Response to associate editor

The authors would like to appreciate the associate editor for your constructive comments. We have revised it carefully according to your comments. Responses are provided in a point-by-point fashion as follows:

- (1) The title might be rephrased. The current title pays more attention to "composition", and abundance of ammonia oxidizers was indeed analyzed by both qPCR and FISH. In addition, AOB were rarely mentioned in this study. Therefore, it is hard to emphasize "the contribution". It might be rephrased as follows. Nitrification of archaeal ammonia oxidizers in a high temperature hot spring
- Reply: We have changed it according to the associate editor's suggestion.
- (2) L15. Replace "abundance" with "diversity" because both abundance and composition were analyzed in this study.Reply: We have changed it.
- Reply: We have changed h.
- (3) L27-28. Replace "archaea rather than bactera" with "archaeal rather than bacterial ammonia oxidation"Reply: We have changed it.

(4) L183. Replace "16S rDNA" with "16S rRNA genes" Reply: We have changed it.

(5) *L183. It should be lowercase, i.e., replace "Gene" with "gene"* Reply: We have changed it.

(6) L250. Insert "of 16S rRNA genes" after clone sequences. Reply: We have added it.

(7) L573. Pls add the primer information for clone library construction.Reply: We have added relevant information in table 1 in manuscript.

(8) L588. The color may not be that helpful since there are only two treatments. Reply: We have changed it.