

Statement of Dexter James Seeburger Regarding
the Testimony of Dr. Larry Holcomb at
the June 14, 1972 Session of the
Midland Nuclear Plant Proceeding

I have previously appeared as a witness in this proceeding and have been sworn. I have reviewed the testimony of Dr. Larry Holcomb which appears in the transcript of the proceeding beginning on page 8517 and have the following comments to offer.

Dr. Holcomb in his analysis calculates fish losses in the Tittabawassee River as a result of destruction of phytoplankton and zooplankton by the operation of the Midland Plant to be \$52,800/year. Apparently his calculation is based on the methodology proposed in the AEC's draft Guide to Preparation of Cost-Benefit Analyses which was released in December 1971 and used by Applicant in preparation of its Supplemental Environmental Report. His only deviation appears to be the use of a value of \$3.00 per pound of fish rather than the AEC's recommended \$1.00 per pound. The AEC, however, has abandoned this method as being unsupportable. The use of this method by Dr. Holcomb indicates his failure to pay attention to the testimony of Mr. Grube (Tr. 7369-72) and his lack of understanding of aquatic biota. While it is true that some quantity of phytoplankton and zooplankton will be killed by the operation of the Plant and that this amount may approximate five percent of the phytoplankton and zooplankton in the River at the point of intake during the period when withdrawals are being made, these losses cannot meaningfully be converted into pounds of fish. The nutritive value of these organisms will be returned to the River where it can be utilized by the fish and other biota. Additionally, both phytoplankton and zooplankton reproduce very rapidly and it is to be

expected that the remaining organisms in the River will have rapidly restored the concentration of phytoplankton and zooplankton to a level approximating that previously in the River. Even during the periods when there is no pond discharge, I would not expect to see the destruction of this quantity of plankton affect the fish population. If the River is healthy there will be an abundance of these organisms for plankton feeders and if the River is unhealthy to an extent that would affect this abundance the lack of plankton will not be the controlling factor on fish populations. It is not to be expected that any meaningful decrease in the quantity of fish in the River will occur as a result of this relatively small destruction of these organisms. Even were there any likelihood of such loss, Dr. Holcomb's use of a \$3.00/lb value is beyond comprehension. He, himself, states that the values he is using for fish are those developed by the Southern Division of the American Fisheries Society (1970) and that such values range from \$.15 per pound for very undesirable species to \$3.50 for several game species. Yet he uses \$3.00/lb as an average figure. He must be assuming that vastly disproportionate numbers of game fish will be affected since his average is in the game fish range. I believe this to be an unreasonable assumption.

Dr. Holcomb assigns a cost of \$26,400 per year as a result of loss of benthic organisms. He, however, fails to allege any mechanism which would result in such a loss or any basis for his monetary figure. Although some benthic organisms during certain times of the year may become entrained by the intake structure, this will not occur with any frequency. Benthic organisms are by definition bottom dwelling organisms

which exist in the sediment of the River. They will not normally be contained in any significant quantity in the intake water. His figure is not supported by his testimony and is unreasonable.

Dr. Holcomb makes the non sequitur that since Hydropsyche in the Delaware River were either dead or sluggish when the river temperature reached 95°F, that a value of \$98,100 should be assigned to the effects of Dow discharges within Michigan water quality standards that raise the ambient temperature to 85°F. The quality standards set by the Water Resources Commission (WRC) are designed to permit intolerant fish - warm water variety. The composition of the fish population in the River in 1975 and beyond will be that which has resulted from WRC plantings. Presumably the WRC will act reasonably and plant fish that are compatible with their standards. On that basis I can visualize no significant effect from the Dow discharges within the limits of the water quality standards and Dow's stipulation with the WRC.

It is my conclusion that Dr. Holcomb's values which I have discussed above are unreasonable and unsupported by his testimony.

Dated: July 7, 1972