

Title: Response on the interactive comments from the anonymous Referee #2

Dear the Anonymous Referee #2,

Many thanks for your valuable comments on our paper submitted to the distinguished Journal of ACP, which is titled “trend and characteristics of atmospheric emissions of Hg, As, and Se from coal combustion in China, 1980–2007”.

China is one of a few countries throughout the world whose energy structure is dominated by the high polluted fuel—coal. With the rapid development of national economy, coal consumption has been increasing considerably, and it is anticipated that the total coal consumption demand will be probably reached about 4 billion by 2020. Huge amount of coal burning have not only caused the worsening of local air quality as well as comprehensive regional atmospheric environment problems (such as acid rain, ground-level ozone, visibility deterioration, etc), but also led to remarkable emissions of heavy metals into the atmosphere. By now, the negative effects of Hg, As, and Se on the environment and public health in China have received great concern from all over the world. In order to know about the temporal changes and current situation of typical heavy metals emissions from coal combustion in China, we developed an anthropogenic atmospheric emission inventory of Hg, As, and Se from coal combustion during the period of 1980-2007. Specially, the temporal emission inventories of Hg, As, and Se were developed and discussed in detail by economic sectors, coal types, provinces, and regions between 1995 and 2007. The research report based on these results have been submitted to SEPA, we believe that it will be very helpful for government policymaking on relevant heavy metals pollution control in China.

However, just as mentioned by the referees' comments and the discussion made in our paper, we know that there are still some uncertainties on the inventory, especially the uncertainties on the averaged trace element content in different coal by province, and the removal efficiency by the equipped conventional air pollution control devices (SCR, ESP/FF, and FGD) for different types of combustion facilities. In the near future, we will continue to do research work on field tests for trace elements content in different coal, and the removal efficiency of different boilers and APCD configuration. Thus, the uncertainties can be lowered and our inventory can be improved and updated to new years.

Finally, we do appreciate your valuable comments on our manuscript.

Yours Sincerely

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