

**Climate Action Reserve
Comments on Protocol for N₂O Abatement from Nitric Acid Plants**

I verbally commented during the CAR meeting at the AN-NA conference in October in Little Rock. This note is a written followup.

I believe it quite likely that many nitric acid plants will first install "secondary" abatement because of its low investment, even though it achieves only 70 to 90% abatement in most applications. As the value of emissions credits increases, and public policy becomes clearer, I think many plants will want to consider "tertiary" abatement which could achieve 99% abatement.

Tertiary abatement has fairly high investment costs, however, and I believe many plants might want to consider adding a small tertiary unit in addition to secondary abatement to take abatement from 70 to 90% all the way to 99%. A tertiary unit that starts with 90% and ends with 99% would have only 1/2 as much catalyst, and the reactor would be only 1/2 the size of one that did all the abatement in tertiary alone - and would therefore cost less. I think this combined approach would make it more feasible, and more likely, than eliminating secondary abatement and replacing it completely with tertiary.

I suggest that the methodologies be revised to allow:

1. secondary alone
2. tertiary alone
3. secondary plus tertiary. This would be a small modification of the secondary methodology: the vent gas concentration would be measured AFTER the tertiary unit. Otherwise the methodology would be the same as secondary alone.

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