

## APPENDIX B

### STUDIES ON FINDINGS IN HUMAN POPULATIONS

#### A Quarter Century of Research Progress on Reproductive and Developmental Effects of Persistent Toxic Substances from Great Lakes Fish Consumption

##### Year Endpoints and Findings Reference

1974 - Exposure study - PCB levels in breast milk and Humphrey 1983 Establishment of maternal serum correlates with consumption of Lake Michigan Great Lakes fish. Fish-eaters Cohort

1980 - Establishment Exposure study - Lake Michigan sport fish Schwartz et al. 1983 of Michigan Infant consumption predicts PCBs in maternal milk and Cohort - Perinatal serum. Placental transfer of PCBs. Jacobson et al. 1984a Studies PCBs pose a risk to the fetus and newborn. Jacobson et al. 1983

Fish consumption and cord blood PCB predicts Fein et al. 1984

lower birth weight, smaller head circumference,

and shorter gestational age.

Contaminated fish consumption predicted motoric Jacobson et al. 1984b

immaturity, poorer lability of states, a greater amount

of startle, and more abnormally weak reflexes

(classified as "worrisome").

1981 - Michigan Prenatal exposure to PCBs, measured as maternal Jacobson et al. 1985a

Infant Cohort - consumption of Lake Michigan fish and cord blood

7 months PCB levels, predict a decrease in visual recognition

memory. Indication of deficit in short term memory.

1985 - Michigan Serum samples from 4 year old children indicated Jacobson et al. 1985b Infant Cohort - breast feeding as a principal source of PCBs and

4 years PBBs, though eating fish also resulted in elevated levels.

1985 - Michigan Pre-natal exposure to PCBs predicted poorer short- Jacobson et al. 1990a Infant Cohort - term memory function on both verbal and quantitative 4 years tests indicating continuing impact. Similarly, predicted growth retardation, but contempo- Jacobson et al. 1990b rary PCB levels predicted reduced activity levels.

1991 - Michigan Prenatal exposure to PCBs was associated with Jacobson and Jacobson 1996 Infant Cohort - lower Intelligence Quotients (IQ) scores. Strongest 11 years effect was on memory and attention indicating fetal brain is particularly sensitive to these compounds.

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