

Attachment A

WSPA Comments on 15-day Modifications to draft Regulation for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Operations (February 2017)

Circulation Tanks

Issue 1: Proposed section 95668(b)(2)(A) allows owners or operators of circulation tanks to comply with the requirement to conduct technology assessments in three different production fields by either (1) conducting assessments in three fields individually or (2) being part of a group of owners or operators who conduct assessments in three different production fields. In order to meet (2), section 95668(b)(2)(A)1 allows an owner or operator to conduct a technology assessment in one or more fields and submit it to ARB, to be combined with technology assessments from other owners or operators, in order to reach the required three different production fields. WSPA requests that ARB clarify that the option in subsection 95668(b)(2)(A)1. is a method by which to meet the requirement in section 95668(b)(2)(A).

Recommendation 1: WSPA recommends that ARB clarify proposed section 95668(b)(2)(A) as follows:

(A)1. In order to comply with section 95668(b)(2)(A), individual owners or operators may conduct a technology assessment and emissions testing within one or more production fields and submit the results to ARB, which will be combined with technical assessments performed by other owners or operators.

Issue 2: Proposed section 95668(b) requires owners or operators of circulation tanks to conduct a technology assessment which includes the information listed in section 95668(b)(2)(C). The proposed regulation refers to the “technology assessment and emissions testing” in some places and only the “technology assessment” in others. Because section 95668(b)(2)(C) currently lists the information that must be included in a technology assessment, including test results, WSPA believes that the proposed regulation should simply reference the “technology assessment,” whose requirements are specified in section 95668(b)(2)(C).

WSPA's requested changes and clarifications to section 95668(b)(2)(C) (Issue 3 below) also support this suggested modification.

Recommendation 2: WSPA recommends that ARB clarify proposed section 95668(b) as follows:

(2)(A) Each owner or operator, individually or as part of a group of owners and operators, must conduct a technology assessment ~~and emissions testing~~ in at least three different production fields from wells with different characteristics, such as depth of well or API gravity of crude oil or condensate.

(2)(A)1. Individual owners or operators may conduct a technology assessment ~~and emissions testing~~ within one or more production fields and submit the results to ARB, which will be combined with technical assessments performed by other owners or operators.

(3) The ARB Executive Officer will review the results of the technology assessment ~~and emissions testing~~ specified in section 95668(b)(2) and provide a determination on the installation of vapor collection and control equipment by no later than July 1, 2019.

Issue 3: As stated previously in our comments dated July 18, 2016, WSPA's primary concern with the proposed control measures for circulation tanks is safety of the technology when used in practice. WSPA appreciates ARB's consideration of our comments and incorporation of a safety evaluation in the proposed regulation. WSPA believes that a comprehensive safety evaluation of the capture and control technologies must be conducted to determine if they can be installed and operated safely. Please see Attachment B for an evaluation of the safety concerns, performed by an independent safety expert, associated with the operation of capture and control equipment that has been considered to date.

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WSPA also requests that ARB clarify that the listed requirements for a technology assessment in section 95668(b)(2)(C), including emissions testing, only apply in so far as they can be completed in a safe and feasible manner. For instance, WSPA believes that should a technology be shown to be infeasible or unsafe in the field, no further test results or data, such as those listed in (C)5 or (C)6, should be collected. WSPA recommends that ARB clarify, either by amending section 95668(b)(2)(C) as suggested below or in its response to comments, that each category of information listed in that subsection is not required for every technology assessment and that the technology assessment may end when a technology is found to be infeasible or unsafe in practice.

Recommendation 3: WSPA recommends that ARB clarify the proposed section 95668(b)(2)(C) as follows:

- (C) *The technology assessment shall include **as applicable**, but is not limited to, the following information relating to vapor collection and control equipment:*
1. *List of vapor collection and control equipment evaluated;*
 2. *Test results demonstrating the functionality, emissions results, and technical feasibility of the equipment with written statements provided by equipment manufacturers;*
 3. *Costs of the equipment;*
 4. *Safety aspects related to the installation **and operation** of the equipment;*
 5. *Test results that provide the fuel flow rate and Higher Heating Value of gas collected; and*
 6. *Test results that provide the report shall include the results of testing conducted by the owner or operator or equipment manufacturers that demonstrate the vapor collection and control efficiency and methane, criteria pollutant, and toxic air contaminant emissions before and after installation of the equipment.*

Issue 4: As currently drafted, section 95668(b)(4)(A) does not specify whether it applies only to technology assessments already submitted, or whether it means that ARB can require owners or operators to continue to complete technology assessments beyond January 1, 2019. ARB's "Notice of Public Availability of Modified Text and Availability of Additional Public Documents and/or Information" p. 7 suggests that ARB intended this section to apply only to the scenario in which ARB had received a technology assessment by January 1, 2019, but was unable to make a determination on that assessment by July 1, 2019. WSPA requests that ARB clarify whether this section is meant to give ARB additional time in which to complete its review and determination of technology assessments, or to allow ARB to continue requesting technology assessments from owners or operators beyond January 1, 2019.

Recommendation 4: WSPA recommends that ARB clarify the proposed section 95668(b)(4) as follows:

*If ARB has not made a determination on **a technology assessment submitted under section 95668(b)(2) ~~the installation of vapor collection and control equipment~~** by July 1, 2019, an owner or operator to whom that determination would apply may continue to operate circulation tanks at a level below 95% vapor collection and control efficiency until 180 days after ARB makes the late determination.*

Well Casing Vents

Issue 5: Section 95668(g)(1) requires operators to measure natural gas flow rate from open well casing vents. It is our understanding that ARB's intent is to only require natural gas flow rate monitoring for wells with casing vents *normally* open to the atmosphere. An operator does not have to measure a well casing vent that is normally closed but may be temporarily opened for maintenance or monitoring. WSPA recommends that ARB clarify this intent to avoid confusion.

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Recommendation 5: WSPA suggests that section 95668(g)(1) be clarified as follows:

(1) Beginning January 1, 2018, owners or operators of wells located at facilities located in sectors listed in section 95666 with a well casing vent that is normally open to the atmosphere shall measure the natural gas flow rate from the well casing vent annually by direct measurement (high volume sampling, bagging, calibrated flow measuring instrument)...

Leak Detection and Repair

Issue 6: In Section 95669(b)(2) the phrase “exclusively for crude oil with an API Gravity less than 20” is used. It is our understanding that ARB’s intent is to exclude components on equipment and processes used in crude oil production where the API Gravity is less than 20.

Recommendation 6: WSPA suggests that section 95669(b)(2) be clarified as follows:

(2) Components, -- including components found on tanks, separators, wells, and pressure vessels – used exclusively for crude oil production with an API Gravity less than 20 averaged on an annual basis. The average annual API gravity shall be determined using certified reports submitted to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources.

Issue 7: WSPA will continue to point out that there is no Method 21 inspection procedure for pipes. Method 21 states, “place the probe inlet at the surface of the component interface where leakage could occur.” Therefore, there needs to be a suspected leak path in order to effectively implement Method 21, which does not exist on a run of pipe. If a pipe leak is detected by some other means such as audio-visual inspections, then it can be measured by Method 21. ARB is already requiring audio-visual inspections on pipes annually.

Recommendation 7: WSPA recommends that ARB exclude pipes from the quarterly Method 21 inspections. WSPA suggests that section 95669(g)(1) be clarified as follows:

(g) At least once each calendar quarter, all components, except components identified in Section 95669(e)(1), shall be tested for leaks of total hydrocarbons in units of parts per million volume (ppmv) calibrated as methane in accordance with US EPA Reference Method 21 excluding the use of PID instruments.

Issue 8: WSPA appreciates that ARB is allowing the use of OGI as a screening process for leak detection. As stated in previous comment letters, WSPA believes that operators should be allowed to use cost-effective technologies to meet the emissions reduction targets of the LDAR requirements. While OGI (followed by Method 21) is more cost-effective than Method 21 alone, there are several emerging control technologies that may be even more cost-effective in the future in achieving the target emissions reductions. WSPA understands that ARB is willing to consider any emerging LDAR technologies as an option, if such technologies can be proven to meet the emission reduction targets. However, this intent is not stated in the regulation which is limited to the use of OGI as a screening tool.

Recommendation 8: WSPA recommends that ARB state the intent that ARB will consider reviewing emerging technologies for LDAR and consider allowing such technologies as an option, if they can be proven to meet the emission reduction targets. WSPA recommends that this intent be made clear either in the regulatory text or in the Adopting Resolution/Final Statement of Reasons (FSOR).

Issue 9: As ARB has noted several times and as explained repeatedly in WSPA’s previous Comment Letters, the majority of facilities are already in a mature LDAR program implemented by a local air district. Several years of data demonstrates that these facilities have had very low leak rates. Unfortunately, ARB

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is requiring quarterly inspections indefinitely. WSPA is disappointed that ARB has removed the step-down provision that would act as a reward for operators that work hard at minimizing the number of leaks from their operations. WSPA re-iterates that removal of step-down provision will lead to extremely onerous and costly inspections without any significant emissions benefit.

Recommendation 9: WSPA recommends that ARB review leak data that will be reported under the LDAR program. WSPA requests that ARB include references in either the Adopting Resolution or the Regulation to allow evaluation for potential future re-consideration of step-down provision for operators who demonstrate very low leak rates.

Issue 10: There is a typographical error in Section 95669(i)(5)(A)(1).

Recommendation 10: WSPA suggests that section 95669(i)(5)(A)(1) be revised as follows:

1. A delay of repair to obtain parts or equipment shall not exceed 30 calendar days from the date identified in Table 24 by which repairs must be made, unless the owner or operator notifies the ARB Executive Officer to report the delay and provides an estimated time by which the repairs will be completed.

Vapor Collection Systems and Vapor Control Devices

Issue 11: Proposed section 95671(e) requires operators to remove circulation tanks from service by January 1, 2020 if vapor control systems cannot be installed. However, section 95668(b)(4) allows operators to continue to operate circulation tanks at a level below 95% vapor collection and control efficiency if the ARB Executive Officer makes a determination that controlling emissions is not possible or until 180 days after ARB has made a determination on a technology assessment, if such determination is not made by July 1, 2019. Proposed section 95671(e) does not take into account the potential for ARB to find, based on the technology assessment, that controlling emissions is not possible, or for the potential for a late determination by ARB as to a technology assessment as noted in section 95668(b)(4)(A). Both of these situations allow operators to continue to operate circulation tanks at a level below 95% vapor collection and control beyond January 1, 2020.

Recommendation 11: WSPA suggests that proposed section 95671(e) be clarified as follows:

If the collected vapors cannot be controlled as specified in sections 95671(b) through (d) of this subarticle, the equipment subject to the vapor collection and control requirements specified in this subarticle may not be used or installed and must be removed from service by January 1, 2019, and circulation tanks may not be used and must be removed from service by January 1, 2020, unless the ARB Executive Officer has made a determination under section 95668(b)(4) that controlling emissions is not possible or section 95668(b)(4)(A) applies.

Reporting Requirements

Issue 12: WSPA appreciates the inclusion of our previous comment in the clarification of annual reporting deadlines for previous year's data. WSPA's understanding of the reporting requirements in section 95673 is that the annual report for a calendar year will be due on July 1 of the following year. As such, the first annual report will be due July 1, 2019 for the data from calendar year 2018.

Recommendation 12: WSPA recommends that ARB clarify the reporting requirements as follows:

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(a) Beginning ~~in January 1, 2018~~ 2019, owners or operators of facilities located in sectors listed in section 95666 subject to requirements specified in sections 95668 and 95669 shall report the following information to ARB ~~for each calendar year~~ by July 1st of ~~each calendar~~ the following year ~~(first report for calendar year 2018 will be due July 1, 2019)~~ unless otherwise specified...