

Section 13-5-303 of the Staff Report, https://www.baaqmd.gov/~media/dotgov/files/rules/reg-13-rule-5-petroleum-refinery-hydrogen-systems/rule-version/documents/20220124_01_sr_1305-pdf.pdf?la=en states as follows:

Section 13-5-303 – Alternative Methane and Other Greenhouse Gas Emissions Standard Option:
Proposed Rule 13-5 includes an alternative methane and other GHG emissions standard option that allows a facility to comply with the rule by reducing emissions by 90 percent from an established baseline.

I oppose the inclusion of this exception to the base requirement that hydrogen plant methane emissions be kept below 15 lbs. per day as proposed in Regulation 13-5-301 for the following reasons:

1. All the other refineries in the region meet or exceed the regulation already except for Valero and PBF. This is a demonstration that there is already cost effective BARCT available to limit methane emissions to this level.
2. Per Table 1 on page 24 in the staff report the average annual emissions in the baseline years is excerpted in the table below. If methane emissions were to decrease by 90% of this amount, under this regulation we would still be left with methane emissions well above 15 lbs./day for these 3 facilities compared to the other refineries which are essentially at zero. This would essentially reward the two outlier refineries for their previous bad behavior

Hydrogen Plant	Base annual average emissions (metric tons/yr)	Base annual average emissions (lbs. day}	90% reduced annual average emission per 13-5-303 (lbs. /day)
Valero	1518	9150	915
PBF Refinery	1005	6058	606
Air Products (PBF)	32	193	19

3. The 20% substitution of carbon dioxide equivalent emissions for methane might run afoul of perceived restrictions imposed by AB398 of gasses subject to cap-and-trade limitations.
4. Methane is a short-lived climate pollutant with an atmospheric lifetime of 12 years whereas carbon dioxide has an atmospheric lifetime of hundreds to thousands of years. There is no scientific basis for assuming that replacing 20% of the 100-year equivalent methane emission with carbon dioxide or other long lived GHGs such as N₂O or short-lived pollutants such as black carbon, is a valid trade-off.

I would also like to point out an arithmetic error on page 20 of the Staff Report with the example calculation for this substitution which invalidates the entire calculation. In the first line of the calculation 10,000 is multiplied by 34 with the answer being given as 34,000 rather than 340,000, making the entire calculation invalid.

Here is an excerpt from the beginning of the example calculation. I have bolded the error:

Example Calculation of Section 13-5-303 Alternative Methane and Other Greenhouse Gas Emissions Standard Option

S-1 Hydrogen Plant

Baseline Emissions:

- Total Hydrogen Plant Methane Emissions = 10,000 lbs /year*
- Carbon Dioxide Scrubbing Vent = 10,000 lbs/year of carbon dioxide*
- Methane GWP value of 34 from Schedule T of Regulation 3 was used to convert the mass emissions of methane to Carbon Dioxide Equivalent (CO_{2e}) mass emissions.*

Baseline Methane CO_{2e} Emissions

= (10,000 lbs of methane)(34) = 34,000 CO_{2e} lbs/year