The population of rainbow smelt at Bruce B and alewives at Bruce A have crashed. This EIS notes that the greatest quantities of fish entrained and impinged on the Bruce B intake screens are adult female smelt and baby larval smelt; similarly for Bruce A, the greatest quantity of fish entrained and impinged on the Bruce A screens are alewives. However, this EIS states that the reasons for the population crashes is related to the introduction of Goby fish into the Great Lakes from bilge water releases of commercial ships.

This conclusion is in no way obvious and needs clarification.

Prior to the construction and operation of Bruce B, smelt in this region would run for 5-7 day periods and be so thick at times in the streams that they appeared to be a solid mass. Today, there are no such runs that anyone I know has seen, with one exception. Late in the 1990's, smelt ran for 3 days and nights, but not otherwise in the years since Bruce B began operations. Last year we found solitary specimens and this year none at all.

In order to analyse what has happened here, we need first to identify the historical population of the smelt in this region. What is the historical analysis of regional smelt populations? What was their migratory area? How many survived annually to repopulate the species and how much of the population served as a source of food for other species? This EIS is silent on these features.

Next, the Goby population, with its origin and genesis, needs to be identified. When and where did it arrive in the Great Lakes? How has it grown and what has been its sources of food? How, when and where has its population spread? What is its current population and settlement? Does its population growth alone account for the change in the populations and size of the species of fish near the Bruce power stations?

The EIS comments on the reduction of smelt, particularly at Bruce B. While it identifies impingement from entrainment as one source of the reduction, this observation is not quantified. What proportion of the adult female smelt population (relative both to the population as a whole and the female population as a whole) was impinged by the intake screens at Bruce B? Similarly, what proportion of the baby larval smelt relative to those who were born that year were entrained at the Bruce B intake screens? How have these numbers changed over the years, both in terms of absolute numbers and in terms relative to the population as a whole at these various times?

There is no analysis of the history and scope of entrainment and its detail. Such an analysis would allow us to compare results from year to year to determine whether the problem is worsening or improving. This EIS needs to make such an analysis available in order for meaningful claims to be made. A precautionary approach, as this EIS supports, demands no less. Adherence to the sustainability principle requires clear and incontrovertible evidence that Bruce B operations are not themselves responsible for these dramatic population crashes.

Finally, if as this EIS states, it is Goby fish that account for the reduction in the smelt population, as smelts crashed, it seems reasonable to assume that the Goby must have grown exponentially from

eating so many smelt (as well as alewives). Where is the evidence of this exponential growth of Goby fish in this immediate region?

At the present state of analysis provided by this EIS, it seems to be more reasonable to assume that it has been the Bruce operations which have been a primary reason for the collapse in the smelt population. If, as this EIS concludes on the basis of no cited evidence, it has been the introduction of Goby fish that has led to the decline in smelt (as well alewife) populations, the population profiles of each species must be identified and compared with one another to help determine what role the Goby fish have played in these population crashes.