

February 18, 2016

Mr. Joe Fischer
California Air Resources Board
1001 'I' Street
Sacramento, CA 95814qqq

Subject: Comments on the 'Revised Draft Regulation for GHG Emissions Standards for Crude Oil and Natural Gas Facilities'

Dear Mr. Fischer:

The following comments are being presented to address concerns with the 'Revised Draft Regulation for GHG Emissions Standards for Crude Oil and Natural Gas Facilities'.

95668(a)(1) - The primary and secondary vessels is where the flashing losses occurs. After passing through the initial two vessels, the fluid is at atmospheric pressure. The current APCD rules cover any tertiary tanks, including overflow, drain and produced water tanks and it is not necessary to increase the regulatory burden for tanks that will not flash, so the rule should be amended to include only the primary and secondary vessels. No justification was provided for removing this wording in the revised draft.

95668(a)(2) – There is no exemption for small producers. The San Joaquin Valley Air Pollution Control District (SJVUAPCD) exempts tanks from vapor control that have a crude oil throughput less than 50 barrels per day of a “small producer”. Small producers are defined as having production less than 6,000 barrels of oil per day from all operations in the San Joaquin Valley.

This is an important exemption for small producers. Emissions from small producers are a small fraction of the total emissions from crude oil production. We recommend that tanks with less than 50 barrels per day of oil throughput be exempt from the testing and control requirements of this proposed regulation.

95668(a)(2)(A) – The SJVUAPCD exempts tanks from permit that are used for 6 months or less and have a capacity no greater than 500 bbl. (i.e. baker tanks or equivalent are commonly used for temporary purposes). These tanks are a vital resource for oil production operations. We recommend that this section be changed to allow for up to 6 months of operation which would align with existing permitting requirements in the SJVUAPCD.

95668(a)(5) - The method to determine the applicability of the rule sums the results of the GOW and the GOR to determine if the 10 ton threshold is triggered. If the 10 ton value is exceeded, a provision should be included to evaluate the produced water side. As established by several air districts, a 'Clean Produced Water' exemption is included in the APCD rules. It is not practical and very costly to add vapor recovery to the clean produced water system past the initial two vessels where the flashing losses would occur because the water tanks are often located away from the crude oil separation and stock tanks.

95668(a)(5) - If the produced oil tanks are already on vapor recovery, only the GOW should require the Flash Liberation Testing. In determining applicability of the 10 ton threshold, the GOR, which is controlled with the vapor recovery, should be added to the GOW to determine the methane emissions.

95668(a)(8) - The flash testing that is required if a new well is added to the system should only be for separator and tank systems that are not already controlled. If the process is already controlled, then this activity is just an added expense with no value.

95668 (c)(3)(a) and (b) - This paragraph states that if additional vapors or new vapors must be controlled, then the vapors are not allowed to be sent to a sales gas system, fuel gas system, or injection. This needs to be corrected to allow beneficial use of vapors. In 95668 (a)(5), the Vapors can be sent to a fuel-gas system that feeds heaters, steam generators, etc., so this needs to be clarified in this section.

95668(c)(4) – This section requires installation of a vapor control device that is in a region designated as non-attainment, or which has not been classified as attainment of, all state and federal ambient air quality standards to control NO_x to 15 ppm at 3% O₂, and 95% control of all emissions.

An example of a control device for low flow emission sources that exceed 10 tons of methane emissions was provided by ARB. Aereon has installed a bladder tank combined with their smallest flare; model CEB-50, in one location in Europe to control emissions from a waste water treatment plant. For low flow sources this device poses significant issues.

- It is costly to install the bladder tank, CEB-50 flare, piping and associated instrumentation control emissions from small flow rates.
- This system will require makeup gas to combust low BTU gas sources.
- This single installation does not provide sufficient operating history to determine if the system can provide effective, reliable control of low flow sources.

No options are provided for operators that do not have the resources to install and operate equipment that meets these control requirements.

Small sources should be provided an alternative to installation of these expensive control options. Existing regulations in the SJVUAPCD effectively control NO_x and VOC emissions from flares, through BACT requirements. Cost effectiveness should be considered on an individual basis when determining if these controls should be required.

Many small tank systems would need a very small destruction device (1.3 mcf/day) – the supplemental fuel would exceed this amount just to run a pilot flame or maintain the required temperature. A provision that evaluates the GOR by tank system should be included in the rule so that crude oil producers do not have to purchase expensive Low-NO_x destruction devices that emit a greater volume of GHG gases than the uncontrolled tank facility.

95668 (c)(5) - If it is not technologically feasible to control the vapors, the separator and tank system must be closed down and put out of business. This can be corrected by either justifying the installation with a cost-effectiveness analysis or providing an exemption based on production volume.

95669 – This section requires fugitive component leak detection and repair. These inspection requirements apply to all facilities, not just facilities that exceed 10 tons methane per year.

There should be an exemption for facilities that have a small number of components or limited throughput.

Appendix C

Section 10.6 requires correction of analytical data to remove oxygen (and the corresponding ratio of nitrogen) to be removed from the sample. Correction of the analytical data may be valid where oxygen is present in the sample if the oxygen and nitrogen are a result of leaks into the sampling system. However, the presence of oxygen does not necessarily indicate a leak.

- Fire flooding of oil reservoirs, using oxygen or air, can result in natural gas production with oxygen present.
- Argon, an inert gas, is present in air at a concentration of 0.93 mole percent. Argon is difficult to determine via chromatography because the argon and oxygen peaks often coincide. If argon is present, assuming that this is oxygen could lead to overestimating methane emissions.

If you have any questions, please feel free to contact me at Scott Faulkenburg at (661) 377-0073 x 15.

Sincerely,

Scott Faulkenburg
Senior Environmental Analyst