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October 15, 2013

Via web and email: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Mr. Richard Bode (rbode@arb.ca.gov)
Chief, Mandatory Reporting Regulation
California Air Resources Board
1001 I Street
Sacramento, CA95814

Subject: Western States Petroleum Association Comments on Proposed Amendments to the Regulation for Mandatory Reporting of Greenhouse Gas Emissions; 45-day Draft Comment.

Dear Mr. Bode:

Over the past several years, the Western States Petroleum Association (WSPA), a trade association representing 27 companies that explore for, develop, refine and transport petroleum and petroleum products in the Western United States has worked diligently with the California Air Resources Board (ARB) to gain consensus on definitions, procedures and methods essential to accurate and reliable implementation of reporting of Greenhouse Gas (GHG) emissions. We appreciate ARB's willingness to understand challenges that face reporters and the second and third compliance periods under the Cap and Trade (C-T) program approach.

In response to the ARB's release of Proposed Amendments to the Regulation for Mandatory Reporting of Greenhouse Gas Emissions, WSPA is submitting the following comments well in advance of the 45-day comment deadline. We do so to allow staff time to study these comments and prepare any necessary amendments prior to the October 24-25 Board Hearing; however, WSPA may submit additional comments on issues that may not have been included in this letter.

1. Mandatory Reporting and Recordkeeping (MRR) for Complexity Weighted Barrel

WSPA appreciates and supports ARB’s proposal at their October 7, 2013 workshop to use Complexity Weighted Barrel (CWB) instead of the Carbon Weighted Tonne (CWT). WSPA has included additional specific comments on other elements of staff’s proposal in its Cap & Trade Comment letter.

Recommendation:

WSPA supports staff’s proposal to use CWB instead of CWT and, in so doing we recommend that ARB make all necessary revisions/corrections in support of CWB in their Mandatory Reporting Regulation, the Cap & Trade Regulation, Proposed Amendments to the MRR regulation (45-day draft), and all other related guidance and reference documents as appropriate.

2. Section 95102 Definitions – Conventional & Unconventional Wells

The proposed amendment includes the following definitions for conventional and unconventional wells:

(105) “Conventional wells” mean crude oil or gas wells in producing fields that do not employ hydraulic fracturing to produce commercially viable quantities of natural gas.

(481) “Unconventional wells” means crude oil or gas wells in producing fields that employ hydraulic fracturing to enhance crude oil or gas production volumes.

Recommendation:

We recommend the definition of conventional wells be changed (as indicated in the **red font** below) to the following to align with the definition of “unconventional wells” as follows:

(105) “Conventional wells” mean crude oil or gas wells in producing fields that do not employ hydraulic fracturing to produce commercially viable quantities of **crude oil or** natural gas.

3. Section 95102 Definitions – Intrastate Pipeline

The proposed amendment includes the following definition for intrastate pipeline:

(254) “Intrastate pipeline” means any pipeline or piping system wholly within the state of California that is delivering natural gas to end-users and is not regulated as a public utility gas corporation by the California Public Utility Commission (CPUC), not a publicly-owned natural gas utility and is not regulated as an interstate pipeline by the Federal Energy Regulatory Commission. For purposes of this article, intrastate pipeline operators that physically deliver gas to end users in California are considered to be Local Distribution Companies [LDC]. Facilities that receive gas from an upstream LDC and redeliver a portion of the gas to one or more adjacent facilities are not considered intrastate pipelines.”

Our understanding is that a facility which receives gas from an upstream LDC and redistributes the gas to downstream facilities is not an intrastate pipeline. However, it is not clear whether a pipeline is an intrastate pipeline in the following situations:

- a) The facility processes or mixes gas received from an upstream LDC with other gases and redistributes the processed gas
- b) Total gas redistributed a greater amount of gas than the amount that was received
- c) The gas received or redistributed is part of a gas exchange

Recommendation:

WSPA recommends ARB clarify the above questions in the regulation or provide a guidance document for reporters.

4. Section 95102 Definitions

The proposed amendment includes the following definition for onshore petroleum and natural gas production facility.

(326) “Onshore petroleum and natural gas production facility” means all petroleum or natural gas equipment on a well pad, **or** associated with a well pad **or to which emulsion is transferred** and CO2 EOR operations that are under common ownership or common control including leased, rented, or contracted activities by an onshore petroleum and natural gas production owner or operator that are located in a single hydrocarbon basin as defined in 40 CFR §98.238. **When a commonly owned cogeneration plant is within the basin, the cogeneration plant is only considered part of the onshore petroleum and natural gas production facility if the onshore petroleum and natural gas production facility operator or owner has a greater than fifty percent ownership share in the cogeneration plant.**

Where a person or operating entity owns or operates more than one well in a basin, then all onshore petroleum and natural gas production equipment associated with all wells that the person or entity owns or operates in the basin would be considered one facility.

Based on CARB facility guidance document (http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg_oilgasfacility_definition.pdf, dated 2/29/12, page 3) for Petroleum and Natural Gas Systems, the “associated with” term is also inclusive of cogeneration facilities that supply steam and/or electricity to the well pad.

Cogeneration units located in the basin are included in the Onshore Production facility only if these units supply steam and electricity to the well pads. This guidance is consistent with EPA’s guidance on facility determination of industry segments. However, the text added to the existing definition requires cogeneration plants located in the basin to be included in the Onshore Production facility regardless of the industry segment that the units serve. Was this CARB’s intention and if so, will the guidance document change to reflect that? In addition, should the reporters re-assign cogeneration plants to facilities based on the above definition for the 2013 report?

Recommendation:

WSPA recommends ARB revise the statement added to the definition as shown in **red font** below:

When a commonly owned cogeneration plant is within the basin and serves well pad operations, the cogeneration plant is only considered part of the onshore petroleum and natural gas production facility if the onshore petroleum and natural gas production facility operator or owner has a greater than fifty percent ownership share in the cogeneration plant.

5. **Section 95130(a)(2) – Requirement for Verification of Emissions Data Reports**

ARB proposes revising Section 95130(a)(2) by adding to the list of verifications other program certifications or audits that include third party certification of environmental management systems to ISO 14001 and third party certification of energy management systems to the ISO 50001 standard. Based on ARB's proposal, these previous certifications would also count toward a facility's consecutive 6-year limitation for using the same verifier.

WSPA believes the level of scope and thorough review taken to perform AB32 third-party verifications is significantly different and more stringent from those that were conducted in the above mentioned audits. Because ARB would not consider any of these audits as an equal substitute to full-filling AB32 verification requirements going forward, it seems unfair for facilities to have to now count them if performed in the past. Many of these listed certifications were voluntarily performed in good faith to evaluate adherence with GHG requirements at the time, and reporters should not be penalized by having these certifications count toward their 6-year verifier limitation.

Recommendation:

Delete proposed language revisions in Section 95130(a)(2).

6. **Section 95131(e) – Requirement for Verification Services**

ARB proposes revising Section 95131(e) by including that if "**an error is identified**" the Executive Officer (EO) may set the positive or qualified verification aside and require the reporter to re-verify the MRR report by a different verification body. Additionally, ARB also added the following language:

"In instances where an error to an emissions data report is identified and determined by ARB to not affect the emissions or covered product data, the change may be made without a set aside of the positive or qualified positive verification statement".

WSPA understands ARB's desire to ensure the submittal of accurate emissions and covered product data; however, it is important to note that the MRR specifies reporters must ensure emission and covered product data meet a standard level of accuracy of at least 95%. While ARB states if an error is determined to not affect the emissions or covered product data the facility will not be required to set aside the positive or qualified verification, it does not specifically consider the fact that errors could be within $\pm 5\%$ and therefore meet the accuracy standards specified in the regulation.

WSPA recommends ARB revise their proposed revisions by clarifying that errors that do not affect the 95% level of accuracy for emissions and covered product data will not result in ARB setting aside a positive or qualified positive verification.

Recommendation:

ARB should revise the proposed language as follows (see red font):

“In instances where an error to an emissions data report is identified and determined by ARB to not affect the 95% accuracy standard for emissions or covered product data, the change may be made without a set aside of the positive or qualified positive verification statement.”

7. **Section 95103(h)(1) – Reporting in 2014 for 2013 Data:**

WSPA appreciates and supports the inclusion of Section 95103(h)(1) which will allow reporters the ability to utilize Best Available Methods (BAM) for quantifying and reporting 2013 GHG emissions as listed within each of the referenced regulatory sections. As stated earlier, WSPA supports ARB’s proposal to use CWB instead of CWT and recommends ARB make all necessary revisions and corrections to the MRR and all applicable document in support of CWB only.

Recommendation:

WSPA supports ARB’s recommendation to use CWB instead of CWT, and if it proceeds with CWB only the BAM provisions as proposed would apply to reporting of CWB throughput data in addition to all the other referenced sections listed in Section 95103(h)(1-11).

8. **2014 Data Collection and Reporting Requirements:**

WSPA appreciates ARB staff’s efforts in working closely with WSPA and WSPA members on the myriad of MRR reporting complexities involving data, monitoring, documentation and analysis including the verification process. As ARB and stakeholders have worked through the AB32 MRR program, it has become clear that reporting requirements are extraordinarily complicated. With each subsequent regulatory revision additional requirements have in many instances only increased the complexity resulting in significant challenges for reporters to ensure all new revisions and reporting requirements are met both within very stringent accuracy standards and timeframe schedules.

In that regard, while WSPA supports staff incorporating BAM provisions for the 2013 data collection year WSPA members are very concerned whether there is sufficient clarity and understanding on all aspects of the MRR reporting regulations going forward into 2014. For example, in December 2012 ARB issued a document entitled: “*Guidance on Reporting requirements for the Carbon Dioxide Weighted Tonne (CWT)*” (“Guidance”) to provide guidance on reporting requirements for CWT product meters. The guidance allowed reporters the ability to demonstrate CWT meter accuracy through 95103(k)(11) in lieu of having to follow 95103(k)(1-10) requirements. Further, in its 45 day draft ARB proposed revisions to Section 95103(k)(11) which incorporated “*process throughputs in sections 95113(l)(3)-(4)*”. As ARB is aware, WSPA supports these changes.

However, at ARB’s October 7, 2013 C&T workshop ARB released a document entitled: “Language to Support Complexity Weighted Barrel (CWB)” in support of the proposed revisions. Item (E) on page 2 of the document, states that all throughputs must follow the accuracy requirements outlined in section 95103(k). WSPA is concerned that this new

language is confusing and could be interpreted to mean that operators who plan on utilizing the ARB Guidance document to demonstrate CWB meter accuracy are now required to follow 95103(k)(1-10) requirements regardless of what the methodology may be as opposed to 95103(k)(11).¹

While we understand ARB's intent in the above referenced sections, it is unreasonable, if not impossible, to expect reporters to have a clear understanding of the final regulatory requirements they are subject to, especially because the proposed revisions will become final on or about the same time the regulation becomes effective (i.e., January 1, 2014). As in any regulation where revisions are proposed, facilities that are subject to these new requirements must be able to have sufficient time to comply with them once they become final.

To avoid any potential situations where a requirement was either not clear, a result of different interpretation, a new change, or simply unforeseen, WSPA recommends ARB incorporate the following recommendations that will help reporters better understand in advance and have options to comply with any new methodologies in data collection and calculation changes prior to the January 1 deadline date. This is especially important given the fact ARB is in the processes of finalizing their proposal to use CWB instead of CWT and the need exists for clear guidance going forward in 2014. The ability to identify options to reporting is particularly important in the event new requirements arise that were unforeseen or due to interpretation issues resulting in having to meet stringent deadline requirements (i.e., January 1 of each year).

Recommendation #1:

WSPA recommends ARB develop a list or table that describes the specific proposed changes so that it is clear to reporters which of the new changes would require data collection/reporting as a result of changes in methodology by January 1, 2014.

Recommendation #2:

WSPA recommends ARB extend the use of Best Available Methods (BAM) through 2014 for refinery product data reporting. This will allow reporters sufficient time to transition to the CWB methodology, including calculations and reporting requirements, as well as time to implement the alternative CWB product meter demonstration of accuracy requirements that are specified in ARB's Guidance document (which will need to be updated to reflect CWB requirements).

Recommendation #3:

WSPA recommends ARB clarify in the Guidance document that reporters who voluntarily elect to pull and inspect product CWB meters (on a scheduled turnaround basis); may list the

¹This confusion is of concern to reporters and would limit their flexibility on their ability to select various methods of demonstrating meter accuracy. For example, if a reporter voluntarily elects to pull and inspect a CWB process meter; they should be able to do that pursuant to the Guidance document. A reporter can list when that meter will be scheduled to be pulled and inspected in their Monitoring Plan. However; if the reporter is subject to the postponement request requirement in Section 95103(k)(9); it would not only provide an additional burden unnecessarily on the reporter; but will act as a disincentive to pull and inspect product meters.

meters and planned time schedule in their Monitoring Plan in lieu of having to submit a postponement request pursuant to Section 95103(k)(9).

Recommendation #4:

WSPA recommends ARB revise Section 95103(m)(5) to clarify that operators have the ability to request an alternative monitoring methodology approval from the Executive Officer during the data collection year[WSPA’s recommended language shown in red].

“Section 95103

- (m) *Changes in Methodology.* Except as specified below, where this article permits choices between different methods for the monitoring and calculation of GHGs **and product data**, the operator or supplier must make this choice by January 1, 2013, unless new or revised regulatory changes were made to reporting requirements or calculations, that requires the reporter to install new equipment or revise calculations; in which case the method must be in place on January 1 of the following year. ~~unless the use of an alternative calculation method is approved in advance by the Executive Officer.~~ An operator or supplier can utilize an alternative calculation method pursuant to Section 95109(A) & (B), and ARB Guidance; within the data collection year, subject to approval in by the Executive Officer.

~~(5) — When regulatory changes impose new or revised reporting requirements or calculation methods on an operator or supplier, the monitoring and calculation method must be in place on January 1 of the year in which data is first required to be collected pursuant to the reporting requirements.~~

Recommendation #5:

Consistent with our earlier comments, WSPA recommends ARB’ revise the December, 2012 “Guidance on Reporting requirements for the Carbon Dioxide Weighted Tonne (CWT)” (“Guidance”) to CWB metric units.

9. Section 95104(e) – Increase in Facility Criteria Pollutant & Toxic Air Contaminant (TAC) Emissions

ARB proposes including Section 95104(e), entitled “*Increase in Facility Criteria Pollutant & Toxic Air Contaminant Emissions*”. This section will require operators to report whether an increase in toxic air contaminants (TACs) or criteria emissions occurred from a facility.

Specifically, the proposed MRR amendment would require facilities to evaluate and report *any* changes in facility operations or status that may have potentially resulted in an increase in emissions of criteria pollutants or toxic air contaminants in relation to the previous data year and specify the reasons for such increases including *any* production changes or *any* regulatory changes or *any* efficiency changes.

While WSPA understands the reason for requesting this information is for Adaptive Management planning and review purposes, we are very concerned with ARB's approach for obtaining this information. As we noted in meetings with ARB, in addition to the numerous concerns about having to track, monitor and report criteria/TAC emission data that is already managed by Air Districts, the regulations as proposed are "one-sided" because they only ask for increases rather than for decreases in emissions. Hence, as written, because only increases are to be reported, ARB and the public will see a skewed and erroneous result.

The requirement to only report increases is problematic. Add to that challenge the fact that, as ARB is aware, many WSPA member facility operations are large and complex in size and scope. These facilities have for over 40 years been subject to air quality regulations and compliance requirements within their respective local air districts. These regulations and reporting requirements track, monitor and maintain air quality permitting, criteria and TAC emissions inventories and monitoring data as required by Federal and State air quality requirements. Much of the data that ARB wishes to receive already exists within local air district programs.

WSPA believes that this massive effort is not efficient for the purposes stated in the Plan. Facilities may be undertaking this resource and time intensive effort to just report that there have been no emission changes. In addition, WSPA believes that the effort may not provide the specific information that ARB hopes to gather. For example, ARB recognizes that changes in emissions can exist from year to year as a result of slight changes in operations that are well within and allowed by air district permits. Further, requiring criteria and TAC emission data information within the GHG MRR reporting program also raises the following concerns:

- How will this information be reviewed and evaluated?
- If a facility expands its operation, obtains all required local, State and Federal air quality permits, and the result is an increase in permitted criteria pollutants, how will the increase in emissions be reviewed by ARB within its Plan?
- Will the information submitted for this new requirement now be subject to a verification or assessment percent accuracy standard?
- Will this information be subject to the penalty provisions in Section 95107?

Finally, the proposed language would require a new extensive tracking, monitoring and reporting system to report criteria and TAC pollutant information to the ARB according to the MRR definitions of facilities, which may differ from district program definitions and requirements. Additionally, air districts have varying time schedules by which they develop their annual criteria and TAC emission inventories as well as specific procedures (i.e., BAAQMD calculates the inventory for facilities).

Recommendation:

Delete Section 95104(e) for all of the reasons explained above. Instead, ARB should work with the regulated community toward identifying a process where information already managed and maintained by Air Districts can be used for ARB Adaptive Management planning purposes.

10. Section 95104(d) & 95112(a)(5)(C)

WSPA commented previously in the “discussion draft” regarding need for clarification on proposed revisions to Sections 95104(d) and 95112(a) (5) (C) respectively. WSPA reiterates its comments as follows:

- **Section 95104(d)(4) – Emissions Data Report Contents & Mechanism**

ARB added amendments in Section 95104(d)(4) requiring that if a facility’s boundary includes more than one cogeneration system, boiler or steam generator and each system produces thermal energy for different end users or on-site processes and operations, the facility will be required to report the disposition of generated thermal energy by unit/system or by group of units with the same dispositions and by the type of thermal energy product provided. Based on WSPA’s understanding, the requirement for an operator to report the disposition of generated thermal energy by “unit/system or by group of units” is defined as a group of units (e.g. cogeneration turbines) that are located at one facility location of which the reporting of thermal energy that goes to a single third party can be reported as a single unit. For example, if there is a cogeneration unit with 3 gas turbines and the generated thermal energy is sold to a single third party operator (i.e.: a utility) the data from all three turbines can be combined and reported as a single data.

In addition to referencing “particular end-user” ARB also requires the reporting of the disposition of thermal energy for “on-site industrial processes”.

Recommendation:

As stated in our earlier comments, WSPA recommends ARB clarify that for reporting of thermal energy for “on-site industrial processes” the total amount of thermal energy can be reported in total if the total thermal energy is used by the same facility. For example, if a refinery operates a cogeneration unit on-site and the thermal energy produced by the cogeneration unit is used by the same on-site refinery, the refinery can just report the total amount of thermal energy that is used within its facility boundary.

In addition, ARB should provide workshops/training to reporters to ensure there is a clear understanding of both the regulatory reporting requirements including the Cal-eGGRT tool for reporting the disposition of thermal energy.

- **Section 95112 Electricity Generation and Cogeneration Units**

ARB proposes new amendments that state if a facility includes more than one electricity generating unit or cogeneration system and each unit/system or each group of units generate electricity for different particular end-users or retail providers or electricity marketers, the operator must separately report the disposition of generated electricity by unit/system or by group of units.

Recommendation:

Similar to our comments described above for Section 95104(d)(4), ARB should clarify that if a facility generates its own thermal energy within the facility boundaries and the thermal energy is used by the same company within its own on-site industrial processes then the operator can report the total amount of thermal energy as a total.

11. Section 95105 (c)(7) – Recordkeeping Requirements

ARB proposes adding in the reference “AGA Report No.3 (2003) Part 2”, as a reference document to be used for orifice plate inspection requirements. WSPA believes that API’s “Fuel Gas Measurement document; API Technical Report 2571; First Edition, March 2011” should also be used as a basis for orifice plate inspections. This API technical report compliments the “AGA Report No. 3(2003)” and “ISO 5167-2 (2003)”, and it provides additional guidance for meters in refinery fuel gas service that ensure compliance with MRR metering requirements. Facilities should be able to use this additional reference especially if it provides more appropriate guidance that is consistent with “AGA Report No.3 (2003) Part 2” and “ISO 5167-2 (2003)”.

Additionally, WSPA requests ARB clarify that in the event there is a disagreement with a verifier over an orifice plate inspection based on the referenced fuel measurement documents, the reporter can utilize alternative engineering methods to demonstrate orifice plate accuracy.

Recommendation:

WSPA recommend ARB include API’s “Fuel Gas Measurement document; API Technical Report 2571; First Edition, March 2011” that can be used in conjunction with “AGA Report No.3 (2003) Part 2” and “ISO 5167-2 (2003)”

12. Section 95113 – Petroleum Refineries

As stated previously, WSPA supports ARB’s proposal to use CWB instead of CWT and recommends ARB make all necessary revisions and corrections as necessary to support CWB.

13. Hydrogen

• **Section 95114(e)(1) and (e)(2)**

ARB is proposing revisions to Section 95114(e) (1) and (e) (2) that will require reporters to sample for carbon and hydrogen content for each feedstock for hydrogen production units. Furthermore, we noted that the sampling frequency for carbon content from refinery fuel gas differs in sections (e) (1) and (e) (2). Section 95114(e) (1) states monthly sampling for carbon content and hydrogen content from fuels such as refinery fuel gas is required. Section 95114(e) (2) states daily sampling for carbon content and molecular weight from fuels such as refinery fuel gas is required. WSPA does not believe that daily sampling for carbon content and molecular weight from fuels is necessary to develop representative values.

It is not clear to WSPA why ARB is requiring reporters to sample for the hydrogen content and how this data will be useful in better delineating process and combustion emissions. Most facilities already track process feed and combustion emissions separately so there should be no need for adding additional reporting obligations that are unnecessary. WSPA is concerned that

complying with requirements that do not provide any clear reason or value may also have the unintended result of having to install additional metering or special instrumentation processes unnecessarily.

- Section 95114(j)

With respect to Section 95114(j): WSPA requests ARB provide more clarification in this section. For example, if hydrogen gas is sold then the "...annual masses of on-purpose hydrogen and by-product hydrogen produced must be reported (metric tons)". Currently, as written, it is difficult to determine if hydrogen gas is NOT sold, then are the on-purpose and by-product hydrogen produced required to be reported?

Recommendations:

WSPA recommends that ARB remove the requirement in (e) (1) for "hydrogen content" data and the sampling requirements for both (e) (1) and (e) (2) be done consistently on a monthly basis.

WSPA also recommends clarifications to Section 95114(j) on hydrogen gas product data.

14. Section 95131(b)(9) – Emissions Data Report Modifications

ARB proposes revisions to Section 95131(b) (9) that will require reporters to fix all correctable errors that affect covered emissions, non-covered emissions or covered product data. While WSPA members make every effort to ensure compliance with the accuracy requirements of the reporting regulation it is unreasonable to require all errors be corrected especially if the differences are of such small magnitude that they are insignificant and below the $\pm 5\%$ accuracy level specified in the regulation.

WSPA recommends ARB revise the following section to allow reporters flexibility to work with the verification team in determining what correctable errors actually need to be corrected. Additionally, WSPA believes correctable errors that are within $\pm 5\%$ should not be considered a non-conformance.

Recommendation:

To incorporate the improvements noted above we recommend the following revisions (red font) to Section 95131(b) (9):

"The verification shall use professional judgment in the determination of correctable errors as defined in section 95102(a), including whether differences are not errors but result from truncation of rounding or averaging, or errors that are of such small magnitude they are determined to be insignificant.

15. Section 95150(a)(2)

ARB has added the definition of "emulsion" to 95102(a)(149) as follows:

(149) “Emulsion” means a mixture of water, crude oil, associated gas, and other components from the oil extraction process that is transferred from an existing platform that is permanently affixed to the ocean floor and that is located outside the distance specified in the “offshore” definition of this article, to an onshore petroleum and natural gas production facility. For purposes Appendix B, emulsion means a mixture of crude oil, condensate, or produced water in any proportion.

The term emulsion can be used in several different contexts and processes within the oil and gas industry. By this definition the ARB is clarifying, for the purposes of the MRR, that requirements related to the term “emulsion” apply exclusively to fluids produced offshore.

ARB has also added the following phrase to the definition of “Onshore Petroleum and Natural Gas Production” industry segment in 95150(a)(2).

“Crude oil and associated gas that is piped to an onshore production facility as an emulsion as defined in section 95102(a) must follow the requirements of section 95156(a)(7)-(10) and meet the metering requirements of section 95103(k) by measuring the emulsion before the first separation tank at the onshore production facility and not at the platform.”

The current proposed definition of onshore production segment may cause confusion in the reporting requirements of 95156(a)(7)-(10).

Recommendation:

WSPA recommends that the phrase added to 95150(a)(2) be clarified to reflect the specific definition of “emulsion” in the context stated in Section 95102(a)(149) as follows:

“Crude oil and associated gas that is piped to an onshore production facility as an emulsion **from an offshore platform** as defined in section 95102(a) must follow the requirements of section 95156(a)(7)-(10) and meet the metering requirements of section 95103(k) by measuring the emulsion before the first separation tank at the onshore production facility and not at the **offshore** platform.”

Also, revise the definition in 95150(a)(2) to include “**or to which emulsion is transferred**” to make it consistent with the proposed amended definitions of “facility” and “onshore petroleum and natural gas production facility” found elsewhere in the MRR and Cap and Trade Regulations

Finally, ARB should make definitions in the Cap and Trade and MRR regulations consistent. For example: The definitions of “Onshore Petroleum and Natural Gas Facility” are not consistent between the Mandatory Reporting Regulation and Cap and Trade Regulation:

- a) Cap and Trade definition of "facility" (proposed 134(C), p. 19-20): "all petroleum and natural gas equipment on a well-pad, or associated with a well pad or to which emulsion is transferred"

- b) MRR definition of "onshore petroleum and natural gas production facility" (proposed 326, p. 15): "all petroleum and natural gas equipment on a well-pad, or associated with a well pad or to which emulsion is transferred"
- c) MRR definition of "facility" (proposed 171, p. 11): "all petroleum and natural gas equipment on a well-pad, associated with a well pad or to which emulsion is transferred"

The last of the three definitions (proposed 171, p. 11) which uses "or" only once appears to be the clearest.

Recommendation:

Revise the Cap and Trade definition of "facility" (proposed 134(C), p. 19-20) and the MRR definition of "onshore petroleum and natural gas production facility" (proposed 326, p. 15) to be consistent with the MRR definition of "facility" (proposed 171, p. 11).

The revised definitions of "facility" (proposed 171, p. 11) and "onshore petroleum and natural gas production facility" (proposed 326, p. 15) strike the word "hydrocarbon" from the phrase "single hydrocarbon basin." However, the same change has not been made to the relevant definition of "facility" in the Cap and Trade regulation (proposed 134(C), p. 19-20).

Recommendation:

Revise the Cap and Trade definition of "facility" (proposed 134(C), p. 19-20) to be consistent with the MRR definitions.

16. BAM for 2014 Emulsion Reporting

Upstream facilities impacted by the proposed definition of emulsion (from an offshore platform) will have to begin complying with the additional measurement and reporting requirements associated with this volume starting in 2014, through the use of flash testing. A rule finalized by the end of 2013 does not allow impacted facilities sufficient time to evaluate and make, if needed, infrastructure changes necessary to comply with the newly-applicable flash test requirements. In such situation, engineering calculations and other approved methods would be an appropriate substitute for flash testing in the interim.

Recommendation:

Allow facilities which are newly subject to the emulsion testing and reporting requirements as a result of the proposed regulation changes to use Best Available Methods for 2014 and for such time as reasonably necessary to complete infrastructure changes.

17. Section 95153(f) – Crude Oil Well Completion and Workover GHG emission reporting requirement.

ARB proposed revisions to Section 95153(f) to require reporters to measure and report vented GHG emissions associated with crude oil well completion and well workover work. Applying this new requirement to "crude oil wells" is inappropriate because the amount of emissions, if any, is small and is primarily fugitive in nature during oil well completion and workover work.

USEPA's April 12, 2010 Subpart W Background Technical Support Document (TSD) references previous emission studies for both the natural gas industry segment and the petroleum industry segment. Based on these studies and other relevant information, the USEPA concluded that measurements were required to quantify emissions from gas well workovers and completions, but that the emissions from oil wells were so small and were sufficiently known as to not require inclusion in Subpart W reporting.

Emissions from oil wells are very small for a number of reasons. One significant factor is the comparatively low pressure at which the oil exists in the reservoir. It is this low pressure that usually requires pumps to bring the oil to the surface while gas wells exist at pressures high enough to allow the gas to flow freely to the top of the well. In addition, operators are required to follow regulatory standards set by the Division of Oil, Gas & Geothermal Resources (DOGGR) to ensure the well is fully under control prior to conducting any well completion or workover work. These standards include a variety of well control equipment and procedures that are based on the characteristics of the well and require operators to ensure there is no fluid or gas emission flowback during completion and well workover work.

WSPA conducted a preliminary member survey of the cost to install and operate a measurement system on individual well completion and workover equipment described in the proposed section. Using recently published USEPA emission factors for oil and gas operations (see below), the estimated cost of metering (not controlling) emissions was in excess of \$100,000 per ton of CO₂e emissions.

The above costs are based on the assumption metering equipment exists to capture GHG emissions during completion and well workover work. It is important to note that because any emissions during oil well completion and workover work are most likely to be fugitive in nature, it is not technologically feasible to utilize any of the proposed calculation methodologies stated in 95153(f)(1) and (2). Therefore, the costs are simply estimates to illustrate the expense of the proposed requirement compared with the emissions that might be quantified.

Alternatively, because there exists no technologically feasible way to perform measurements to quantify any GHG emissions, ARB may consider utilizing recently published U.S. EPA emission factors for quantifying GHG emissions associated with Oil & Gas operations (USEPA Technical Support Document for NSPS OOOO and table below).

Recommendation:

Delete the reference: "Crude oil and" from section 95913(f). If ARB remains concerned about emissions from crude oil well workover and completion activities, then the agency should work with stakeholders to develop an alternative emission factor method before proceeding further.

Table 4-2. Uncontrolled Emissions Estimates from Oil and Natural Gas Well Completions and Recompletions

Well Completion Category	Emissions (Mcf/event)	Emissions (tons/event)		
	Methane	Methane ^a	VOC ^b	HAP ^c
Natural Gas Well Completion without Hydraulic Fracturing	38.6	0.8038	0.12	0.009
Natural Gas Well Completion with Hydraulic Fracturing	7,623	158.55	23.13	1.68
Oil Well Completions	0.34	0.0076	0.00071	0.0000006
Natural Gas Well Recompletion without Hydraulic Fracturing	2.59	0.0538	0.0079	0.0006
Natural Gas Well Recompletion with Hydraulic Fracturing	7,623	158.55	23.13	1.68
Oil Well Completions	0.057	0.00126	0.001	0.0000001

Minor discrepancies may exist due to rounding.

- a. Reference 4, Appendix B., pgs 84-89. The conversion used to convert methane from volume to weight is 0.0208 tons methane is equal to 1 Mcf of methane. It is assumed methane comprises 83.081 percent by volume of natural gas from gas wells and 46.732 percent by volume of methane from oil wells.
- b. Assumes 0.1459 lb VOC /lb methane for natural gas wells and 0.8374 lb VOC/lb methane for oil wells.
- c. Assumes 0.0106 lb HAP/lb methane for natural gas wells and 0.0001 lb HAP/lb methane for oil wells.

18. Section 95156(a)(7)-(10) Additional Data Reporting Requirements.

ARB has amended the reporting requirements for onshore production facilities as follows -

- (7) Barrels of crude oil produced using thermal enhanced oil recovery. This includes the crude oil fraction piped as an emulsion as defined in section 95102(a);
- (8) Barrels of crude oil produced using methods other than non-thermal enhanced oil recovery. This includes the crude oil fraction piped as an emulsion as defined in section 95102(a);
- (9) MMBtu of associated gas produced using thermal enhanced oil recovery. This includes the associated gas fraction piped as an emulsion as defined in section 95102(a);
- (10) MMBtu of associated gas produced using methods other than non-thermal enhanced oil recovery. This includes the associated gas fraction piped as an emulsion as defined in section 95102(a).

As stated above, the term emulsion can be used in several different contexts and processes within the oil and gas industry. The current proposed definition of onshore production segment may cause confusion in the reporting requirements of 95156(a)(7)-(10).

Recommendation:

WSPA recommends that the requirements be amended (see red font) to reflect the specific definition of “emulsion” in the context stated in Section 95102(a)(149) as follows:

- (7) Barrels of crude oil produced using thermal enhanced oil recovery. **This includes any the crude oil fraction piped to an onshore petroleum and natural gas production facility as an emulsion from an offshore platform as defined in section 95102(a);**
- (8) Barrels of crude oil produced using ~~other than~~ **non**-thermal enhanced oil recovery. **This includes any the crude oil fraction piped to an onshore petroleum and natural gas**

production facility as an emulsion from an offshore platform as defined in section 95102(a);

(9) MMBtu of associated gas produced using thermal enhanced oil recovery. **This includes any the-associated gas fraction piped to an onshore petroleum and natural gas production facility as an emulsion from an offshore platform as defined in section 95102(a);**

(10) MMBtu of associated gas produced using methods ~~other than non~~-thermal enhanced oil recovery. **This includes any the-associated gas fraction piped to an onshore petroleum and natural gas production facility as an emulsion from an offshore platform as defined in section 95102(a).**

19. Section 95156(c) Additional Data Reporting Requirements.

ARB has amended the reporting requirement to add gas plants associated with onshore production facilities as follows:

(c) The operator of a natural gas liquid fractionating facility, or a natural gas processing facility, or an onshore petroleum and natural gas production facility with a gas plant that produces less than 25 MMscf per day must report the annual production of the following natural gas liquids in barrels corrected to 60 degrees Fahrenheit:

EPA and ARB do not define a gas plant as is currently included in the phrase. However, a natural gas processing plant is defined in Section 95150(a)(3). As such, WSPA requests that ARB rephrase the statement to include “natural gas processing plant” instead of “gas plant.” In addition, the added phrase assumes that all natural gas processing plants are included in onshore production facilities. This may or may not be true. WSPA requests that ARB rephrase the statement to remove this assumption and clarify requirements for facilities that are subject to Cap & Trade requirements.

Recommendation:

WSPA recommends ARB rephrase the reporting requirement as follows (see red font):

(c) The operator of a natural gas liquid fractionating facility, ~~or a natural gas processing facility as defined in 95150(a)(3),~~ **or an onshore petroleum and natural gas production facility with a gas plant a natural gas processing plant that produces processes less than 25 MMscf per day and is subject to Cap & Trade regulation** must report the annual production of the following natural gas liquids in barrels corrected to 60 degrees Fahrenheit:

20. Section 95156(d) Additional Data Reporting Requirements

ARB had added the following reporting requirement:

“(d) Onshore natural gas processing facilities that have an annual average throughput of 25 MMscf per day or greater must also report the volume of associated gas, waste gas, and natural gas processed (MMBtu).”

Existing Section 95122(d)(1) and 40 CFR 98.406(a)(3) require natural gas processing facilities to report the following:

(3) Annual volumes in Mscf of natural gas received for processing.

Because these are existing requirements for natural gas processing facilities, the proposed section 95156(d) is redundant.

Recommendation:

Remove the redundant reporting requirement.

21. Section 95157(c)(19) Activity Data Reporting Requirements.

Existing Sections 95156(a)(9) & (10) already require reporting of MMBtu of associated gas which is the covered product under the Cap & Trade regulation. In addition, ARB had proposed added the following reporting requirement:

“(19) For onshore petroleum and natural gas production and natural gas distribution combustion emissions, report the following:

(H) Annual volume of associated gas produced (Mscf) using thermal enhanced oil recovery and non-thermal enhanced oil recovery.

ARB states in its Initial Statement of Reasons that this requirement is being added in order to obtain a statewide average heat content for associated gas and to allow comparison of associated gas production data reported to ARB and to DOGGR. We understand the intention of this provision, but would like to inform ARB that the different level of granularity required by the ARB and DOGGR reporting may cause the data to not match neatly. In addition, volumes of associated gas production (Mscf) are activity data and are not covered product data and therefore should not be subject to materiality assessments.

Recommendation:

WSPA recommends ARB clarify this reporting requirement as follows:

“(19) For onshore petroleum and natural gas production and natural gas distribution combustion emissions, report the following:

(H) Annual volume of associated gas produced (Mscf) using thermal enhanced oil recovery and non-thermal enhanced oil recovery. This data is subject to conformance check only.

22. Refinery Workshop (October 7, 2013)

The workshop held by ARB on October 7 may have raised issues that could affect MRR requirements. We are reviewing these issues and will work with ARB to identify questions and comments that should be submitted to ARB prior to final approval by the Board.

Thank you for taking the time to review these comments and recommendations. Should you have any questions, feel free to contact me or Mike Wang (cell: 626-590-4905); email: mike@wspa.org).

Regards,

A handwritten signature in blue ink, appearing to read "Cathy A. Boyd". The signature is fluid and cursive, with the first name "Cathy" being the most prominent.

Cc: Edie Chang, ARB (echang@arb.ca.gov)
Steve Cliff, ARB (scliff@arb.ca.gov)
Dave Edwards, ARB (dedwards@arb.ca.gov)