Reviewer’s report

Title: Prenatal Exposure to Extremely Low Frequency Magnetic Field and its Impact on fetal growth

Version: 0 Date: 16 Oct 2018

Reviewer: Tuomo Eskelinen

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1. The definition of MF in this study has not been addressed and defined properly: Magnetic fields represent a wide spectrum of frequencies and sources, eg. extremely low frequency (ELF), or low frequencies (LF), and so on. The type of MF addressed should be defined and explained, not only in methods, but throughout the text.

2. Only measurements of (40-100 Hz) magnetic field were used in the exposure assessment with EMDEX. Exposure assessment, when based only on measurements, has some deficiencies: exposure of the study subjects to other frequencies (than 40-100 Hz) from other sources, is not detected. It is also unclear, if other information on other sources or historical exposures to magnetic fields was collected, eg, by questionnaire or interview, to get a more comprehensive information on MF exposure during 3rd trimester.

Furthermore, the validity of the 24-h EMDEX measurements when evaluating study subjects' exposure during the 3rd trimester, is not explained or discussed. How much is there misclassification of exposure of the study subjects - this is an important question when interpreting the study results.

3. High exposures are not present, which should be taken into account in the interpretation of results. In Tables 2 and 3, N of boys is 38 both in the P50, and P75 in the "above median" exposure categories. Please explain the exposure profile of the study subjects. Does this imply some difference of MF exposure between boys and girls? If so, it should be explained. The results of the study seem to be only indicative and should be interpreted cautiously due to potential misclassification of MF exposure of the study subjects and lack of higher exposures.

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