Appendix A-3

Proposed Regulation Order

Proposed Amendments to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

[Note: This version of the Proposed Regulation Order complies with Government Code section 11346.2 subdivision (a)(3). The proposed amendments are shown in underline to indicate additions and strikethrough to indicate deletions from the existing regulatory text. For ease of readability, CARB has also provided a version of the proposed amendments that can toggle between amendments in strikeout/underline and a “clean" version with amendments incorporated into the regulatory text, which can be found in the Word version of this Proposed Regulation Order.]

Subchapter 10. Climate Change

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Proposed Regulation Order

Title 17, California Code of Regulations

Amend Division 3, Chapter 1, Subchapter 10, Article 2, Subarticle 1, sections 95100(c), 95101(h)(1)(A)(4), and (h)(1)(B), 95101(i)(4) and (i)(5), 95102, and 95103(f)(h) and (o); Subarticle 3, sections 95111(h), 95115(n)(16), and 95118(e);sections 95123 and 95125; Subarticle 4, section 95131Subarticle 5, sections 95152(f)(5), (g)(3), and (h)(3), and 95153(b) and (p) and (p)(6)(B), title 17, California Code of Regulations, to read as follows:

Subchapter 10. Climate Change

AMENDMENTS TO THE REGULATION FOR THE MANDATORY REPORTING OF GREENHOUSE GAS EMISSIONS

Article 2: Mandatory Greenhouse Gas Emissions Reporting

Subarticle 1. General Requirements for Greenhouse Gas Reporting

§ 95100. Purpose and Scope.

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(c) U.S. EPA GHG Reporting Rule. This article incorporates various provisions of title 40, Code of Federal Regulations (CFR), Part 98. These provisions are a portion of the U.S. Environmental Protection Agency (U.S. EPA) Final Rule on Mandatory Reporting of Greenhouse Gases. Unless otherwise specified, references in this article to 40 CFR Part 98 are to those requirements promulgated by U.S. EPA and published in the Federal Register on October 30, 2009, July 12, 2010, September 22, 2010, October 28, 2010, November 30, 2010, December 17, 2010, and April 25, 2011, and November 29, 2013.

(d) Except as otherwise specifically provided:

(1) Wherever the term “Administrator” is used in the federal rules referred to in this article, the term “Executive Officer of the California Air Resources Board” or “Executive Officer” shall be substituted.

(2) Wherever the term “EPA” is used in the federal rules referred to in this article, the term “California Air Resources Board” or “CARB” shall be substituted.

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Note: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4, and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

§ 95101. Applicability.

(a) General Applicability.

(1) This article applies to the following entities:

(A) Operators of facilities located in California with source categories listed below are subject to this article regardless of emissions level:

1. Electricity generation units that report CO_2 mass emissions year round through 40 CFR Part 75;
2. Cement production;
3. Lime manufacturing;
4. Nitric acid production;
5. Petroleum refineries and biorefineries;
6. Geologic storage~~sequestration~~ of carbon dioxide;
7. Injection of carbon dioxide.

(B) Operators of facilities located in California with source categories listed below, are subject to this article when stationary combustion and process emissions of CO_2, CH_4, and N_2O equal or exceed 10,000 metric tons CO_2e for a calendar year:

1. Stationary fuel combustion, which includes electricity generating units not subject to 40 CFR Part 75 and electricity generating units that utilize thermochemical and/or electrochemical fuel conversion;
2. Glass production;
3. Hydrogen production;
4. Iron and steel production;
5. Pulp and paper manufacturing;
6. Petroleum and natural gas systems;
7. Geothermal electricity generation;
8. Lead production;

(C) Suppliers of fuels provided for consumption within California that are specified below in paragraph (c);

(D) Carbon dioxide suppliers as specified below in paragraph (c), including CO_2 producers regardless of quantity produced, and CO_2 importers and exporters when annual bulk imports or exports equal or exceed 10,000 metric tons;

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(2) Any reporting entity in one or more of the categories in subsection (a)(1) above must submit an annual emissions data report, except as provided in the cessation provisions of subsections (h) and (i) of this section. The emissions data report must cover all source categories and GHGs for which calculation methods are provided or referenced in this article, for the reporting entity. Except as otherwise specified in this article, the report must be compiled using the methods specified by source category in 40 CFR Part 98.

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Note: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4, and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

§ 95102. Definitions.

(a) General Definitions.

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"Carbon dioxide supplier" means: (a) facilities with production process units located in the State of California that capture a CO_2 stream for purposes of supplying CO_2 to another entity or facility or that capture the CO_2 stream in order to utilize it for geologic storage~~sequestration~~ where capture refers to the initial separation and removal of CO_2 from a manufacturing process or any other process, (b) facilities with CO_2 production wells located in the State of California that extract or produce a CO_2 stream for purposes of supplying CO_2 for commercial applications or that extract a CO_2 stream in order to utilize it for geologic storage~~sequestration~~, (c) exporters (out of the State of California) of bulk CO_2 that export CO_2 for the purpose of geologic storage~~sequestration~~, (d) exporters (out of the State of California) of bulk CO_2 that export for purposes other than geologic storage~~sequestration~~, and (e) importers (into the State of California) of bulk CO_2. This source category is focused on upstream supply and is not intended to place duplicative compliance obligations on CO_2 already covered upstream. The source category does not include transportation or distribution of CO_2, purification, compression or processing of CO_2, or on-site use of CO_2 captured on-site.

"Facility," unless otherwise specified in relation to natural gas distribution facilities, gas processing facilities, and onshore petroleum and natural gas production facilities as defined in section 95102(a), means any physical property, plant, building, structure, source, or stationary equipment located on one or more contiguous or adjacent properties in actual physical contact or separated solely by a public roadway or other public right-of-way and under common ownership or common control, that emits or may emit any greenhouse gas. Operators of military installations may classify such installations as more than a single facility based on distinct and independent functional groupings within contiguous military properties. For a geologic carbon storage or (GCS) or geologic carbon sequestration facility, the GCS site, storage site or site means one or more storage zones and associated confining layer(s) and any surface facilities or infrastructure necessary to convey or inject CO2 streams at the site and to monitor to ensure permanent storage of injected CO2.

"Geologic carbon storage" or "geologic carbon sequestration" or GCS means the permanent ~~(≥100 years)~~ containment of CO2 deep underground within porous rock formations~~process of injecting CO_2 captured from an emissions source into deep subsurface rock formations for permanent storage~~.

Note: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4, and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

§ 95103. Greenhouse Gas Reporting Requirements.

The facilities, suppliers, and entities specified in section 95101 must monitor emissions and submit emissions data reports to the Air Resources Board following the requirements specified in 40 CFR §98.3 and §98.4, except as otherwise provided in this part.

* * * *

(f) Verification Requirement and Deadlines. The requirements of this paragraph apply to each reporting entity submitting an emissions data report that indicates emissions equaled or exceeded 25,000 metric tons of CO2e, including CO2 from biomass-derived fuels and geothermal sources, electric power entities that are electricity importers or exporters, facilities with sources as identified in section 95101(b)(3), or each reporting entity that has or has had a compliance obligation under the Cap-and-Invest Regulation in any year of the current compliance period. This includes all geologic carbon ~~CO2~~ storage facilities~~y operators facilities~~ subject to section 95101(a)(1)(A)6 regardless of emissions level. The requirements of this paragraph apply to reporting entities that have not met the requirements for cessation of verification in section 95101(i). The requirements of this paragraph do not apply to data reported under section 95126 by importers of cement and data reported under section 95127 by importers of hydrogen and producers of hydrogen utilizing electricity. The reporting entity subject to verification must obtain third-party verification services for that report from a verification body that meets the requirements specified in Subarticle 4 of this article. Such services must be completed and separate verification statements for emissions data and for product data, as applicable, must be submitted by the verification body to the Executive Officer by August 10 each year.

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Note: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4, and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

§ 95123. Suppliers of Carbon Dioxide.

Any supplier of carbon dioxide who is required to report under section 95101 of this article must comply with Subpart PP of 40 CFR Part 98 (§§98.420 to 98.428) in reporting to CARB, except as otherwise provided in this section.

(a) When reporting imported and exported quantities of CO_2 as required in 40 CFR §98.422, the supplier must report quantities of ~~carbon dioxide~~CO_2 imported into and exported from the State of California. Exports for purposes of geologic storage~~sequestration~~ must be reported separately from exports for other purposes. If supplied CO_2 ~~supplied~~ is transferred to a geologic carbon storage~~sequestration~~ facility, ~~sequestered injected offsite~~, the supplier must report the name of the geologic carbon storage ~~facility.~~facility in addition to the information required in 40 § 98.426(f)(xi).

(b) *Missing Data Substitution Procedures.* The supplier must comply with 40 CFR §98.425 when substituting for missing data, except as otherwise provided below.

(1) For all data required for emissions calculations in this section, the supplier must follow the requirements of paragraphs (A)-(~~D~~E) below.

(A) If the data capture rate is at least 90 percent for the data year, the supplier must substitute for each missing value using the best available estimate of the parameter, based on all available process data.

(B) If the data capture rate is at least 80 percent but not at least 90 percent for the data year, the supplier must substitute for each missing value with the highest quality assured and conservative value recorded for the parameter during the given data year, as well as the two previous data years.

(C) If the data capture rate is less than 80 percent for the data year, the supplier must substitute for each missing value with the highest quality assured and conservative value recorded for the parameter in all records kept according to section 95105(a).

(D) The supplier must document and retain records of the procedure used for all missing data estimates pursuant to the recordkeeping requirements of section 95105.

(E) If the supplied CO_2 is injected onsite or offsite by ~~into a~~ geologic carbon storage facility, the CO_2 supplier shall~~must~~ clearly indicate which data is substituted.

NOTE: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4 and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

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§ 95125. Geologic Storage~~Sequestration~~.

The operator of a facility who is required to report under section 95101 of this article~~, and who is not eligible for abbreviated reporting under section 95103(a),~~ must report emissions data from geologic storage~~sequestration~~ to CARB in accordance with Subpart RR of 40 CFR § 98.440 to 98.449 (November 29, 2013), which is incorporated by reference herein.

(a) If the stored CO_2 consists of CO_2 derived from multiple sources/facilities, a mass-balance approach must be used to assign the stored amount to each source of CO_2 based on metered data.

(b) Surface leaks described in ~~section~~40 CFR § 98.442(d) ~~must~~shall be reported by type and location.

(c) Flow or mass meters used to quantify injected CO_2 shall~~must~~ be based on continuous flow readings and meet the accuracy requirements in section 95103(k).

(d) CO_2 concentration data ~~must~~shall be based on at least monthly data and meet the accuracy requirements in section 95103(k).

(e) Wherever the term “sequestered” is used, “stored” shall be substituted, and wherever “subpart W” is used, “Subarticle 5” shall be substituted, and wherever the term “subpart PP” is used, section 95123 shall be substituted.

(f) The facility’s “monitoring, reporting, and verification plan” shall be consistent with their testing and monitoring plan for permanence certification pursuant to the Geologic Carbon Sequestration Protocol, (GCS Protocol, California Air Resources Board, [date]) incorporated herein by reference, if applicable, and updated annually when leaks are detected.

(g) Subsurface leaks shall~~must~~ be reported and reviewed during verification.

NOTE: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4 and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.

Subarticle 4. Requirements for Verification of Greenhouse Gas Emissions Data Reports and Requirements Applicable to Emissions Data Verifiers; Requirements for Accreditation of Emissions Data and Offset Project Data Report Verifiers

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§ 95131. Requirements for Verification Services.

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(b) Verification services shall include, but are not limited to, the following:

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(4) *Review of Reporting Entity's Operations, Product Data and Emissions*. The verification team shall review facility operations to identify applicable greenhouse gas emissions sources and product data. This shall include a review of the emissions inventory and each type of emission source to ensure that all sources listed in sections 95110 to ~~95123~~95125 and sections 95150 to 95158 of this article are properly included in the emissions data report. This shall also include a review of the product data to ensure that all product data listed in sections 95110 to ~~95123~~95125 and sections 95150 to 95158 of this article are included in the emissions data report as required by this article. The verification team shall also ensure that the reported current primary and any secondary (if reported) NAICS codes reported pursuant to section 95104(c) accurately represent the NAICS-associated Activities listed in Table 8-1 of the Cap-and-Invest Regulation. Review of these NAICS codes and associated activities must be documented in the verification team's sampling plan.

(5) *Other Reporting Entity Information*. Reporting entities shall make available to the verification team all information and documentation used to calculate and report emissions, product data, fuels and electricity transactions, and other information required under this article, as applicable.

(6) *Electricity Importers and Exporters*. The verification team shall review the GHG Inventory Program documentation required pursuant to section 95105(d), electricity transaction records, including deliveries and receipts of power via North American Electric Reliability Corporation (NERC) e-Tags, written power contracts, settlements data, and any other applicable information required to confirm reported electricity procurements and deliveries.

(7) *Sampling Plan*. As part of confirming emissions data, product data, electricity transactions, or fuel transactions, the verification team shall develop a sampling plan that meets the following requirements:

(A) The verification team shall develop a sampling plan based on a strategic analysis developed from document reviews and interviews to assess the likely nature, scale and complexity of the verification services for a reporting entity. The analysis shall review the inputs for the development of the submitted emissions data report, the rigor and appropriateness of data management systems, and the coordination within the reporting entity's organization to manage the operation and maintenance of equipment and systems used to develop emissions data reports.

(B) The verification team shall include in the sampling plan a ranking of emissions sources by amount of contribution to total CO_2 equivalent emissions for the reporting entity, and a ranking of emissions sources with the largest calculation uncertainty. The verification team shall also include in the sampling plan a ranking of the product data by units specified in the appropriate section of this article and a ranking of the product data with the largest uncertainty. As applicable and deemed appropriate by the verification team, fuel and electricity transactions shall also be ranked or evaluated relative to the amount of fuel or power exchanged and uncertainties that may apply to data provided by the reporting entity including risk of incomplete reporting.

(C) The verification team shall include in the sampling plan a qualitative narrative of uncertainty risk assessment in the following areas as applicable under sections 95110 to ~~9512~~95125, 95129 , and 95150 to 95158:

1. Data acquisition equipment;
2. Data sampling and frequency;
3. Data processing and tracking;
4. Emissions calculations;
5. Product data;
6. Data reporting;
7. Management policies or practices in developing emissions data reports.

(D) After completing the analyses required by sections 95131(b)(7)(A)-(C), the verification team shall include in the sampling plan a list which includes the following:

1. Emissions sources, product data, and/or transactions that will be targeted for document reviews, and data checks as specified in 95131(b)(8), and an explanation of why they were chosen;
2. Methods used to conduct data checks for each source, product data, or transaction;

3. A summary of the information analyzed in the data checks and document reviews conducted for each emissions source, product data, or transaction targeted.

The sampling plan list must be updated and finalized prior to the completion of verification services. The final sampling plan must describe in detail how the identified risks were addressed during the verification.

(E) The verification team shall revise the sampling plan to describe tasks completed by the verification team as information becomes available and potential issues emerge with material misstatement or nonconformance with the requirements of this article.

(F) The verification body shall retain the sampling plan in paper, electronic, or other format for a period of not less than ten years following the submission of each verification statement. The sampling plan shall be made available to CARB upon request.

(G) The verification body shall retain all material received, reviewed, or generated to render a verification statement for a reporting entity for no less than ten years. The documentation must allow for a transparent review of how a verification body reached its conclusion in the verification statement.

(8) *Data Checks*. To determine the reliability of the submitted emissions data report, the verification team shall use data checks. Such data checks shall focus on the largest and most uncertain estimates of emissions, product data and fuel and electricity transactions, and shall include the following:

(A) The verification team shall use data checks to ensure that the appropriate methodologies and emission factors have been applied for the emissions sources, fuel and electricity transactions covered under sections 95110 to ~~95123~~95125, 95129, and 95150 to 95158;

(B) The verification team shall use data checks to ensure the accuracy of product data reported under sections 95110 to ~~95123~~95125, and 95150 to 95158 of this article;

(C) The verification team shall choose data checks for emissions sources, product data, and fuel and electricity transactions data, as applicable, based on their relative contributions to emissions and the associated risks of contributing to material misstatement or nonconformance, as indicated in the sampling plan;

(D) The verification team shall use professional judgment in the number of data checks required for the team to conclude with reasonable assurance whether the total reported covered emissions and covered product data are free of material misstatement. At a minimum, data checks must include the following:

1. Tracing data in the emissions data report to its origin;
2. Looking at the process for data compilation and collection;
3. Recalculating emission estimates to check original calculations;
4. Reviewing calculation methodologies used by the reporting entity for conformance with this article; and
5. Reviewing meter and fuel analytical instrumentation measurement accuracy and calibration for consistency with the requirements of section 95103(k).

(E) As applicable, the verification team shall review the following information when conducting data checks for product data:

1. Product inventory and stock records;
2. Product sales records and contracts;
3. Onsite and offsite product delivery records;
4. Purchase and delivery records for inputs to product(s);
5. Product measurement records; and
6. Other information or documentation that provides financial or direct measurement information about total product(s) reported.

(F) The verification team is responsible for ensuring via data checks that there is reasonable assurance that the emissions data report conforms to the requirements of this article. In addition, and as applicable, the verifier's review of conformance must confirm the following information is correctly reported:

1. For facilities that combust natural gas, natural gas supplier customer account number, service account identification number, or other primary account identifier(s) reported pursuant to section 95115(k);
2. For suppliers of natural gas, end-user names, account identification numbers, and natural gas deliveries in MMBtu, reported pursuant to section 95122(d)(4);
3. Energy generation and disposition information reported pursuant to section 95104(d), 95112(a), 95112(b) and electricity and thermal energy purchases and acquisitions reported pursuant to 95104(d)(1) and 95104(d)(2), if any of the following apply:

    a. The facility belongs to an industry sector (e.g., reported a NAICS code) listed in Table 8-1 of section 95870 of the Cap-and-Invest Regulation;

    b. The facility is applying for legacy contract transition assistance under the Cap-and-Invest Regulation; or

c. The facility is eligible for a limited exemption of emissions from the production of qualified thermal output pursuant to section 95852(j) of the Cap-and-Invest Regulation.

4. Emissions associated with a state of emergency that is declared by the Governor to address high energy demand or electric grid reliability that are optionally reported by electricity generation facilities to CARB under section 95112(j), if the facility was not a covered entity in the previous data year.

5. For geologic carbon storage facilities, quarterly CO2 injection data, surface leaks, the installation date of the carbon capture unit as described in section 95852.3(a) of the Cap-and-Invest Regulation, and the monitoring, reporting, and verification plan approved by CARB.

(G) The verification team shall compare its own calculated results with the reported data in order to confirm the extent and impact of any omissions and errors. Any discrepancies must be investigated. The comparison of data checks must also include a narrative to indicate which sources, product data, and transactions were checked, the types and quantity of data that were evaluated for each source, product data, and transaction, the percentage of reported emissions covered by the data checks, the percentage of product data covered by the data checks, and any separate discrepancies that were identified in emission data or product data.

* * * *

(12) *Material Misstatement Assessment*. Assessments of material misstatement are conducted independently on total reported covered emissions and total reported covered product data (units from the applicable sections of this article). A material misstatement assessment is not required for emissions data when an entity reports no covered emissions and is not required for product data when an entity reports no covered product data; however, a conformance review is required for all verifications.

(A) In assessing whether an emissions data report contains a material misstatement, the verification team must separately determine whether the total reported covered emissions and total reported covered product data contain a material misstatement using the following equation(s):

$$Percent\ error\ (emissions) = \frac{\sum[Discrepancies, Omissions, Misreporting]\ x\ 100}{Total\ reported\ covered\ emissions}$$

or

$$Percent\ error\ (product\ data) = \frac{\sum[Discrepancies, Omissions, Misreporting]\ x\ 100}{Total\ reported\ covered\ product\ data}$$

Where:

"Discrepancies" means any differences between the reported covered emissions or covered product data and the verifier's review of covered emissions or covered product data for a data source or product data subject to data checks in section 95131(b)(8).

"Omissions" means any covered emissions or covered product data the verifier concludes must be part of the emissions data report, but were not included by the reporting entity in the emissions data report.

"Misreporting" means duplicate, incomplete or other covered emissions the verifier concludes should, or should not, be part of the emissions data report or duplicate or other product data the verifier concludes should not be part of the emissions data report.

"Total reported covered emissions or covered product data" means the total annual reporting entity covered emissions or total reported covered product data for which the verifier is conducting a material misstatement assessment.

For instances in which an entity reports covered product data in different units of measurement or reports covered product data subject to sections 95156(a)(7) and 95156(a)(8), the verifier must conduct a material misstatement evaluation according to the requirements of sections 95131(b)(12)(D) and (E), respectively.

(B) When evaluating material misstatement, verifiers must deem correctly substituted missing data to be accurate, regardless of the amount of missing data.

(C) The omissions variable described in section 95131(b)(12)(A) does not apply to excluded covered product data as described in section 95103(l), such that excluded covered product data is not considered in the material misstatement assessment.

(D) If multiple types of covered product data are reported with different units of measurement, the verifier shall conduct a separate material misstatement evaluation for each product (for example, wineries (NAICS code 312130) with products reported in proof gallons shall have one material misstatement assessment, products reported in shorts tons shall have another material misstatement assessment, and products reported in gallons shall have another material misstatement assessment), except as provided in section 95131(b)(12)(E).

(E) Verifiers shall conduct a separate material misstatement evaluation for covered product data reported pursuant to section 95156(a)(7) and 95156(a)(9) on a barrel of oil equivalent basis, and for covered product data reported pursuant to section 95156(a)(8) and 95156(a)(10) on a barrel of oil equivalent basis. If a facility reports covered product data under sections 95156(a)(7), 95156(a)(8), and another section(s) that requires reporting covered product data, three (or more) separate covered product data material misstatement assessments must be completed and three (or more) separate product data verification statements must be issued.

(F) For geologic carbon storage facilities, material misstatement is separately evaluated for surface leaks, and for total annual CO2 sequestered in the calendar year.

(13) *Review of Missing Data Substitution*. If a source selected for a data check was affected by a loss of data used to calculate GHG emissions for the data year:

(A) The verification team shall confirm that the reported emissions for that source were calculated using the applicable missing data procedures, or that an approved interim data collection procedure was used for the source.

(B) If 20 percent or less of any single data elements used to calculate emissions are missing, and emissions are correctly calculated using the missing data requirements in sections 95110 to ~~95123~~95125, 95129, and 95150 to 95158 these emissions will be considered accurate and as meeting the reporting requirements for that source.

(C) If greater than 20 percent of any single data element used to calculate emissions are missing or any combination of data elements are missing that would result in more than 5 percent of a facility's emissions being calculated using missing data requirements in sections 95110 to ~~95123~~95125, 95129~~-~~, and 95150 to 95158, the verifier must include a finding of nonconformance with the required emissions calculation methodology as part of the verification statement.

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Note: Authority cited: Sections 38510, 38530, 39600, 39601, 39607, 39607.4, and 41511, Health and Safety Code. Reference: Sections 38530, 39600 and 41511, Health and Safety Code.