

Mandatory Reporting Regulation Guidance on Complexity Weighted Barrel

Background

Section 95113(l)(3) of the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR) requires petroleum refineries to calculate and report a total facility complexity weighted barrel (CWB) value beginning with the 2013 data year for reporting starting in 2014.

Classification of CWB Throughputs as Covered Product Data

- “Covered product data” is defined in section 95102(a) of the reporting regulation as “all product data included in the allocation of allowances under sections 95870, 95890 and 95891 of the Cap-and-Trade Regulation, regardless of whether the Cap-and-Trade Regulation imposes a compliance obligation for the data year.”
- Proposed changes to Table 9-1 in section 95891 of the Cap-and-Trade Regulation list the CWB as a product. For this reason, the CWB is considered covered product data under MRR.
- Because the CWB is considered covered product data, the CWB throughput measurements are subject to the metering requirements as listed in section 95103(k)(1)-(10) of MRR and the material misstatement calculation required during third-party verification as described in section 95131(b)(12) of MRR.

Metering Requirements for CWB Throughputs

2013 Data Year Only

Since the 2013 data year is the first year of reporting under the new amendments to the MRR, operators may use best available methods for the first year as specified below.

- Section 95103(h)(4) specifies that for 2013 data reported in 2014, operators may use best available methods for calculating and reporting the covered product data elements required to be reported in section 95113(l)(3) (i.e., CWB throughputs).
- For purposes of demonstrating accuracy of each CWB throughput, the operators must demonstrate the accuracy requirements in section 95103(k) (i.e., within five percent) without necessarily having to follow the specific calibration requirements in sections 95103(k)(1)-(10).
- The accuracy demonstration required by 95103(k) of MRR may be met using engineering methods, upstream or downstream meters from the required throughput, mass-balance methods, or strap-on meters.

For 2014 Data Year and Beyond

- Section 95113(l)(3)(E) specifies that all throughput measurements must meet the full calibration and accuracy requirements provided in sections 95103(k)(1)-(10).
- Section 95103 of MRR contains mechanisms for complying with the metering requirements specified in section 95103(k):

1. Postponement Requests:

- The postponement mechanism provided in sections 95103(k)(8)-(9) is applicable to CWB throughput measurements. The postponement process is available for:
 - Existing meters that cannot meet deadlines for calibration and inspection as described in section 95103(k)(8),
 - Situations where installation of a new metering device is not feasible, and
 - Continuously operating units and processes where calibration or inspection cannot be performed without operational disruption.
- Operators must submit a postponement request to the Executive Officer following the procedures described in section 95103(k)(9); however, for 2014 data reported in 2015, postponement requests for CWB throughput metering must be received by the reporting deadline of April 10, 2014, as stated in section 95113(l)(3)(E).
- As specified in section 95103(k)(9)(B)(7), operators must include a proposed method for assuring the accuracy requirements of section 95103(k)(6) are met for each throughput for which a postponement is requested. Options for accuracy demonstration include, but are not limited to:
 - Engineering methods,
 - Upstream /downstream meters (mass balance)
 - Strap-on meters.
- ARB recommends that operators include all necessary CWB throughput postponement requests for their facility under one global postponement request, rather than submitting a separate request for each individual throughput.
- If an operator has an approved postponement request, the verifier will assess for material misstatement and non-conformance against that approved postponement request.

2. Changes in Methodology:

- Alternative measurement/monitoring method:
If an operator identifies a situation where conventional metering is not feasible or identify an alternative method that achieves accuracy at an equivalent level to the ± 5 percent 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).

- An operator seeking to propose a change in measurement methodology must submit a request to the Executive Officer. The request must follow the provisions in section 95103(m)(3)-(4), including a description of the alternative approach and why it is being proposed, and including a demonstration of the estimated CWB throughput calculated using the required metering methods in section 95103(k) AND using the proposed alternative measurement methodology.
- Alternative measurement methodologies that are approved by the Executive Officer are applicable for future reporting periods, barring regulatory changes to the CWB measurement methods or requirements.
- If an operator has an approved alternate measurement/monitoring method, the verifier will assess for material misstatement and non-conformance against that approved alternate measurement/monitoring method.

Excluding Inaccurate Covered Product Data

- Revisions to section 95103(l) allow operators to elect to exclude inaccurate covered product data, thereby providing a mechanism for operators to avoid material misstatement for covered product data in the event of material measurement inaccuracies.
 - The reporting entity must still report a description of any excluded covered product data and an estimated magnitude using best available methods. Not providing this information is a non-conformance.
 - If an operator elects to exclude any inaccurate CWB throughputs in order to avoid material misstatement, the total facility CWB will be lower than would otherwise be calculated without any data exclusion.
- Although section 95103(l) specifies that excluded covered product data will not be used for the material misstatement assessment, the required description of the excluded data and the estimated magnitude of that data using best available methods are still evaluated for conformance during verification.
- There are no *de minimis* provisions for product data, however there are alternative measurement methods and the exclusion provision as described above, in the event that metering is not possible.
- **Note:** For the purposes of data exclusion, inaccurate data is data whose accuracy cannot be proven, not necessarily erroneous data.

Reporting of CWB Throughputs

- To avoid double-counting:
 - The requirement to report each CWB process only once, per section 95113(l)(3)(E), is intended to clarify the boundaries of CWB processes.
 - When reporting process unit feeds, include only fresh feed, not recycled feed.
- If the traditional name of a unit does not match its current function, classify it based on its current function. Refer to definitions in section 95102(c) and the last column of Table 1 (CWB Factors and Functions) of section 95113 for further information on which activities are considered within which process units.
- For units where output is reported, such as sulfur and asphalt, report only the amount that is produced at the facility.
- Coke-on-Catalyst % is to be reported in **volume** (not weight, as it is in CWT).
- Special fractionation may include any units that meet the definition of special fractionation in section 95102(c)(62) and are not reported under other CWB units.
- For “Fuel Gas Sales Treating & Compression,” report the horsepower rating of the unit, not the horsepower utilized that year.
- “Total Refinery Input” and “Non-Crude Input” are the last two items in Table 1 of section 95113. These items are **not** considered CWB throughputs but are required elements in 95113. These items are defined in section 95102(c).
 - These items are reported and calculated separately from the CWB product data streams in the subtotal section of the CWB reporting spreadsheet.
 - Hydrogen brought in from off site is not considered part of “Total Refinery Input” or “Non-Crude Input.”
- Throughputs, “Total Refinery Input”, and “Non-Crude Input” should be reported to at most two decimal places.

Verification of CWB Throughputs

- The CWB is subject to the verification requirements as defined in section 95103(l) of MRR and must be evaluated for material misstatement.
- The material misstatement evaluation will be based upon the total calculated facility CWB value, as calculated in section 95113(l)(3)(B).
 - This means that a reporting entity must be able to demonstrate to the verification body that the total facility CWB is accurate to within at least ± 5 percent.
 - As described above, the reporting entity may exclude individual inaccurate CWB throughputs from the total facility CWB calculation to avoid material misstatement per the provisions in section 95103(l).

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- The error calculation for individual throughputs will be based on the throughput multiplied by its unique CWB factor.
- If an alternative measurement method has been approved by the Executive Officer pursuant to section 95103(m), the verification body will verify the reported product data against this approved measurement method.
- The metering methods used to comply with section 95103(k) of the reporting regulation should be clearly outlined in the reporting entity's greenhouse gas monitoring plan (see section 95105(c)).
- In developing a sampling plan for the CWB data, the verification body will apply the same uncertainty risk assessment in this case as it would for other emissions sources at the facility.
- **Note:** The material misstatement assessment performed by the verification body for CWB covered product data is separate from the material misstatement assessment for petroleum refinery reports.

CWB Calculation For Purposes of Reporting and Allocation

Section 95113 of MRR provides the following equation to calculate total refinery CWB for purposes of reporting:

$$CWB_{Total} = \sum [(CWB_{Factor}) * (Throughput)] + CWB_{Off-sites \text{ and } Non-Energy \text{ Utilities}}$$

Based on the definitions for the variables of this equation, it simplifies to:

$$CWB_{Total} = 1.0085 * CWB_{process} + 0.327 * Total \text{ Refinery Input}$$

Verification bodies will verify the reported total refinery CWB against this equation.

For allocation purposes under the Cap-and-Trade Regulation, amendments to the Cap-and-Trade Regulation will include the method for calculating a refinery's CWB value for allocation. The method will rely on the data reported and verified pursuant to section 95113 of the MRR, and will be based on $CWB_{process}$ adjusted for non-crude input and off-sites and non-energy utilities using the following equation:

$$CWB = 1.0085 * CWB_{process} + 0.327 * Total \text{ Refinery Input} + 0.44 * Non-crude \text{ Input}$$