This is the second time that I have reviewed this manuscript. My first step in this second review was to read the authors' response to all reviewer comments. The author responses were adequate and appropriate, in that they improved text that was unclear, answered important questions, and/or defended assumptions made. My second step was to re-read the manuscript to see if any additional questions arose. The points below are based on this re-reading of the manuscript.

Important Points/Questions/Clarifications

1. Are the concentrations presented only relevant for the surface level model cells?

2. On page 8, line 163, is N7 the number concentration of particles smaller than 7 micron? That is, does this subscript refer to size in micron as it does for subscripts on PM?

3. How sensitive are the OC and PM2.5 regressions to the OC:OM conversion factors used (page 11)? These values should include a citation. At this point, if the PM2.5 regression is included in the Supplemental Information, it should be mentioned here.

Editorial Points

In general, the information included in the introduction, methods, results and discussion are appropriate. That being said, I do believe that the manuscript could use some editing prior to publication. For example:

1. The first paragraph should be restructured – it could be three separate paragraphs: one on PM-health; one on PM0.1-health; one on surface area-health focused on smaller particles.

2. In some places O3 is used, in some places ozone is used. In several places, subscripts and superscripts are not used consistently. In some places units are expressed as ug/m3, in some places ug m-3 is used. On line 311, PM2/5 should be PM2.5.

3. In a couple of places (line 182; line 290), however is used as a coordinating conjunction. This requires either a semicolon or should be two separate sentences.

4. I do not believe that the most current version of the Supplemental Information of the manuscript was provided, as Tables/information called out in the main text do not appear, Figures/Tables are mis-numbered, Figure S1 is an exact copy of Figure 1 in the current version of the text… If the information that the main text says is in the new SI, it certainly sounds appropriate/adequate/important.

5. Why is there a * on LOUKY in Figure 2?

6. Correct spelling error in the x-axis title in Figure 6a. Measured, not mesaured.