Reviewer's report

Title: Legionella on board trains: effectiveness of environmental surveillance and decontamination.

Version: 1 Date: 24 February 2012

Reviewer: Yusen Lin

Reviewer's report:

Major Compulsory Revisions

1. The statistical method that authors used to report significant decrease of bacterial load in pre- and post-decontamination may be inappropriate. Bacterial counts should be compared in the logarithm fashion, not in plain number. Based on the authors’ data, there may not be significant difference after the logarithm. The authors actually acknowledge that by separating the bacterial load results into <100, 100-999, 1,000-9,999, and >10,000 cfu/L. This is the concept of logarithm evaluation. The authors should redo the statistical analysis.

2. The authors should provide more details in the design of the study: is there only one train or several trains? The author mentioned "The first cycle of decontamination was completed in September 2008......". Is there the second cycle? Does the train receive decontamination treatment whenever the load >1,000 cfu/L?

3. Latex along may not be definitive for Legionella identification. Direct Fluorescent Antibody (DFA) may be a more appropriate method of confirming the isolation of Legionella.

Minor Revision

1. The authors inter-change the term "bacterial load", "bacterial counts", "total bacterial count" which may confuse the readers, especially the term "total bacterial count" often time means "total heterotrophic bacterial counts". It may confuse the readers that this study survey both Legionella and total bacterial counts.

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.

Declaration of competing interests:

I declare that I have no competing interests