



March 29, 2019

David Edwards  
Assistant Division Chief  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**RE: Comments on Proposed 15-Day Changes to the *Regulation for Criteria Air Pollutant and Toxic Air Contaminant Emissions Reporting***

Dear Mr. Edwards:

Aera Energy LLC (Aera) is an independent oil and gas producer with operations in Fresno, Kern, Monterey and Ventura Counties. The California Air Resources Board (CARB) requested input on the proposed 15-day changes to the *Regulation for Criteria Air Pollutant and Toxic Air Contaminant Emission Reporting* (CTR Regulation). As Aera's operations will be impacted by this rulemaking, Aera appreciates the opportunity to provide the following information.

General Comment: Understanding the sources of emissions is important to ensure that future investments in emissions control technology are making the greatest impact. Through AB 617, CARB has been tasked with standardizing the emission inventory for stationary sources and publishing the data on their website. We should not lose sight of the fact that stationary sources are not the primary contributor to the State's emissions inventory. For example, at a September 28, 2017 meeting, CARB staff identified that stationary sources contributed only 11% of the particulate matter in Bakersfield during 2015 on an annual average basis. As such, if a California resident reviewed the emission inventory for stationary sources near Bakersfield, the person would only be seeing a small fraction of the emission sources affecting air quality. Aera encourages CARB to continue to improve the emission inventory for all sectors, not just stationary sources, and make that data transparent for Californians.

17 CCR §93401 (a)(1): This section contains the following sentence, "[f]or determining applicability under section 93401(a)(1), a 'facility' includes an onshore oil and gas production or processing facility as defined in California Code of Regulations (CCR), title

17, section 95102.” The referenced section does not contain that definition. The closest definition in that section is for “‘facility’, with respect to onshore petroleum and natural gas production for the purposes of section 95150 to 95158”. Further, the *Regulation for Criteria Air Pollutant and Toxic Air Contaminant Emission Reporting* contains a definition for “onshore petroleum and natural gas production facility”. Aera believes that CARB intended to reference “onshore petroleum and natural gas production facility” as defined in the CTR Regulation. Aera suggests that 17 CCR §93401 (a)(1) be modified as follows

*A facility that is required to report to the state board the facility’s greenhouse gas emissions pursuant to H&SC section 38530 at the beginning of the data year. For determining applicability under section 93401(a)(1), a “facility” includes any onshore petroleum and natural oil and gas production or processing facility as defined in California Code of Regulations (CCR), title 17, section 95102.*

17 CCR §93401 (a)(4): This section requires reporting for facilities emitting more than 4 tpy of any criteria pollutant. Both sulfur oxides (SO<sub>x</sub>) and particulate matter are included as criteria pollutants. For the most part, sulfur dioxide (SO<sub>2</sub>) is emitted from combustion sources and oxidizes in the atmosphere to form sulfuric acid (H<sub>2</sub>SO<sub>4</sub>). The sulfuric acid then secondarily reacts in the atmosphere to form a sulfate molecule, which is a particulate.<sup>1</sup> For this reason, the U.S. Environmental Protection Agency considers sulfur oxides to be a precursor to particulate matter formation.

As currently defined, sulfate particles meet the definition of both “sulfur oxides” and “particulate matter”. Double-counting emitted compounds will result in overstated emission inventories.

There are National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO<sub>2</sub>) and small particulates (includes sulfate molecules). Therefore, it is important to quantify the SO<sub>2</sub> emissions and then understand how these compounds react in the atmosphere. Accordingly, operators should quantify sulfur oxide emissions (that will be primarily SO<sub>2</sub>) and, separately, quantify emissions of small particulates excluding any emissions of sulfur oxides that reacted in the atmosphere to form small particulate matter. This process will ensure accurate emissions reporting and avoid double-counting sulfur oxide compounds. To accomplish this improvement, Aera suggests the following modification to the definition of particulate matter.

*“Particulate matter (PM)” for the purposes of this regulation particulate matter means any airborne finely divided solid or liquid material with an aerodynamic diameter equal to or less than 10 micrometers. PM precursors (including those*

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<sup>1</sup> San Joaquin Valley Air Pollution Control District, *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards*, Appendix G Precursor Demonstration, Page 15 of 23, November 15, 2018

found in condensable and filterable PM) are reported separately and should not be included as particulate matter.

- "PM<sub>2.5</sub>" means PM with an aerodynamic diameter equal to or less than 2.5 micrometers, including emissions of both filterable PM and condensable PM.

- "PM<sub>10</sub>" means PM with an aerodynamic diameter equal to or less than 10 micrometers, including emissions of both filterable PM and condensable PM. Emissions of PM<sub>10</sub> will include emissions of PM<sub>2.5</sub>.

- "Condensable PM" means material that exists in vapor phase at stack conditions, but which condenses or reacts upon cooling or dilution in the ambient air to form solid or liquid PM after discharge from the stack. All condensable PM is in the PM<sub>2.5</sub> size fraction.

"Filterable PM" means particles that are directly emitted by a source as a solid or liquid at stack or release conditions such that they could be captured on the filter of a stack test train. Filterable PM can be in the PM<sub>2.5</sub> or PM<sub>10</sub> size fraction.

- "PM precursors" means emissions of NO<sub>x</sub>, SO<sub>x</sub>, NH<sub>3</sub>, and ROG.

17 CCR §93402 (a): The definition of "best available data and methods" requires the quantification of actual emissions and not maximum permitted emissions. Aera supports the gathering of actual emission information, as this data is necessary for air quality planning. However, there are instances where using the maximum permitted emission rate to estimate actual emissions makes sense. There is unique equipment in use that constitute very minor sources of emissions and where it is difficult to estimate an actual emission rate that differs from the original permitting. Aera requests that CARB acknowledge that there are instances where permitted emission rates can be used for actual emission reporting.

17 CCR §93402 (a): "Emergency standby engine" is defined in the draft CTR regulation, but the definition does not appear to be used. Aera recommends that the unused definition be deleted.

17 CCR §93402 (a): The terms "device" and "equipment" are commonly used interchangeably, but CARB chose to define them separately. CARB has clarified the term "device" by adding several examples. It remains unclear when an object that produces emissions is considered a device or equipment under the draft CTR regulation. Aera suggests that examples be added to the definition of "equipment" to clarify the difference between a device and equipment.

17 CCR §93402 (a): The definition for "pollutant code" lists both particulate matter and "particulate matter 10 microns or less". "Particulate matter" is defined as "any airborne finely divided solid or liquid material with an aerodynamic diameter equal to or less than 10 micrometers", while PM<sub>10</sub> includes "PM with an aerodynamic diameter equal to or less

than 10 micrometers.” As the definitions of particulate matter and PM<sub>10</sub> are functionally equivalent, there is no reason to include particulate matter in the pollutant code list.

17 CCR §93402 (a): “Primary emissions release location” is defined as location(s) where 80% or more of the facility’s airborne emissions enter the atmosphere. The release location for an entire facility can vary by pollutant. For example, NO<sub>x</sub> emissions may be primarily released from combustion sources, while VOCs are emitted from fugitive equipment leaks. How does an operator determine the “primary emissions release location” if the locations differ by pollutant?

17 CCR §93403 (d)(1)(A): This section contains a reference to 17 CCR §93403 (b), which Aera believes CARB intended to change to 17 CCR §93403 (c).

17 CCR §93403 (d)(2): This section contains a reference to 17 CCR §93403 (c)(1)(A), which Aera believes CARB intended to change to 17 CCR §93403 (d)(1)(A).

17 CCR §93404: This section states that the emissions format is determined by the local air district. It is CARB’s intent to develop a standard reporting format to be used by all reporting entities in California. It seems this section should be revised to state that if CARB develops a statewide reporting structure, then CARB establishes the reporting format.

17 CCR §93404 (b)(3): The definition of “device” becomes very important when evaluating 17 CCR §93404 (b)(3). For example, would an individual crude oil production well be considered a “device” that would require individual reporting under 17 CCR §93404 (b)(3)? If so, this would add thousands of devices that require individual reporting. Obviously, fugitive emissions from production wells are minor emission sources, and requiring emissions reporting by individual production well would be unnecessarily onerous. Aera requests that the following modification be made to section 17 CCR §93404 (b)(3).

- (3) For each device or emissions unit at the facility:*
  - (A) Device or Emissions Unit identifier*
  - (B) Description of the device or emissions unit*
  - (C) Unit Type Code*
  - (D) Air District Permit ID*
  - (E) Design capacity of device or emissions unit, if applicable*
  - (F) Devices consisting of fugitive emissions that are included under the same Air District Permit ID can be aggregated for the purposes of reporting.*

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17 CCR §93404 (d)(4): Portable equipment is excluded from the emissions reporting requirements under this section. However, as currently drafted, portable equipment will be subject to the General Contents section of 17 CCR §93404 (b). For each portable engine, an operator will have to provide engine designations, fuel use, location information, etc. As portable equipment makes up a small fraction of the total emissions inventory in the State, Aera assumes that this was not CARB's intent when drafting 17 CCR §93404 (d)(4). To rectify this oversight, Aera suggests that 17 CCR §93404 (d)(4) be moved to a new section 17 CCR §93404 (b)(8) and be modified as follows.

*(8) Emissions from permitted portable equipment operated at a facility, regardless of equipment ownership, must also be reported, except for portable equipment registered and reported under the Statewide Portable Equipment Registration Program Regulation (CCR, title 13, section 2450 et seq.).*

Aera appreciates the opportunity to provide input during the rulemaking process. Should you have any questions, please feel free to contact me at (661) 665-5279.

Sincerely,



John E. Haley, P.E.  
EHS Lead – Air Quality

cc: Brian Clements, SJVAPCD  
Jonathan Dethloff, Aera Energy LLC