this problem is resolved.

The Michigan State Department of Natural Resources has recently reported a "high danger" of failure of the upstream dams on the Tittibawassee river at Sanford and Beaverton. Such failure of earthen dams could result in sudden flooding with damage to installations and leave the unit with inadequate cooling water.

Hydrazine is to be used as a scavenger. It decomposes at 329 °F. into ammonia and nitrogen with explosive violence. Hydrazine sulfate also decomposes explosively at 482°F into gas and sulfur. Hydrazine, like ammonia, is flammable. It boils at 235°F and freezes at 0°C (32 °F.) It is toxic and carcinogenic.

The hazards due to icing and fogging caused by the cooling pond are grossly underestimated. Not only nearby roads but the entire city are likely to be covered by fog and smog, which will concentrate toxic contaminants.
As to highway safety, within the immediate area CPCo should be required to provide fog-dispersing devices, suchg as the propellors along the New Jersey Turnpike, at dangerous intersections, and to see to it that the roads affected are kept salted and sanded, and otherwise maintained.
The data in Table 4.2, compared with monthly high and low atmospheric temperatures, on the basis of humidity indicate that throughout the year, during the day, the volume of fog generated by moisture outfall will be relatively constant, and that quantities at night during January through March and in November will be in much the same range. In April the volume will increase 25% at night, in May, September and October 50%, and in July through August, 130%. This means that in January through March and in November and December severe icing conditions may be expected day and night in a relatively constant area around the pond. In April and October and in part of May and September, severe icing may arise over a 25-50% greater area, if the height of the fog remains the same, and in the warmer months severe fog will extend over a much greater area, perhaps the entire city, at night. Hazard due to toxic and radioactive materials born in the fog will be much greater during the warm months of the year, when more people are outside and windows are open.
There is danger of polution of the municipal water supply.

The use of pop-valves, which do not generally reseat properly, for pressure relief is a hazard. Prangible safeties in parallel should be required.

Insistance on nuclear energy ignores the high rate of lung cancer among uranium miners, such as the Indians in New Mexico.

The greater hazards are due to an accident, resulting in direct radiation and loss of water-soluble isotopes. The effect of lead time, age, sex and exposure to low doses remains unknown.

By calculating risk over a large(50 km radius) area the specific threat to the residents of Midland is soft-pedeled. The use of such terms as person-rems over a large area dilutes the hazard. The danger is to the residents of Midland and their property. The Price-Anderson act with low values excludes them from any chance of compensation in case of an accident, and insurance cannot be obtained. The ratepayers not only bear the burden of excessive costs at the beginning, but in case of accident will be without compansation.

Cntamination of the aquifers in case of an accident could endanger also the cities of Bay City and Saginaw, and the great lakes.

I urge consideration of all these factors.

Sincerely,
A.B. Savage
A,B. Savage

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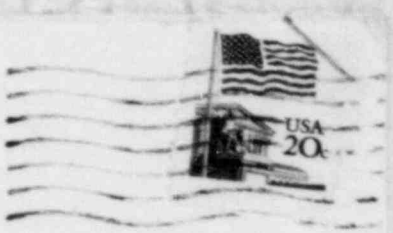
Midland, MI 48640



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