CALIFORNIA AIR RESOURCES BOARD

Covered Product Data General Reporting and Verification Guidance

for California's Mandatory GHG Reporting Program

Introduction

This document provides general guidance for reporting and verification of covered product data pursuant to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (title 17, California Code of Regulations, section 95100 et seq.) (MRR). Additional sector-specific covered product data guidance is available for hydrogen producers, cement producers, tomato processors, petroleum and natural gas producers, and petroleum refineries and coke calciners. These documents can be found on the Mandatory Greenhouse Gas (GHG) Reporting Guidance Documents website.

Unlike MRR, this guidance does not have the force of law, does not establish new mandatory requirements for GHG reporting, and in no way supplants, replaces, or amends any of the legal requirements of the Regulation. Conversely, an omission or truncation of regulatory requirements in this guidance does not relieve operators of their legal obligation to fully comply with all requirements of MRR.

This document addresses the following areas related to covered product data: relevant definitions, North American Industry Classification System (NAICS) code and general reporting requirements, accuracy and calibration requirements, and verification requirements. General reporting and accuracy requirements can be found in sections 95103(k)-(l) of MRR. Reporting requirements for specific covered product data are listed in sections 95110, 95113-95120, 95124, and 95156 of MRR.

The current version of this document contains only minor revisions to update legal language and improve readability.

1 NAICS Code Reporting

Industrial allowance allocation eligibility under the Cap-and-Trade Regulation is determined, in part, by NAICS code. To receive allocation under a product-based benchmark listed in Table 9-1 of the Cap-and-Trade Regulation, entities must have reported a NAICS code listed in both Tables 8-1 and 9-1 of the Cap-and-Trade Regulation and report the associated covered product data through the California Electronic Greenhouse Gas Reporting Tool (Cal e-GGRT). If a facility expects to receive industrial allocation under more than one product benchmark, it must report the NAICS code for each industrial activity. Primary and additional NAICS codes can be

reported in Cal e-GGRT. NAICS code descriptions can be found at: https://www.census.gov/eos/www/naics/.

An entity performing an activity listed in Table 8-1 of the Cap-and-Trade Regulation, but not listed in Table 9-1 of the Cap-and-Trade Regulation, may be eligible for allocation under the Cap-and-Trade Regulation's energy-based allocation methodology. Because NAICS codes are used to determine eligibility for allowance allocation, verifiers must confirm pursuant to section 95131(b)(4) of MRR that the NAICS codes reported accurately represent the operator's activities. Pursuant to section 95131(b)(9) of MRR, if a reporting entity initially reports an inaccurate NAICS code(s) and then does not submit a revised emissions data report to correct the NAICS code(s), the result will be an adverse product data verification statement.

2 Covered Product Data Reporting Methodologies

Covered product data reporting methods may differ by product. Most covered product data reporting is based on production quantities of the finished products. Reporters may use two methodologies for reporting production quantities of non-intermediate covered product data: (1) production data or (2) sales data with an inventory adjustment (pursuant to sections 95103(k)(7) and 95103(k)(11), respectively). These two methodologies are considered equivalent. Operators must receive advance approval from CARB to change their reporting methodologies for covered product data (pursuant to section 95103(m)).

Because not all covered product data are reported as production values, operators and verifiers must pay special attention to both the MRR reporting requirements for each covered product and the definitions for covered product data.

For the following covered product data, non-production quantities must be reported:

- Clinker *consumed* (section 95110(d));
- Limestone and gypsum *consumed for blending* (section 95110(d));
- Complexity weighted barrel *throughputs* or *inputs* (section 95113(l)(3));
- Liquid hydrogen *sold* (section 95114(j));
- Plaster sold as a separate finished product and stucco used to produce saleable plasterboard (section 95115(n)(3));
- Nameplate horsepower of turbine generator units *tested* (section 95115(n)(4));
- Glass *pulled* (section 95116(d)); and

- Natural gas *processed* (section 95156(d)).

Further, for the following covered product data, production data must be reported when the products are not sold (i.e., they are intermediate, not final, products):

- Hot rolled steel produced (section 95115(n)(1));
- Pickled steel sheet produced (section 95115(n)(1));
- Adjusted hulled and dried pistachios, and flavored pistachios (section 95115(n)(17));
- Blanched almonds, flavored almonds, and pasteurized almonds (section 95115(n)(17));
- Intermediate dairy ingredients produced (section 95115(n)(16)); and
- Sulfuric acid produced from sulfuric acid regeneration (section 95115(n)(20)).

MRR also requires reporting of non-covered product data. These data must be evaluated by the verifier for conformance only and are not included in the covered product data material misstatement evaluation. This guidance document does not address the reporting of non-covered products.

3 Measurement Accuracy and Meter Calibration Requirements

Section 95103(k) specifies the measurement accuracy and meter calibration requirements applicable to covered product data. If measurement accuracy cannot be demonstrated, operators must follow the provisions in section 95103(l) to exclude covered product data. For more information on metering and measurement accuracy and calibration requirements, refer to the Measurement Accuracy, Meter Calibration, and Missing Data Requirements guidance document found on CARB's Mandatory GHG Reporting Guidance Documents website.

3.1 Measurement Accuracy and Meter Calibration Requirements

All measurement devices and data used to measure and calculate covered product data must meet the +/- 5 percent accuracy requirements described in section 95103(k). Pursuant to section 95103(k)(10), if a meter fails calibration, recalibration, or a field accuracy assessment, and the meter represents more than 5 percent of the overall covered product data, then the operator must either demonstrate by other means to the satisfaction of the verifier and/or CARB that the measurements used to calculate the covered product data meet +/-5 percent accuracy going back to the most recent successful calibration or field accuracy assessment or exclude the data pursuant to section 95103(l). If a reporter chooses to report covered product data in such a case,

the operator should be issued a nonconformance for failing to calibrate the meter in accordance with MRR requirements even if the operator is able to demonstrate sufficient accuracy. A nonconformance should be issued even in cases where a failed meter calibration or recalibration of meters represents less than 5 percent of an operator's overall covered product data.

If an operator is unable to meet the requirements for meter calibration in section 95103(k) without causing operational disruption, the operator may submit a calibration postponement request to CARB. In order to be approved by CARB, the postponement request must be submitted at least 30 days prior to the required calibration/inspection date, and must meet the requirements of sections 95103(k)(8) and (9).

If an operator identifies a situation in which conventional metering is not feasible or identifies an alternative method that achieves the +/- 5 percent accuracy required by section 95103(k)(6), the operator may submit a request for approval of an alternative measurement/monitoring method by following the requirements in section 95103(m).

Table 1 shows various scenarios for demonstrating measurement accuracy and meeting meter calibration requirements for covered product data under MRR and describes how material misstatement and conformance are assessed under each scenario.

Table 1: MRR Potential Covered Product Data Reporting Scenarios

Scenario	Approved method to demonstrate accuracy	Operator uses primary meter to report data	Method meets +/-5% accuracy requirement[1]	Primary meter status post-inspection	Operator includes product data or data in CWB calculation	Meter data included in material misstatement assessment	GHG Emissions Data Report in Conformance with section 95103(k)	Positive verification Statement Issued[2]
1	Postponement	Yes	Yes[3]	Pass[4]	Yes	Yes	Yes	Yes
2	Postponement	Yes	Yes[5]	Fail[6]	Yes	Yes	Yes	Yes
3	Postponement	Yes	No[7]	--	No, must exclude[8]	No	Yes	Yes
4	Alternative	No[9]	Yes	--	Yes	Yes	Yes	Yes
5	Temporary[10]	No	Yes	Fail	Yes	Yes	Yes	Yes
6	Non-postponement	Yes	Yes	Fail[11]	Yes	Yes	No	Qualified[12]
7	Non-postponement	Possible[13]	No[14]	Fail	No, must exclude[15]	No	Yes	Yes

[1] Accuracy is demonstrated to the satisfaction of the verifier, and the verifier confirms the approved method was followed. CARB evaluates postponement requests to ensure they meet regulatory requirements; however, staff does not have access to data to allow them to evaluate conformance with +/-5% accuracy requirements.
[2] A positive verification statement is issued if the verifier finds reasonable assurance of no material misstatement and nonconformance
[3] Accuracy demonstrated to the satisfaction of the verifier and CARB using methods described in the postponement request
[4] Meter primary element passes inspection (e.g., meets AGA/ISO standards)
[5] Accuracy demonstrated to the satisfaction of the verifier and CARB using methods described in the postponement request
[6] Meter primary element does not pass inspection requirements in section 95103(k)(6); data from primary meter is still valid because accuracy was demonstrated and approved under postponement request
[7] CARB approves method via the postponement request, but verifier finds that the accuracy requirements were not met
[8] Section 95103(l) requires that inaccurate covered product data be excluded
[9] CARB approves alternative method; operator uses engineering calculations that meet the accuracy requirements
[10] Pursuant to section 95103(m)(4), CARB pre-approval not required for using a temporary method, but operator must notify CARB by the reporting deadline that a temporary method was used; use of temporary method limited to less than 365 days
[11] Meter primary element does not pass inspection requirements in section 95103(k)(6); data from primary meter is still valid because accuracy is within +/- 5 percent as demonstrated to a verifier and CARB
[12] Qualified Positive is possible if verifier finds reasonable assurance that there is no material misstatement
[13] Operator either relies on data from primary meter or uses another means to demonstrate accuracy to the verifier and CARB for the time period in question
[14] Meter does not satisfy the +/-5 percent accuracy requirement for a portion of the year
[15] Section 95103(l) requires that inaccurate covered product data be excluded

3.2 Excluding Covered Product Data

With the exception of cement plants, operators that report covered product data must exclude inaccurate covered product data pursuant to section 95103(l). Operators must exclude covered product data if there is no evidence of accuracy. Pursuant to section 95103(l), reporters may also exclude covered product data for other reasons, such as when the quantity of product does not warrant the effort required to report the data accurately. When inaccurate data are excluded, the reporting entity must describe the excluded data and estimate it using best available methods.

4 Verification of Covered Product Data

Covered product data are subject to the verification requirements specified in section 95103(l) and must be evaluated for both conformance and material misstatement. The conformance evaluation determines if all MRR requirements have been met in preparing and reporting the covered product data. Beginning with 2017 data reported in 2018, verification bodies are required to assess if all covered products conform with the reporting requirements in MRR and to document that review in their sampling plan (section 95131(b)(14)(B)). The material misstatement evaluation is based upon the facility's total calculated covered product data, and reporters must demonstrate to the verification body that the total covered product data are accurate to within +/-5 percent.

If an alternative measurement method has been approved by CARB pursuant to section 95103(m), the reported product data will be verified for accuracy based on the approved measurement method. This also applies to alternative methods associated with postponement requests granted pursuant to sections 95103(k)(8)-(9). Any methods used to comply with meter calibration and accuracy requirements in section 95103(k) should be clearly outlined in the reporting entity's GHG Monitoring Plan (section 95105(c)). Because allowance allocation is calculated based on covered product data, the verifier's risk analysis and sampling plan must include *all* covered product data. For covered products identified as the highest risk, the verifier must conduct an in-depth review, including detailed data checks and review of data management systems. For all other covered products, the verifier should, at a minimum, review the data management systems for data collection and review data as needed to reach reasonable assurance that each element of covered product data meets the accuracy requirements of section 95103(k).

While product data for each individual product is required to meet the accuracy requirements in section 95103(k), the material misstatement assessment is based on

the sum total of the covered product data and not on each individual product (see section 95131(b)(12)(A)), with one exception. A separate material misstatement evaluation must be conducted for each element of covered product data with different units of measure reported by the same entity (e.g., proof gallons, gallons, and short tons at wineries). The material misstatement review does not include any excluded product data. An operator that excludes covered product data correctly, and that uses a reasonable method to separately estimate and report the quantity of excluded data, is in conformance with MRR. A positive product data verification statement can be issued for the remaining covered product data even if a large portion of covered product data is excluded. Material misstatement and other verification requirements still apply to the remaining covered product data that were not excluded.

5 Detailed Information on Some Covered Product Data

The following provides further reporting guidance for some covered product data.

Section 95115(n)(1): Hot Rolled Steel Sheet, Pickled Steel Sheet, Cold Rolled and Annealed Steel Sheet, Galvanized Steel Sheet, and Tin Plate

Nonprime or other steel sheet products (hot rolled steel sheet, pickled steel sheet, cold rolled and annealed steel sheet, galvanized steel sheet, and tin plate) that do not meet quality specifications but otherwise meet the definitions for these covered product data in section 95102(b) are considered covered product data as long as the product is sold to a customer and not landfilled, recycled, or otherwise wasted.

Section 95115(n)(1): Pickled Steel Sheet

Pickled steel sheet is an intermediate product that can be further manufactured into other final products. Facilities must report the full production quantity of pickled steel sheet, including both pickled steel sheet that is transferred off-site and pickled steel sheet further processed on-site. For example, if 100 tons of pickled steel sheet were produced and 40 tons were further processed into galvanized steel sheet, then the reporting entity would report both the 100 tons of pickled steel sheet and the 40 tons of galvanized steel sheet. Final products that are not made from pickled steel sheet may only be counted once, regardless of the number of times sheet is rolled or re-processed.

Section 95115(n)(1): Cold Rolled and Annealed Steel Sheet

Steel sheet that is cold rolled but not annealed is not reported as "cold rolled and annealed steel sheet." Steel sheet must be cold rolled before it is annealed; therefore, any product that is annealed has already been cold rolled and meets the MRR definition of "cold rolled and annealed steel sheet."

Section 95115(n)(2): Soda Ash

The total mass of all soda ash, bicarb (sodium bicarbonate), sodium sulfate, potassium sulfate, potassium chloride, and sodium chloride produced must be reported as soda ash equivalent in short tons on a dry basis. Boron-containing products must be separately reported as boric oxide equivalent as described later in this document.

Section 95115(n)(3): Plaster Sold as a Separate Finished Product

When reporting the quantity of plaster that is sold as a separate finished product, the plaster must be mined on-site and sold separately from any other products such as plasterboard.

Section 95115(n)(3): Stucco Used to Produce Saleable Plasterboard

When reporting the amount of stucco used to produce saleable plasterboard, the stucco can be either purchased or mined on-site, and it must not be included in the quantity of plaster that is sold as a separate finished product. The quantity of stucco is reported on a dry basis and cannot include paper backing or other materials added to plasterboard.

Only stucco that is used to produce *saleable* plasterboard may be reported as covered product data. If the plasterboard is not in saleable condition, the stucco used to produce it cannot be included as covered product data. Operators often use the term "net" to identify saleable plasterboard from "gross" production. Gross production includes trimmings and other waste that is recycled back into the process before it can be sold. Reporting is required to be based on net production, not gross production.

The quantity of reported stucco used to produce saleable plasterboard can be determined by subtracting non-stucco solids (e.g., starch and other additives) introduced during the manufacturing process from the quantity of net plasterboard produced. Determining the quantity of stucco that meets the definition of covered product data under MRR by direct measurement as it is introduced into the production process is also possible. However, operators and verifiers should ensure that the reported quantity includes only net production, that it excludes non-stucco solids, and that the portion of the stucco removed when ends are cut and when certain product fractions are rejected due to quality issues is not reported as covered product data.

Section 95115(n)(4): Nameplate Power of the Units Tested at Turbine and Turbine Generator Set Testing Facilities

The sum of the nameplate power of a unit tested for each unique certification or test protocol shall be reported as horsepower (hp) tested. For example, a 200 hp turbine that is tested for two unique certifications or test protocols shall be reported as

400 hp. A 200 hp turbine tested twice for the same certification or protocol due to a failed test, recalibration, or any other reason shall be reported as 200 hp.

Section 95115(n)(6): Dehydrated Onion, Dehydrated Garlic, Dehydrated Chili Peppers, Dehydrated Parsley, and Dehydrated Spinach

When reporting the production of dehydrated onion, dehydrated garlic, dehydrated chili peppers, dehydrated parsley, and dehydrated spinach, these products may only be counted once. For product that is re-processed by toasting, re-grinding, or other re-processing, and measured using the same measuring device and data acquisition system as the other initially dehydrated products, either the initial dehydrated product mass or the final product mass may be reported, but not both. For example, in order to only count product once, the sum of all re-processed products is subtracted from the sum of all of the dehydrated products (product that is not re-processed *and* product that is re-processed) to ensure only the initially dehydrated product is reported. If a reporter wishes to change the point of measurement of these covered product data, per section 95103(m), the change in method must be approved in advance by CARB.

Section 95115(n)(7): Lager Beer

When reporting the production of lager beer, lager beer that is wasted during filling of containers and is not sold may not be counted as covered product data. Lager beer that is spilled but recovered during container filling may only be reported once and only if that quantity of lager beer is successfully filled in a container for sale.

Section 95115(n)(14): Freshwater Diatomite Filter Aids

Freshwater diatomite filter aids are most often packed in 25-50 pound bags, but can also be packaged in larger containers. The small amount of wasted material that is not saleable may *not* be included in the reported quantity of produced diatomaceous filter aids. Filter aids must be mined and produced on-site in order to be reported as produced.

Section 95115(n)(15): Seamless Rolled Ring

When reporting the quantity of seamless rolled ring, waste material sent to an off-site recycling facility must be excluded.

Section 95115(n)(16): Butter and Cream

Butter that is initially counted as covered product and is then re-introduced to the butter-making process (for example, because it did not meet product specifications the first time through) may be counted as covered product a second time if it is re-processed

into saleable butter. Per CARB guidance, operators should continue to report reprocessed butter as butter, and not as liquid dairy intermediate milk production or fluid milk production.

Butter oil does not meet the MRR definition of butter; therefore, butter oil may not be reported as butter. For butter that is rejected and re-processed into butter oil, the initially produced butter may be reported as butter, even if it is never sold as butter.

An operator at a single facility may not report both cream and butter when cream production is an intermediate step to making butter. Purchased cream churned into butter can be reported as butter production. However, purchased cream that is pasteurized and then sold as cream is *not* cream production because that cream was not produced by the reporting facility. Only reporting-facility-produced cream that does not get churned into butter may be reported as cream production. If a cheese manufacturer produces cream from milk and sells the cream, then that amount of cream is considered covered product data. Cream that is an intermediate product in the cheese making process may not be reported as cream production.

Section 95115(n)(16): Fluid Milk Products

For fluid milk products, which include milk, buttermilk, skim milk, and ultrafiltered milk, reporting entities can produce several products in sequence, and products may be sold at different stages in the process. For example, raw milk is converted into cream, skim milk, and/or buttermilk. Cream may be sold or further processed into butter, buttermilk may be sold as liquid or dried and sold as powder, and skim milk may be further processed into ultrafiltered milk products, evaporated milk, or powdered milk. Because the reporting entity may sell the product at any point in this process, it may not be possible to categorize the product (whether it is milk, cream, or evaporated milk) until the product is sold and leaves the facility.

Because of both the short period for which fluid milk products are stored and the lack of information about which products will be intermediates to other products, quantities of milk, buttermilk, skim milk, and ultrafiltered milk produced are combined and reported as a single fluid milk product using sales data without an inventory adjustment. Beginning with 2017 data reported in 2018, quantities (metric tons) of milk, buttermilk, skim milk, and ultrafiltered milk produced are no longer reported separately and are instead summed and reported as fluid milk product.

Section 95115(n)(16): Whey Protein Concentrate

Total whey protein concentrate (WPC) includes all WPC produced at the reporting entity for the data year. WPC with high protein concentration using diafiltration is a subset of

total WPC, which means WPC with high protein concentration is reported as both WPC and WPC with high protein concentration. Total WPC is covered product data, but WPC with high protein concentration is not covered product data.

Section 95115(n)(16): Milk Powder

If powdered milk that was initially counted as covered product was re-introduced to the process, it may be counted as covered product data again after the secondary process. In addition, all powdered milk, regardless of fat content, may be reported as covered product data.

Anhydrous milkfat and milk protein concentrate are required to be reported starting with 2018 data, but are not covered products.

Section 95115(n)(17): Almonds and Pistachios

Facilities must report the following covered product data:

- Short tons of adjusted hulled and dried pistachios
- Short tons of flavored pistachios
- Short tons of blanched almonds
- Short tons of flavored almonds
- Short tons of pasteurized almonds

The total tons of hulled and dried pistachios must conform to the sampling methodology specified in the "Representative Sampling" section of "Agriculture Shipping Point and Market Inspection Instructions for Pistachios in the Shell"[1] (U.S. Department of Agriculture 2005). This value is the total tons of pistachios that are hulled and dried on-site, including both nuts that are transferred off-site and nuts that are further processed on-site. This value must exclude purchased nuts that were previously hulled and dried off-site. Hulled and dried pistachios that are introduced to the flavoring process must be reported under flavored pistachios. Thus, nuts must be reported in both categories if they are both hulled and dried on-site and then flavored on-site.

The quantities of blanched almonds, flavored almonds, and pasteurized almonds are reported separately as covered product data. Similar to pistachios, an almond may be

[1] U.S. Department of Agriculture. 2005. *Agriculture Shipping Point and Market Inspection Instructions for Pistachios in the Shell.* Available at: https://www.arb.ca.gov/regact/2016/capandtrade16/incorp2.pdf. February 2005.

counted twice: once when it is either blanched or pasteurized, and once when it is flavored. This accounts for emissions associated with the different stages of processing.

Section 95115(n)(19): Distilled Spirits, Dry Color Concentrate, Grape Juice Concentrate, Grape Seed Extract, and Liquid Color Concentrate

Beginning with 2017 data reported in 2018, verifiers are required to separately evaluate material misstatement for each product with different units of measurement, as required in section 95131(b)(12)(D). When verifying the production of distilled spirits (proof gallons), dry color concentrate (short tons), grape juice concentrate (gallons), grape seed extract (short tons), and liquid color concentrate (gallons), the verification body separately assesses material misstatement for each of the three units of measure, summing covered products with the same measurement units. Because these three different units of measure cannot be combined when evaluating material misstatement, the gallons of product, proof gallons of product, and the short tons of product must be reasonably assured of no material misstatement in order to receive a positive product data verification statement.

To convert U.S. gallons into proof gallons, multiply U.S. gallons by the percent of alcohol by volume, multiply by 2, and divide by 100. For example, to convert 100 U.S. gallons with 40% alcohol by volume, multiply 100 U.S. gallons by 40% (100 x 40 = 4000), multiply by 2 (8000), and divide by 100. The result is 80 proof gallons.

Section 95115(n)(20): Sulfuric Acid Regeneration

Refineries and other facilities that regenerate sulfuric acid for onsite use or for sale according to the definition in section 95102(c) must report in Subpart A of Cal e-GGRT the quantity of sulfuric acid produced on a dry basis. The amount of sulfuric acid produced must be reported in short tons of dry H_2SO_4. For a non-refinery sulfuric acid regeneration facility, all of the sulfuric acid produced may be reported as covered product data, including fresh sulfuric acid produced from elemental sulfur.

Section 95115(n)(21): Boric Oxide Equivalent

Boric acid and other boric oxides must be reported as boric oxide equivalent starting with 2017 data reported in 2018. See section 95102(b) for the definition of boric oxide equivalent, and the boric acid equivalency factors for each of the listed products. The boric acid equivalency factors are weighted on an acid-strength-basis, not on a molecular weight-basis. Additionally, the 99 percent factor for anhydrous boric acid indicates that the product may have a moisture quantity between zero and one percent in some cases and still be considered "dry."

6 Additional Information

Detailed training materials for reporting using Cal e-GGRT: https://ww2.arb.ca.gov/mrr-tool.

The GHG Mandatory Reporting Regulation, with full requirements: https://ww2.arb.ca.gov/mrr-regulation.

Contact the MRR helpdesk: ghgreport@arb.ca.gov.

For help with reporting or verification, please contact the appropriate staff member: https://ww2.arb.ca.gov/mrr-contacts.