Reviewer's report

Title: Evaluation of contaminated drinking water and preterm birth, small for gestational age, and birth weight at Marine Corps Base Camp Lejeune, North Carolina: A cross-sectional study

Version: 1 Date: 21 August 2014

Reviewer: Ann Aschengrau

Reviewer's report:

This is a very thorough re-analysis of adverse birth outcomes in relation to contaminated drinking water at Camp Lejeune, North Carolina with many improvements since the previous 1998 study. My comments are very minor and can be left to the discretion of the authors.

A. Abstract:
1. Revise sentence: “We analyzed the entire pregnancy and individual trimesters.” with something like “We analyzed exposure data for the entire pregnancy and individual trimesters.”
2. Add the interpretation of the results in words.

B. Methods
1. State what was done when the LMP was missing, nonsensical or inexact.
2. Give more information on the amount of missing risk factor data.
3. I am unsure about the backwards elimination procedure. You state that you removed potential confounders “with the value closest to the null.” I assume that this value is for the association between the confounder and the outcome. Please clarify.

C. Discussion
1. You may want to add some biological support for the findings of increased risks for second trimester exposure.

D. Limitations
1. It does not seem to me that labor and delivery complications should be considered confounders. Depending on the type of complication, they could be intermediate steps in the causal pathway and, for that reason, don’t need to be controlled. More elaboration would be useful.

E. Additional File 2
1. Figure 5: the "odds ratio" label for the y axis in this figure is incorrect.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.