

Reviewer's report

Title: Arsenic in drinking water and cerebrovascular disease, chronic airways obstruction, diabetes mellitus, and kidney disease in Michigan: a standardized mortality ratio analysis

Version: 1 Date: 5 September 2006

Reviewer: bruce fowler

Reviewer's report:

General-No revisions needed.

This is a well-written manuscript which reports the results of an SMR analysis study over a 6 county area of Michigan to investigate possible relationships between exposures to low-moderate concentrations of arsenic in well- drinking water and the relative incidence of a variety of clinical endpoints associated with higher levels of arsenic in studies from other countries. The present studies demonstrated a number of modest but statistically significant increases in SMR values for a number of clinical endpoints. The largest of these were for diabetes mellitus and kidney diseases. Statistically significant reductions were noted for chronic liver diseases and cirrhosis. The investigators conclude that the findings of this study are the first to support an association between low- moderate exposure levels of arsenic in drinking water and a number of causes of mortality. They indicate the need for further detailed epidemiological studies on this population/ This findings of this study are important both in terms of providing actual data at the low end of the dose response curve for arsenic in drinking water and common causes of mortality and the fact that these are data from a U.S. study population which have up to this point been not available. This is a useful contribution and should be published in its present form.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept without revision

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.