

State of California
AIR RESOURCES BOARD

**Notice of Public Availability of Modified Text and
Availability of Additional Documents**

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE REGULATION
FOR THE MANDATORY REPORTING OF GREENHOUSE GAS EMISSIONS

Public Hearing Date: December 16, 2010
Public Availability of Modified Text Date: July 25, 2011
Deadline for Public Comment: August 9, 2011

Deadline for Public Comment Period has been extended to August 11, 2011

Background

At its December 16, 2010 public hearing, the Air Resources Board (ARB or Board) considered proposed amendments to California's existing Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (title 17, California Code of Regulations, section 95100 et seq.) (Mandatory Reporting Regulation), which was developed pursuant to requirements of the California Global Warming Solutions Act of 2006.

At the hearing, the Board adopted Resolution 10-43, which endorsed the revisions proposed in the Staff Report: Initial Statement of Reasons released on October 28, 2010, with a number of modifications proposed by staff and identified at the hearing. Resolution 10-43 and other regulatory documents for this rulemaking action are available online at the following website:

<http://www.arb.ca.gov/regact/2010/ghg2010/ghg2010.htm>

Modifications to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions are being released for public comment concurrently with revisions to the proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (title 17, California Code of Regulations, section 95800 et seq.) (Cap-and-Trade Regulation), which provides the requirements for the cap-and-trade program and covered entities' compliance obligations. Proposed revisions to the Mandatory Reporting Regulation have been harmonized with both federal greenhouse gas reporting requirements and the proposed revisions to the Cap-and-Trade Regulation.

In accordance with Government Code section 11346.8, in Resolution 10-43 the Board directed the Executive Officer to adopt the proposed reporting regulations, with the modifications identified in the Resolution and other conforming modifications as may be appropriate, after making the modified language and any additional supporting documents available to the public for a comment period of no less than 15 days. The Board also directed the Executive Officer shall

consider written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration, if the Executive Officer determines that it is warranted.

Summary of Proposed Modifications

Below, staff provides an overview summary of the modifications to the originally proposed regulations. The overview summary does not include modifications to correct typographical or grammatical errors, or changes in numbering or formatting, nor does it include all of the non-substantive revisions made to improve clarity. All references to sections 95100, 95100.5, 95101, 95102, 95103, 95104, 95105, 95106, 95107, 95108, 95109, 95110, 95111, 95112, 95113, 95114, 95115, 95116, 95117, 95118, 95119, 95120, 95121, 95122, 95123, 95129, 95130, 95131, 95132, 95133, 95150, 95151, 95152, 95153, 95154, 95155, 95156, 95157, and 95158 are to title 17 of the California Code of Regulations. Also, all references to sections of the regulation shown below are to the modified text included for this review, and not the originally proposed text.

For a complete account of all modifications in the proposed regulations, please refer to the double-underline and double-strikeout sections of the regulation in Attachment 1, available here:

<http://www.arb.ca.gov/regact/2010/ghg2010/ghg2010.htm>.

A. Modifications to Subarticle 1 and General Requirements for Greenhouse Gas Reporting

This section of the regulation provides the general reporting requirements applicable to reporters. Here, staff also summarizes some modifications to the regulation that apply to multiple sectors or reporting categories.

Modifications to Section 95100. Table of Contents.

Staff is proposing to delete section 95158 from the Table of Contents to reflect staff's proposed deletion of this section from the regulation.

Modifications to Section 95100.5. Purpose and Scope.

A foundation of the ARB Regulation for the Mandatory Reporting of Greenhouse Gas (GHG) Emissions is the United States Environmental Protection Agency (U.S. EPA) GHG Reporting Rule. To maintain consistency with the U.S. EPA requirements, and as directed by the Board in Resolution 10-43, staff updated section 95100.5(c) of the proposed ARB regulation to incorporate by reference revisions to the U.S. EPA regulation promulgated after the original ARB proposal was released. Language was also added to clarify that reporting entities must

follow the requirements of this article where any incorporated provisions of the U.S. EPA GHG Reporting Rule appear to conflict with it.

Modifications to Section 95101. Applicability.

Staff has added new language to clarify what facility and supplier types have an emissions threshold, and what the threshold is, in relation to the U.S. EPA regulation.

For the purposes of “Abbreviated Reporting,” staff removed the requirement to include process, fugitive, or vented emissions in determining applicability (§95101(b)). These revisions apply only to small facilities that meet the “Abbreviated Reporting” criteria, and were added in response to public comments and Board direction. Language was also added to §95101(b)(1) to clarify that process and vented emissions must be counted toward the 25,000 metric ton CO₂e threshold used in ARB’s proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols (title 17, California Code of Regulations, section 95800 et seq.) (Cap-and-Trade Regulation or Cap-and-Trade Program). These revisions are necessary to ensure that reporting entities understand when they are subject to the regulatory thresholds.

Staff has also modified the applicability requirements for fuel and CO₂ suppliers to remove producers of biomass-derived transportation fuels from a reporting obligation because the information they provide can be obtained through their compliance with the Low Carbon Fuel Standard. In addition, staff is proposing that exports from California be included by carbon dioxide suppliers when calculating emissions relative to the reporting threshold (§95101(c)).

Staff also modified the regulation to exclude reporting of fugitive emissions from farms, livestock operations, and landfills (§95101(f)). This is consistent with original staff intent and addresses stakeholder comments received. In addition, staff added language to clarify which source categories listed in the U.S. EPA GHG Reporting Rule are excluded from reporting under California’s reporting regulation. This modification is necessary to clarify which source categories listed in the federal rule are required to report in California. For reporters that no longer meet applicability requirements based on GHG emissions levels, staff reduced the requirement for continued reporting from 5 years to 3 years (§95101(h)), as this is sufficient to document the emissions reductions.

Modifications to Section 95102. Definitions.

Staff added, deleted, and modified a number of definitions in section 95102. The deleted definitions were deleted because the terms defined are no longer used in the regulation. Some of the new or modified definitions are necessary to implement changes to electricity sector reporting requirements. Additional

changes were made for consistency with changes in proposed regulatory programs, and with changes made by U.S. EPA in rulemakings subsequent to the initial staff proposal. Several other definitions were added or modified to improve clarity.

Modifications to Section 95103. Greenhouse Gas Reporting Requirements.

Staff incorporated several changes regarding timing and schedules in response to public comments received and for regulatory program needs. Based on Board direction in Resolution 10-43 and to assist with the transition to new reporting requirements for smaller facilities (between 10,000 and 25,000 metric tons CO₂e), staff extended the initial reporting deadline for these smaller facilities by one year, until June 1, 2013. This change is only for “Abbreviated Reporting” facilities that emit less than 25,000 metric tons of CO₂e per year, and does not apply to facilities which are already reporting generated electricity (§95103(a)(7)). Staff also reorganized and consolidated the Abbreviated Reporting requirements for clarity in section 95103(a). Also, for Abbreviated Reporting, inclusion of process, fugitive, and vented emissions are no longer required for determining applicability or for reporting (§95101(b) and §95103(a)).

To support overall regulatory program needs, the verification deadline was set to September 1 for all reporting entities. This shortens the verification period by one month for electric power entities (§95103(f)). Staff believes that with careful attention to the process, the revised deadline will be workable, since the volume of data subject to review is reduced through the revisions to section 95111. This change is necessary to ensure that verification is completed within the timeline required by the Cap-and-Trade Regulation.

Staff clarified several requirements with respect to reporting in 2012 in section 95103(h). Because the new regulation is not in effect in 2011, the year for which emissions will be reported in 2012, the regulation provides facility operators the option of reporting under U.S. EPA requirements the first year, regardless of whether monitoring systems or procedures are in place that may be needed for separate California requirements. In addition, the more stringent ARB missing data substitution requirements are not to be used for 2012 reporting, but must be used for 2013 reporting. These changes are proposed in response to stakeholder comments and are necessary to ensure reporting entities understand when the requirements of this article are in effect.

Staff has also added language to reporting requirements for biomass fuels. Clarifying paragraphs have been added at §95103(j)(1)-(3) to address stakeholder concerns related to solid fuels, including forest-derived wood and wood waste, and to indicate that the measurement accuracy requirements of §95103(k) apply to biomass fuels carrying a compliance obligation. End users of solid biomass would report the mass of fuel consumed by fuel type, and end users of forest biomass would also report fuel supplier contact information. These

revisions are needed not only to respond to stakeholder comments, but also to clarify reporting requirements for biomass fuels.

Staff modified section 95103(k) to more fully specify the measurement accuracy requirements that would apply when fuels are subject to a compliance obligation under the Cap-and-Trade Regulation. The basis of these requirements was previously included by reference as part of the U.S. EPA's GHG reporting rules. However, with the December 17, 2010 revisions to the U.S. EPA rule, it was necessary to directly incorporate the bulk of the U.S. EPA requirements into the ARB regulation while modifying them to ensure measurements are carried out with sufficient accuracy to support a Cap-and-Trade Program. Language was also added to allow fuel measurement accuracy to be demonstrated in lieu of calibration at continuously operating facilities where calibration is not feasible.

In response to stakeholder comments, staff deleted the specific requirement to carry out weekly fuel monitoring (previously at §95103(l)), but added to the GHG Monitoring Plan requirements in section 95105 language to require a fuel monitoring plan "to verify on a regular basis the proper functioning of fuel measurement equipment that is subject to the accuracy requirement of this article."

Staff has included a new paragraph in section 95103(l) that clarifies the need for separate verification of product data that are reported as specified in Subarticle 2. Product data are used to support allowance allocation and benchmarking in the Cap-and-Trade Program, so evaluations of conformance and material misstatement that are separate from those used for emissions would be required.

Modifications to Section 95104. Greenhouse Gas Emissions Data Report.

Section 95104(a) was modified to include reporting of readily available Energy Information Administration and California Energy Commission identification numbers, as applicable. This is necessary to assist data analysis for multiple facility types. Section 95104(b) was also modified to correct an oversight in the publicly noticed October 2010 version as to which text is supposed to be italicized. Staff modified section 95104(d) to better organize and clarify the reporting requirements for purchases of electricity or thermal energy. Requirements were added to require reporting of electricity provided or sold, and thermal energy provided or sold, in order to support full energy balance analysis.

An additional sentence was added to section 95104(e) in order to specify that reporters are not responsible for submitting data that cannot be submitted via the ARB GHG reporting tool. This update is necessary to ensure that any unforeseen limitations in the reporting tool do not create a reporting non-conformance due to the inability of reporters to enter and submit required data.

Modifications to Section 95105. Document Retention and Record Keeping Requirements.

In response to stakeholder comments, staff reduced the records retention requirement from 10 years to 7 years (95105(a)) for specified facilities. This should be sufficient to meet program needs, and is consistent with Western Climate Initiative (WCI) requirements.

In response to stakeholder comments, weekly fuel monitoring requirements for facilities were dropped from section 95103 (see above), but included as a recommended option in section 95105(c). The new language clarifies that this option would need to be exercised by operators who want to use the missing data substitution alternative for fuel consumption without load ranges in section 95129(d)(2).

Commenters pointed out that the GHG Monitoring Plan requirements, both those specified by U.S. EPA and those additional in the ARB staff proposal, did not apply to electric power entities. In response to these comments, staff added language in lieu of those requirements for electric power entities, specifying information to include in a separate and more appropriate GHG Inventory Program (section 95105(d)).

Modifications to Section 95106. Confidentiality.

In response to public comments, staff has modified section 95106 to clarify that data which is reported to and has been released by U.S. EPA shall be considered public information by ARB.

Modifications to Section 95107. Enforcement.

Based on stakeholder comments and internal review, staff modified the enforcement language in section 95107 to clarify the scope of the enforcement provisions. These modifications include clarification that violations based on each unreported metric ton of carbon dioxide equivalent and violations based on the failure to measure, collect, record, or preserve information required by the article are not also subject to a daily violation. Staff has also added language to refer directly to the penalty factors in Health and Safety Code section 42403(b) which ARB must consider when determining any penalties.

Modifications to Section 95108. Severability.

No modifications were made to section 95108.

Modifications to Section 95109. Standardized Methods.

No modifications were made to section 95109.

**B. Modifications to Subarticle 2
Reporting Requirements and Calculation Methods for Specific Types
of Facilities, Suppliers, and Entities**

This subarticle includes specific reporting requirements for each reporting sector, and for the stationary combustion reporting requirements that apply to multiple sectors. For several sectors, such as glass production, lime manufacturing, and pulp and paper manufacturing, staff made modifications to the type of production data reported to better support ARB program needs. Staff has summarized substantive revisions below. Please refer to the attached proposed revisions to review all changes.

Modifications to Section 95110. Cement Production.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95110 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Several additional comments raised by the cement industry are addressed in section 95115.

Modifications to Section 95111. Electric Power Entities.

Throughout the section, staff made minor edits to consistently identify metric tons of CO₂e (MT of CO₂e). Staff also added clarifying language to section 95111(a), including a specification that delivered electricity must be disaggregated by first point of receipt, that the purchase of generation from specified variable renewable resources and the replacement electricity delivered must be separately reported, and that qualified exports (as defined) must be separately reported. This clarifying language is necessary to ensure that reporting entities understand what and how they must report.

In response to public comment, staff has removed the transmission loss factor from the unspecified default emission factor (§95111(b)). Staff has also removed the requirement to apply a system emission factor to imported power supplied by multi-jurisdictional retail providers to be consistent with WCI recommendations, and has corrected the compliance obligation equation for multi-jurisdictional retail providers (§95111(b) and (d)).

To address stakeholder requests for clarity regarding which reported emissions carry a compliance obligation and which are needed for inventory purposes, staff has added an equation to section 95111(b) that shows which reported emissions are covered under section 95852(b) of the Cap-and-Trade Regulation. A second

equation provides for calculation of the adjustment for replacement electricity associated with variable renewable electricity purchases (§95111(b)(5)).

Staff has added language to section 95111(c) that permits certain retail providers (those who do not import power and are required to report only retail sales) to opt out of verification requirements as long as they consider their reported information to be non-confidential. Retail sales data are not tied to a compliance obligation and are generally treated as public information, so verification should not be necessary. The calculation for reporting emissions associated with electricity not delivered to California, applicable to retail providers who own or operate higher-emitting GHG facilities, was moved to section 95111(c) from section 95111(g)(5) to consolidate additional reporting requirements that apply to retail providers and not marketers. These modifications are necessary to provide clarity to reporting entities.

In section 95111(g), staff has added specification options for claims to specified source deliveries. Entities would report whether the power is from a source that has historically served California, is from a federally owned hydroelectric facility either under contract or delivered by an exclusive marketer, or is from a new facility or new capacity at an existing facility. This will assist entities trying to report within the bounds of resource shuffling limitations in the Cap-and-Trade Regulation, and inform the verification process. Also in section 95111(g), clarifying language has been added to the delivery tracking conditions for specified sources, and registration requirements for claims to specified facilities have been modified in response to stakeholder comments.

Modifications to Section 95112. Electricity Generation and Cogeneration.

To simplify reporting for smaller units, this section of the regulation was modified to allow facilities with a total facility nameplate capacity less than one megawatt to report their electricity generating units as general combustion sources, instead of following the additional requirements of section 95112 (§95112).

Staff included several new definitions to describe data elements for these additional reporting requirements, and some existing terms and definitions were revised for clarity and consistency (§95102). For clarity and to distinguish from cogeneration activities, staff has added the term “bigeneration” to describe electricity generating units that simultaneously produce electricity and steam from the same fuel source but do not utilize waste heat.

To support decisions related to allowance allocation and carbon cost compensation under the cap-and-trade program, staff proposes to revise the reporting requirements for energy production data to capture a complete energy balance at the facility and unit levels. These energy balance provisions are also consistent with AB 32 requirements to fully account for greenhouse gas emissions from all electricity consumed in the state. At the facility level, the

additional reporting requirements include estimates of electricity purchased, destined for the grid, sold to particular end-users, and used by other on-site industrial processes and operations, as well as thermal energy that is purchased, and generated thermal energy provided or sold to an end-user, used to support power generation, or used for other on-site industrial processes and heating/cooling applications (§95112(a)). At the unit level, reporters would provide electricity net generation and gross generation, and thermal energy including total thermal output (§95112(b)).

To support analysis involving other data sets, staff has included reporting of commonly used facility identification information, such as CEC, EIA, PURPA Qualifying Facility, and CAISO ID numbers, where applicable to the facility. Staff has also added a requirement to include facility classification information based on operational control, cogenerator-steam host relationships, and electricity sales. Included is a requirement to report basic information about electricity end-user and thermal hosts. For both cogeneration and bigeneration units, staff has included a requirement for reporters to provide a one-time submittal of an energy flow and metering diagram; this is necessary to serve as a point of reference for staff assistance to reporters, verification and audits, as well as providing information about unit aggregation and waste heat utilization (§95112(a)).

For fuels data, staff modified the use of weighted or arithmetic average high heat value and carbon content to make it consistent with the U.S. EPA GHG reporting rule. Additional specificity was included for fuel consumption relevant to bottoming cycle cogeneration units (§95112(b)).

Staff has added a clarification to recognize that Part 75 and Subpart D facilities should follow the instruction in Subpart D, not Subpart C (§95112(c)). Other language in section 95112(c) was added to the 45-day text, but was not correctly shown as being added with underlining and was incorrectly shown in italics. Staff has therefore shown this paragraph in double-underlining and correctly italicized. This modification is necessary to ensure that the public may comment on this paragraph.

Staff has added a requirement for geothermal facilities to report the steam quantity used when the information is used to estimate emissions, because this is needed to verify the emission estimates (§95112(e)).

For facilities that are currently subject to mandatory GHG reporting and operate renewable energy generation systems greater than 0.5 megawatts, staff added a requirement (§95112(g)) to report basic information on such systems, including nameplate capacity and electricity sold to the grid or other end users. This applies to on-site solar installations, wind energy installations, and hydroelectric power generation at facilities that are not otherwise exempted under section 95101(f), and is necessary to complete the facility energy balance.

Modifications to Section 95113. Petroleum Refineries.

Staff is proposing that changes made final in December 2010 to Subpart Y (Petroleum Refineries) of the U.S. EPA Mandatory Reporting Rule be applicable for reporting to ARB. In particular, emissions from sour gas treated off-site would be subject to reporting, and a second calculation equation would be added for fluid catalytic crackers and fluid cokers.

Because of safety considerations related to sampling, staff has modified the regulation to allow use of an emission factor for coke drum venting in section 95113(f). This is a small source and the approach is consistent with the U.S. EPA rule.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95113 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95114. Hydrogen Plants.

In order to be consistent with U.S. EPA requirements, staff has added language to clarify that third-party hydrogen producers are subject to reporting. A provision has also been included in the data reporting requirements (section 95114(g)) where reporters calculate and report emissions associated with hydrogen production which are reported elsewhere in the reporting regulation. This modification is needed to avoid double-counting of these emissions. Staff also added a requirement to report the annual mass of liquefied hydrogen produced in section 95114(i).

Language in section 95114(b) was added to the 45-day text, but was not correctly shown as being added with underlining and was incorrectly shown in italics. Staff has therefore shown this paragraph in double-underlining and correctly italicized. This modification is necessary to ensure that the public may comment on this paragraph.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95114 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95115. Stationary Fuel Combustion Sources.

Staff reviewed numerous changes to the requirements for stationary fuel combustion sources approved by U.S. EPA on December 17, 2010, in consultation with other Western Climate Initiative jurisdictions. Most of these changes are proposed for inclusion in the ARB reporting regulation through incorporation of the December 17, 2010 action. Staff has retained CO₂ quantification requirements, proposed in October 2010, that are intended to ensure accurate calculation of carbon content data for variable fuels when selecting from the “Tiers” available in the U.S. EPA regulation (§95115(c)). Clarifying language was added to enable Tier 1 to be selected for pipeline quality natural gas measured in therms, and to maintain requirements to weight fuel use values when determining average annual carbon content.

Language in section 95115(a) was added to the 45-day text, but was not correctly shown as being added with underlining and was incorrectly shown in italics. Staff has therefore shown this paragraph in double-underlining and correctly italicized. This modification is necessary to ensure that the public may comment on this paragraph.

Staff has added language to section 95115(e) to address the calculation of biomass fractions of fuels. Specifically, operators may analyze fuel samples rather than exhaust samples for partially biogenic fuels when the biomass fraction is unknown. This change addresses a stakeholder concern over the lack of sensitivity of exhaust sampling to smaller biomass fractions. Language and equations have also been added to clarify how to determine biomass fractions from mixtures of natural gas and biomethane or biogas.

In response to stakeholder comments, staff has also proposed to exclude CEMS reporters from the fuel sampling requirements of 40 CFR §98.34. CEMS reporters would still be required to report annual fuel use information. Such information is essential for many ARB analyses (§95115(f)-(g)).

Staff has included a new paragraph in section 95115(h) that applies some limitation to U.S. EPA’s allowed use of aggregation of units with a common fuel source. This revision is necessary because individual industrial sectors (delineated by source category in the federal regulation) may receive allowances in ARB’s Cap-and-Trade Program that are specific to each sector. Thus, staff is proposing that emissions cannot be combined across source categories. As an example, emissions from a hydrogen plant operated by a petroleum refinery must be reported apart from the refinery’s emissions.

Although U.S. EPA specifically exempted pilot lights from reporting in the final action published December 17, 2010, staff is proposing that pilot light emissions be included in emissions reports. These emissions are sometimes significant enough to exceed *de minimis* levels. The language in section 95115(i) would

allow engineering methods to be used to calculate these emissions when pilot lights are not metered. Pilot lights are a potential source of emissions reduction, so emissions quantification is necessary.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95115 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95116. Glass Production.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95116 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95117. Lime Manufacturing.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95117 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95118. Nitric Acid Production.

Staff has added certain product data reporting requirements as paragraph 95118(d), which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95118 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95119. Pulp and Paper Manufacturing.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95119 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95120. Iron and Steel Production.

Staff has proposed modifications to certain product data reporting requirements, which are necessary to support section 95891 of the Cap-and-Trade Regulation. In addition, the full missing data reporting requirements of sections 95120 and 95129 will apply starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to Section 95121. Suppliers of Transportation Fuels.

In section 95121, staff modified text to clarify the original intent that “components” refers to the Blendstocks, Distillate Fuel Oils and Biomass-Based Fuels and Biomass that are mixed to make finished gasoline and diesel fuels, and not the individual molecular species that make up gasoline. Staff also clarified that denatured ethanol is reported as 100% ethanol, and the denaturant is not reported under the regulation. In addition, reporting requirements were removed for producers and importers of biomass-derived fuels, because this information is already reported to the ARB via the Low Carbon Fuel Standard (LCFS) regulation. However, position holders and enterers would still report biomass-derived fuels (consistent with Board of Equalization Reporting), but only limited verification of the data would be required. These modifications are necessary to clarify reporting requirements and to ensure reporting entities understand what and how they must report.

Modifications to Section 95122. Suppliers of Natural Gas, Natural Gas Liquids, and Liquefied Petroleum Gas.

In response to stakeholder comments, staff has proposed modifications to section 95122 to clarify that system deliveries between capped local distribution companies (LDCs) are directly accounted for by the delivering and receiving LDCs. Emissions for non-system deliveries to capped entities would still be subtracted out separately by ARB (§95122(b)(3)-(5)). These modifications were included following discussions with stakeholders which clarified that there is no need for ARB to maintain responsibility for system delivery accounting, which can be adequately checked during the verification process. Staff also included provisions in section 95122(b)(6) to allow the use of emission factors and heat value data (Tier 2) for estimating emissions from natural gas that is not pipeline quality, if such emissions do not exceed 3 percent of total emissions estimated under section 95122. A high Btu gas emission factor (54.67 kg CO₂/MMBtu) found in the current regulation would be used for all gas above 1100 Btu/scf. Allowing the use of a Tier 2 method similar to pipeline quality natural gas reporting, instead of requiring a Tier 3 method, is necessary to reduce the complexity and burden of reporting for this small portion of emissions.

Staff has also added certain product data reporting requirements as paragraph 95122(f). These revisions are necessary to clarify reporting requirements for

product data and to support the Cap-and-Trade Program, including, specifically, section 95891 of the Cap-and-Trade Regulation.

Modifications to Section 95123. Suppliers of Carbon Dioxide.

Staff has modified language to apply the full missing data reporting requirements of sections 95123 starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

C. Modifications to Subarticle 3. Additional Requirements for Reported Data

Modifications to Section 95129. Substitution for Missing Data Used to Calculate Emissions from Stationary Combustion and CEMS Sources.

This section applies to reporting when certain required data sampling requirements cannot be met, and substitute data must be used to complete reporting. Staff has clarified that the requirements in section 95129(d)(1)-(3) are optional for sources that are not required to meet the accuracy standard specified in section 95103(h) and for sources that do not utilize fuel consumption data for emission calculations. Staff has also added language in section 95129 to clarify that the requirements of section 95129 do not relieve operators from complying with the other sections of the article. This clarification is needed to reduce confusion and address stakeholder comments.

In addition, staff has extended the implementation date for the missing data provisions to 2013 to allow for proper implementation of monitoring systems. Also, the missing data provisions apply only when the unit is combusting fuel, and they do not apply to units with CEMS, when fuel quantities are not used to estimate non-*de minimis* emissions. These changes were made in response to stakeholder comments.

Staff has clarified the various options available to facility operators when fuel meters malfunction. For example, they may substitute upstream or downstream meters, and strap-on meters may be used as an alternative for interim fuel measurement. Staff has also added further clarification on using the “maximum potential fuel flow rate.”

Staff has deleted language on cumulative missing data elements that specified that a nonconformance occurs when more than 20 percent of annual emissions cannot be calculated from directly measured data (previous §95129(j)). Upon further consideration staff believes it is not appropriate to establish a quantitative threshold for nonconformance, which is defined more simply as a failure to meet a regulation requirement. Changes in subarticle 4 allow for a qualified positive

verification statement to be rendered when nonconformance does not result in material misstatement.

**D. Modifications to Subarticle 4.
Requirements for Verification of Greenhouse Gas Emissions Data
Reports; Requirements Applicable to Emissions Data Verifiers**

This subarticle provides the requirements for third-party verification of reporting entities' GHG emissions data reports. Several sections and subsections were modified in response to public comments, in order to synchronize deadlines between the ARB GHG Reporting Regulation and the Cap-and-Trade Program, and in response to Board direction. Modifications to subarticle 4 were made in the following areas: the addition of product data to the verification process; the missing data requirements; the petition process for disagreements between verifiers and reporters; the procedures and timeframes for assigned emissions levels; biomass-derived fuel verification requirements; and requirements for Air Quality Management Districts and Air Pollution Control Districts.

**Modifications to Section 95130. Requirements for Verification of Emissions
Data Reports.**

Staff has proposed modifications to section 95130 to further clarify when full verification services are required. These modifications are needed to ensure reporting entities and verification bodies understand the verification requirements.

Modifications to Section 95131. Requirements for Verification Services.

Staff modified section 95131 to clarify that verification services include an assessment of both GHG emissions data and product data requirements for each GHG emission data report verified. This includes a product data verification statement and an emissions data verification statement. These changes were necessary to provide consistency with the GHG emissions and product data requirements in subarticles 2 and 5 and to support the Cap-and-Trade Program.

In addition, staff has modified section 95131(b)(8) to clarify how verification bodies must check product data during their required data checks. This modification is needed to ensure that verifiers are reviewing product data consistent with the requirements for emissions data. Staff has also modified the material misstatement requirements (formerly in section 95131(b)(14)) in order to ensure that verification bodies are conducting their material misstatement assessments consistently for emissions and product data. These modifications are now found in section 95131(b)(12).

Staff has modified the missing data substitution verification requirements (formerly in section 95131(b)(16), now in section 95131(b)(14)) to add more

specificity to the verification requirements for verifiers who are reviewing GHG emissions data reports with missing data to be consistent with the requirements for missing data used to calculate emissions in section 95129.

In order to make the process of completing a verification report more clear for verifiers and reporting entities, staff has proposed modifications to section 95131(c)(3) which inform the verifier what must be included in the verification report. These changes are needed for clarity in the verification process. Staff also made modifications to the petition process for disagreements between verifiers and reporters in section 95131(c)(4) to clarify the process and ensure it occurs within the timeframe needed to support the Cap-and-Trade Program. These modifications include removing the requirement to get re-verified following an Executive Officer final determination. Staff also modified the procedures and timeframes for assigned emissions levels in section 95131(c)(5) to clarify the process and ensure it occurs within the timeframe needed to support the Cap-and-Trade Program. Staff has also proposed additional language in section 95131(c)(3)(D) to specify how lead verifiers and lead verifier independent reviewers must meet their attestation requirements. This change is necessary to provide clarity to verifiers and to ensure consistency with attestation language in both the Mandatory Reporting Regulation and the Cap-and-Trade Regulation. The time provided for various verification-related activities was changed from five days to five *working* days based on public comments received.

Section 95131(i) includes the requirements for providing verification services for biomass-derived fuels. In response to public comments, staff has included detailed modifications to this subsection for the verification of biomass-derived fuels in the absence of a biomass-derived fuel certification program. These modifications are necessary to assist verifiers with the assessment of these fuels. Specific modifications clarify the verification requirements of biogas and biomethane, urban, agricultural and forest wood waste, biodiesel and fuel ethanol, municipal solid waste and tires.

Modifications to Section 95132. Accreditation Requirements for Verification Bodies, Lead Verifiers, and Verifiers of Emissions Data Reports and Offset Project Data Reports.

Staff has proposed modifications to clarify that verification body accreditation applicants must include a list of any enforcement actions filed against the verification body along with their application (§95132(b)(1)(B)). This is necessary to ensure accurate applications are filed.

In addition, staff has proposed clarifications to the requirements for offset project specific verifiers in order to support Cap-and-Trade Program needs (§95132(b)(5)(B)).

In order to streamline accreditation requirements, staff has also proposed modifications to section 95132(c) to clarify the training and examination requirements for verifiers. These modifications are necessary to ensure consistency amongst verifiers.

Modifications to Section 95133. Conflict of Interest Requirements for Verification Bodies for Emissions Data Reports.

Staff has modified the attestation language in section 95133(e)(1)(F). This modification is necessary to provide consistency with attestation language used in other parts of the regulation. Staff has also included new subsection 95133(h) regarding conflict of interest requirements for Air Quality Management Districts and Air Pollution Control Districts based on the Board's direction in Resolution 10-43. The proposed language for section 95103(h) was included as Attachment B to Resolution 10-43 at the public hearing on December 16, 2010. In conjunction with the addition of section 95133(h), staff has also modified section 95133(d) to include conflict of interest self-evaluations submitted pursuant to section 95133(h) in the "medium" conflict of interest situations. This modification is necessary to clarify which conflict of interest situations are considered "medium."

E. Modifications to Subarticle 5. Reporting Requirements and Calculation Methods for Petroleum and Natural Gas Systems

This subarticle includes the reporting requirements for petroleum and natural gas systems. The proposed changes were made in response to stakeholder comments and consultation, coordination with the Western Climate Initiative, harmonization with U.S. EPA requirements, and staff analysis. U.S. EPA finalized its reporting rule for Oil and Natural Gas Systems (Subpart W) on November 30, 2010, and staff worked with colleagues in other WCI jurisdictions to review the final rule. Much of the final U.S. EPA rule is now proposed for direct incorporation by reference, and staff has proposed deleting now-redundant language. However, staff has retained the rigor that is needed for California's Cap-and-Trade Program. Staff is proposing additional revisions that correct minor errors, provide clarification, and improve data quality.

Modifications to Section 95150. Definition of the Source Category.

Staff has modified section 95150 to clarify that the source categories are specified in the U.S. EPA rule and that GHG emission reporting is required for natural gas booster stations in both the onshore natural gas processing and onshore natural gas transmission industry segments. This is necessary to harmonize with the November, 30, 2010 final U.S. EPA Subpart W and results in the removal of the pre-November 30, 2010 language.

Modifications to Section 95151. Reporting Threshold and Reporting Entity.

Staff has modified section 95151 to clarify that operators of onshore petroleum and natural gas production facilities must apply the reporting threshold in section 95101 basinwide and report for each subset of fields as defined in the U.S. EPA rule. Staff also clarified that natural gas processing facilities must include owned or operated residue gas compression equipment in determining whether the facilities meet the reporting thresholds in section 95101. This is necessary to harmonize with the November, 30, 2010 final U.S. EPA Subpart W and results in the removal of the pre-November 30, 2010 language.

Modifications to Section 95152. GHGs to Report.

Staff has modified section 95152 to clarify that operators must report GHG emissions sources as required by the November 30, 2010 version of the U.S. EPA reporting rule and the modifications included in the remainder of subarticle 5. These modifications are necessary to harmonize with U.S. EPA requirements and result in the removal of pre-November 30, 2010 language.

Modifications to Section 95153. Calculating GHG Emissions.

In order to harmonize with U.S. EPA, and based on the Board's direction in Resolution 10-43 and in response to public comments, a number of the reporting methodologies in section 95153 were modified and these modifications are discussed briefly below:

In section 95153(a), reporting requirements for all high bleed natural gas powered pneumatic devices and pneumatic pumps are identical to those for low bleed natural gas powered pneumatic devices in section 95153(b) until 2015. Beginning January 1, 2015, all natural gas consumption in high bleed devices must be metered. This approach allows operators significant lead time to either swap out high bleed devices and reduce emissions where possible or install the requisite metering.

In the case of emissions from Acid Gas Removal vents (section 95153(c)), staff has limited the choice of methods to three of the four U.S. EPA methods. The computational equation for one of the methods was modified slightly to correct for errors which were introduced at high CO₂ concentrations. These changes do not modify prior data collection requirements. Similarly, the calculation equation for desiccant dehydrators in section 95153(d) was modified slightly for ease of use.

A second equation for wells equipped with plunger lifts in the Well Venting and Liquids Uploading section (section 95153(e)) was added to harmonize with the U.S. EPA requirements.

In the case of emissions resulting from well completions and well workovers (section 95153(f)), staff has adopted the same methodology for both conventional wells and those wells where hydraulic fracturing takes place. In addition, clarification was added in this section to better operationally define sonic and subsonic flow regimes.

Staff has limited choices to two of the five U.S. EPA computational methods for onshore production storage tanks in section 95153(i). A model approach is adopted for storage tanks where production levels are 10 barrels per day or less, while a more robust methodology, which requires operators to measure the Gas-to-Oil ratio, is used for production storage tanks receiving more than 10 barrels/per day.

Sections 95153(m) and (n) cover venting emission from centrifugal and reciprocating compressors respectively. In these sections staff has modified the approach used by U.S. EPA in order to support the needs of the Cap-and-Trade Program. Staff has included reporting requirements for compressors at booster stations in the natural gas processing and transmission sectors but introduced a compressor horsepower (hp) threshold. Reporters must use the more stringent U.S. EPA method for compressors with a rated horsepower of 250hp or greater, while for compressors less than 250hp, reporters may use the much simpler, emission factor-based U.S. EPA approach.

To account for a significant source of potentially overlooked GHG emissions, staff has included in section 95153(z) requirements and methods to report methane (CH₄) emissions from “produced water.”

Modifications to Section 95154. Monitoring and QA/QC Requirements.

In order to harmonize with U.S. EPA requirements, staff has modified section 95154 to clarify that operators must follow the monitoring and QA/QC requirements specified in the November 30, 2010 version of the U.S. EPA GHG Reporting Rule. This harmonization has resulted in the removal of pre-November 30, 2010 language.

Modifications to Section 95155. Procedures for Estimating Missing Data.

Staff has modified language to apply the full missing data reporting requirements of sections 95155 starting in the 2013 reporting year for 2012 data. Missing data substitution in 2012 will instead rely on the requirements in the U.S. EPA regulation.

Modifications to section 95156. Data Reporting Requirements.

Staff has modified the data reporting requirements in section 95156 to clarify which product data is needed to support ARB’s Cap-and-Trade Program. Staff

added language to make vented emissions sources operated by local distribution companies “reporting only” to correct double-counting of their fuel supplier emissions and to allow for the use of U.S. EPA methods to estimate these emissions.

Modifications to section 95157. Records that Must be Retained.

In order to harmonize with U.S. EPA requirements, staff has modified section 95157 to clarify that operators must follow the document retention requirements specified in the November 30, 2010 version of the U.S. EPA GHG Reporting Rule.

Modifications to section 95158. Default Emission Factor Tables.

Section 95158 is no longer necessary because the modifications in sections 95150-95157 explained above incorporate the default emission factor tables in the November 30, 2010 version of the U.S. EPA GHG Reporting Rule. As such, staff has proposed deleting section 95158.

Differences from the July 15, 2011 Discussion Draft.

On July 15, 2011, ARB staff hosted a public workshop to solicit comments on a pre-release “discussion draft” of the proposed revisions to the Mandatory Reporting Regulation. In the modified text included in Attachment 1 to this Notice, staff has included a few additional minor changes from the “discussion draft.” Staff incorporated minor edits to section 95111 to consistently identify the units for calculating and reporting carbon dioxide equivalent as “metric tons of CO₂e” or “MT of CO₂e.” Staff has retained the description of the default emission factor for unspecified electricity, a parameter in the equation in section 95111(b)(1), which was inadvertently stricken in the discussion draft. Staff also made minor edits in sections 95111(b)(3) and 95111(b)(4) for consistency with the decision to remove the requirement to apply a system emission factor to wholesale imported power supplied by multi-jurisdictional retail providers.

In section 95131(c)(3)(D), staff clarified how verifiers must meet their attestation requirements. Also, the time allowed for submitting information for petitioning-related data requests was changed from five days to five working days in sections 95131(c)(4)(B) and 95131(c)(5). The time allowed for submitting an updated conflict of interest form to the ARB was also changed from five days to five working days in section 95131(a)(4). An incomplete sentence in section 95131(i)(2)(B)(1) was corrected, and a specific reference to the Cap-and-Trade Regulation was made more general in section 95131(b)(13)(C), to reflect updates in that regulation. Some minor non-substantive typographical errors were also corrected.

All of these changes are also described in the Summary of Proposed Modifications above.

In the interest of completeness, staff has also added to the rulemaking record and invites comments on the following additional documents:

Additional Documents Added to the Rulemaking Record

Based on updates to the U.S. EPA GHG Reporting Rule and a clarification to calibration requirements, staff added the following documents for incorporation by reference: *Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems, Final Rule* (U.S. EPA, 40 CFR Part 98, November 30, 2010); *Mandatory Reporting of Greenhouse Gases, Final Rule* (U.S. EPA, 40 CFR Part 98, December 17, 2010); *Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems, Final Rule, Grant of Reconsideration* (U.S. EPA, 40 CFR Part 98, April 25, 2011); *Standard Test Method for Butadiene Purity and Hydrocarbon Impurities by Gas Chromatography* (ASTM D2593-93, Reapproved 2009), *EIA Oil and Gas Field Code Master List* (U.S. Energy Information Administration, 2009); and *Measurement of fluid flow by means of pressure differential devices inserted in circular-cross section conduits running full – Part 2: Orifice plates*. (ISO 5167-2, March 1, 2003). These documents are available upon request for review.

Availability of the Attachments and Additional Documents

By this notice, the modified regulatory language, provided as Attachment 1 to this notice, are being made available for public comment prior to final action by the Board's Executive Officer. The attachment is available here:

<http://www.arb.ca.gov/regact/2010/ghg2010/ghg2010.htm>

Comments

Written comments will only be accepted on the additional documents and the modifications identified in this notice, and may be submitted by postal mail or electronic mail submittal as follows:

Postal mail: Clerk of the Board, Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Please note that under the California Public Records Act (Gov. Code § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this

information may become available via Google, Yahoo!, and any other search engines.

In order to be considered by the Executive Officer, comments must be directed to ARB in one of the two forms described above and received by ARB by 5:00 p.m., on the deadline date for public comment listed at the beginning of this notice. Only comments relating to the additional documents and the modifications identified in this notice will be considered by the Executive Officer.

If you need this document in an alternate format (i.e., Braille, large print, etc.) or another language, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 no later than five (5) business days from the release date of this notice TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Si necesita este documento en un formato alterno (por decir, sistema Braille, o en impresión grande) u otro idioma, por favor llame a la oficina del Secretario del Consejo de Recursos Atmosféricos al (916) 322-5594 o envíe un fax al (916) 322-3928 no menos de cinco (5) días laborales a partir de la fecha del lanzamiento de este aviso. Para el Servicio Telefónico de California para Personas con Problemas Auditivos, ó de teléfonos TDD pueden marcar al 711.

Attachment

(Available at: <http://www.arb.ca.gov/regact/2010/ghg2010/ghg2010.htm>)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see ARB's website at www.arb.ca.gov