

Review “AERCOARE/AERMOD evaluation” – Sang Mi-Lee

It is a very interesting approach and very practical to many applications that involve over-water projects. The analysis was focused on overall distribution of concentration. I would suggest including similar analysis for high concentrations, which are usually the main concern in regulatory applications.

Specific comments:

Tables 1, 3, 5 and 7 – it is understandable to adjust the air-sea temperature based on the temperature lapse rate. However, it is unclear how it was adjusted. Details on the adjustment method will be very informative.

A table that summarizes the five cases will make the document clearer and easier to follow.

A few features that I noticed from the Q-Q plots are:

1. Focused on high concentrations, the five approaches show distinctive differences in the sense that Case 1 and 5 performed greatly to reproduce the max concentrations. On the contrary, Case 3 substantially over predicted high values. It is good that none of the approaches showed low bias for the high values. This ensures that at least all the approaches yield fair or conservative answer.
2. Geographically, Cameron case showed the best agreement while Pismo Beach did the worst. This appears to be consistent with all the five approaches. This suggests topography and the distance from the shore and/or release locations become important.