

CONSULTATION DRAFT

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Purpose

This registry procedure is incorporated by reference into the [Blue Box Regulation](#), O. Reg. 391/21 (under the [Resource Recovery and Circular Economy Act, 2016](#) S.O. 2016, c. 12, Sched. 1 (RRCEA)).

The Blue Box Regulation designates supplied paper, packaging, and packaging-like products as obligated materials.

This procedure has three main sections:

Section 1, Blue Box Supply Data, establishes how producers:

- determine blue box supply data;
- verify blue box supply data, and;
- report blue box supply data into RPRA.

Section 2, Blue Box Management Performance, establishes how:

- determine how recovered resources are to be accounted for, and;
- producers, or producer responsibility organizations (PROs) on their behalf, conduct third-party audits the resources recovered from the management of blue box materials used and collected in Ontario.

Section 3, Brewers Retail Inc. and the Liquor Control Board of Ontario, establishes how these parties:

- determine blue box supply and management data, and
- conduct third-party audits verifying the supply and management data submitted.

It is the intention of the Registrar to review this procedure on a regular basis.

Definitions

The following is a list of terms used in this document that have not been defined in the Regulation or RPRA compliance bulletins:

“Calculation point” is the point at which recovered resources have been processed into a form that has been accepted by an end market and the point at which a producer may calculate the weight of recovered resources in respect of the producer’s management requirement.

“End market” is a person that receives a recovered resource for uses that, as per section 41 of the Blue Box Regulation, conforms to the following:

1. Re-use for their original purpose or function; or,
2. Use in new products or packaging; and,
3. Use as aggregate, where such use contributes to a maximum of 15 per cent of the producer’s management requirement for any material category; or
4. Use in the support of soil health or crop growth that is created through the combination of recovered resources created from paper and with organic matter; and,

5. Use in a product that is fuel or a fuel supplement or incinerated for the purpose of producing electricity, where such use contributes to a maximum of 15 per cent of a producer's management requirement for a material category and the recovered resources are residue from recovery processes.

“General conditions” means the following requirements which must be satisfied for recovered resources to count towards a producer's management requirement:

1. The weight of the recovered resources may only be counted one time by the producer and must not be counted by more than one producer;
2. The recovered resources must be recovered from blue box materials supplied to consumers in Ontario; and
3. The recovered resources must have been processed within three months of the registered processor who reported the recovered resources receiving the blue box material from which they were recovered.

“Land disposed” has the same meaning as “land disposal” as defined in section 1(1) of Regulation 347, *General – Waste Management*, R.R.O. 1990, made under the *Environmental Protection Act*, R.S.O. 1990, c. E.19.

“Mass balance” means a chain of custody model in which blue box materials with specified composition characteristics are mixed with other materials with differing characteristics during processing creating the need to reconcile claims of outputs of recovered resources proportional to inputs.

“Recovered resource” is blue box material that is managed under Part VI of the *Blue Box Regulation*.

Section 1 – Supply Data

O. Reg 391/21, the Blue Box Regulation, Section 44 outlines how a producer is required to register, report and submit information supply information based on these incorporated by reference Blue Box Verification and Audit Procedure.

While the highest-level reporting requirements are outlined here, RPRA directs producers to the comprehensive Blue Box Supply Data Reporting Procedure. This document acts as a one-stop shop for producers, including both the material outlined in this procedure applying to supply reporting, and more nuanced information.

1.1 Compliance with Blue Box Supply Reporting Procedure, and Hierarchy

In registering, reporting and in submitting annual supply information into the Registry, Blue Box Producers must comply with the Blue Box Supply Reporting Procedure.

The detailed definition of a Brand Holder shall be outlined in the Blue Box Supply Reporting Procedure.

In a scenario where their conflict in a definition, requirement or process as outlined by RPRA documentation, Producers are directed to resolve the conflict based on the following documentation hierarchy:

1. Resource Recovery and Circular Economy Act, 2016

2. The current version of O. Reg. 391/21: Blue Box regulation, unless the current version of the regulation was published within 150 days of the Blue Box filing deadline. In such a scenario, RPRA will use the prior version of the regulation for the reporting cycle.
3. This Blue Box Verification & Audit Procedure, as incorporated by reference in regulation
4. The Blue Box Supply Reporting Procedure
5. RPRA's Compliance Bulletins
6. Blue Box Registry Forms, as required for completion by the Blue Box Supply Data Reporting Procedure

1.2 Determining Blue Box material weight

Blue Box producers must provide the weight of the producer's Blue Box material supplied to consumers in Ontario rounded to the nearest 0.1 gram for each unit.

When determining weight, apply the following definitions:

- (1) **A component** is an integrated part of the packaging, packaging-like product, or paper product, and is attached to the package when supplied to the consumer. Examples of components include the label on a water bottle, the steel lid on a glass bottle, staples holding together a calendar, tape holding together a cardboard box or the plastic window in an envelope.
- (2) **An ancillary component** is defined as packaging, packaging-like product, or paper product items that help the consumer use the product and are attached to the packaging. Examples of ancillary components include a mascara brush forming part of a container closure, a toy on the top of candy acting as part of the closure, devices for measuring dosage that form part of a detergent container cap, or the pouring spout on a juice or milk carton.

Where packaging is made up of two or more different material types and the materials are of components and ancillary components, apply the component threshold rule. The component threshold rule cannot be applied to products in which several items are packaged together using different packaging materials. For example, the plastic film around a pack of juice boxes or water bottles or samples provided in a magazine must be reported separately.

The component threshold rule is applied as follows:

- If a component or the ancillary component weighs less than 5% of the overall weight of all packaging components combined, then the producer is required to report the weight of the component or the ancillary packaging under the material category that represents the majority of the package's weight.
- If the component or the ancillary component weighs more than 5% and remains attached to the packaging when the consumer discards the packaging, then the producer is required to report the packaging component or ancillary packaging under the material category that represents the majority of the package's weight.
- If the component or ancillary component weighs more than 5% and will not remain connected to the packaging when the consumer disposes of it, then the producer is required to report the packaging component or ancillary packaging under the specific material category associated with the packaging component or ancillary packaging.

1.3 Determining Quantitative Aspect of Supply Data Report

The Blue Box Regulation requires producers to submit Blue Box supply data to RPRA on or before May 31 of each year, detailing the total weight of Blue Box materials, and compostables supplied to consumers in Ontario during the previous calendar year, alongside any eligible deductions. The way the quantitative aspects of reporting occurs shall be conducted in accordance Blue Box Supply Reporting Guidelines.

As part of the Blue Box Supply Reporting Guidelines, producers may have to report Blue Box material categories in a more granular manner, for example, using the Harmonized Producer Reporting Categories utilized by Recycle BC, SK Recycles, Multi-Material Stewardship Manitoba, and Éco Entreprises Québec.

Beginning in 2027 and each year thereafter, must report on key Producer Activity Indicators as part of their annual Blue Box Supply Report, as outlined by Blue Box Supply Reporting Procedure.

Beginning in 2028 and each year thereafter, must report on their largest supplied units as part of their annual Blue Box Supply Report, as outlined by Blue Box Supply Reporting Guidelines.

1.4 Determining Weight Methodology for Quantitative Aspects of Supply Data Reporting

In 2028 and each year thereafter, producers shall be required to report on the method used to validate the weight associated with supplied units using this table and shall be required to achieve a certain percentage of gross weight validated by data integrity tier. The percentages of gross weight validated by data integrity tier shall be outlined in detail in the Blue Box Supply Reporting Guidelines.

Producers who do not validate weight based on the percentages outlined in the table above will be deemed by RPRA to be not in compliance with Section 44 of the O. Reg. 391/21 Blue Box regulation.

The three data tier methodologies are outlined in detail in the Blue Box Supply Reporting Guidelines.

1.5 Determining Qualitative Aspect of Supply Data Report

The Blue Box Regulation requires producers to submit Blue Box supply data to RPRA on or before May 31 of each year. The way the qualitative aspects of reporting occurs shall be conducted in accordance Blue Box Supply Reporting Guidelines.

Each year, producers shall report on their brand list, in accordance with the Blue Box Supply Reporting Guidelines. Beginning in 2028 and each year thereafter, producers shall also be required to report on a list of corporate names where the producer sells that company's product, but the reporting producer is not the obligated producer reporting purposes, in accordance with the Blue Box Supply Reporting Guidelines.

Each year, producers shall submit details on any deductions claimed, including but not limited to the methodology supporting any studies, survey questions, or other supporting evidence. The requirements for deductions, including the standard for acceptability of a study, is outlined

further in accordance with the Blue Box Supply Reporting Guidelines.

Beginning in 2027 and each year thereafter, producers may be required to complete a qualitative form, highlighting the qualitative aspects, including but not limited to additional information about corporate structure, reporting methodologies, supply chain, product tracking, brand lists, deductions, or business to business sales. The requirements for the qualitative aspects, shall be outlined further in accordance with the Blue Box Supply Reporting Guidelines.

Beginning in 2027 and each year thereafter, producers may be required to complete an executive attestation, confirming executive sign off the entire Blue Box submission. The requirements for the executive attestation, shall be outlined further in accordance with the Blue Box Supply Reporting Guidelines.

1.6 Certified compostable products and packaging standards

In the Blue Box Regulation, certified compostable products and packaging are defined as material that are both:

- a. only capable of being processed by composting, anaerobic digestion or other processes that result in decomposition by bacteria or other living organisms, and
- b. certified compostable by an international, national, or industry standard that is listed in this procedure.

To qualify for 1.6(a), a Supplied Unit must be treated as residue or reduce processor yields in the majority of Ontario's common collection system, when placed directly in an unused or unsoiled manner into a curbside blue box.

In other words, if a certified packaging or packaging-like product directly placed in the Ontario curbside blue box can be recycled, it does not qualify as only being capable of being processed by composting, anaerobic digestion or other processes that result in decomposition by bacteria or other living organisms.

To qualify for 1.6(b) above, a Supplied Unit must be certified under one of the following standards:

- a. CAN/BNQ 0017-088: Specifications for Compostable Plastics
- b. ISO 17088: Specifications for compostable plastics
- c. ASTM D6400: Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities
- d. ASTM D6868: Standard Specification for Labeling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities
- e. EN 13432: Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging

What constitutes acceptable evidence by RPRA of the above requirements shall be outlined further in accordance with the Blue Box Supply Reporting Guidelines.

Section 2 – Management Performance

This section should be read in conjunction with Ontario Regulation 391/21: Blue Box,

compliance guidelines, and compliance bulletins for blue box published by the Resource Productivity and Recovery Authority (RPRA).

Appropriate contractual relationships between producer responsibility organizations (PROs), collection sites, and processors must exist that allow for the assurance practitioner to obtain and review data and documentation to support the reasonable assurance engagement.

2.1 Purpose

Under the Blue Box Regulation, blue box producers are required to establish and operate a system for collection and management of blue box material supplied to consumers in Ontario. Where applicable, producers must also meet minimum management requirements for each material category they supply as outlined in [Part VI of the Regulation](#).

Section 67 of the Blue Box Regulation requires that an audit of the performance of each producer's management system be completed by an independent auditor who is licensed or holds a certificate of authorization under the *Public Accounting Act, 2004* and in accordance with the procedures set out in this document.

This section is intended to ensure consistency of reporting by producers and PROs and provide sufficient guidance to allow assurance practitioners to be able to provide a consistent level of assurance in a consistent format.

2.2 Applicable Assurance Standard

All audit reports must be reasonable assurance reports prepared in accordance with the Canadian Standard on Assurance Engagements 3000 (CSAE 3000), Attestation Engagements Other than Audits or Reviews of Historical Financial Information.

As per CSAE 3000, "a reasonable assurance engagement may be referred to as an audit engagement" therefore the terms 'audit' and 'auditor' will be used throughout the rest of this document.

2.3 Blue Box Performance Reporting Criteria

Section 67 of the Blue Box Regulation states that:

- (1) On or before May 31, 2027, and every third year after that, a producer shall cause an audit to be undertaken of the practices and procedures the producer implemented in respect of Part VI in the three immediately preceding calendar years.
- (2) On or before May 31 in any year in which an audit is required under subsection (1), a producer shall prepare and submit a copy of a report on the audit to the Authority, through the Registry, that includes the following information:
 1. A summary of the analysis in the audit of the information submitted by the producer in its annual report under [paragraphs 8, 9, 10 and 11 of subsection 51 \(1\)](#).
 2. A summary of the opinion provided by the auditor on whether the producer complied with its obligations under Part VI during the three calendar years subject to the audit.
- (3) The audit required by subsection (1) must be conducted by an independent auditor who is licenced or holds a certificate of authorization under the *Public Accounting Act, 2004* and in

accordance with the procedures set out in the Blue Box Verification and Audit Procedure.

- (4) If a person ceases to be a producer during any of the three years preceding the date on which the report required by subsection (2) is due, the person shall cause an audit to be undertaken for the years during which the person was a producer and shall submit the report required in subsection (2) with necessary modifications.

Additionally, as part of validating information under paragraph 11 of subsection 51(1), auditors must ensure that the weight of recovered resources accounted for in respect of producers' management requirement are validated for each material category as per Appendix A and reported to the Authority as per Appendix E, or equivalent. When validating material as per Appendix A and reporting per Appendix E, the auditor must note any modifications to the audit opinion. Only weight that can be verified, and not subject to a modification may be counted towards performance in Appendix E.

2.4 Suggested Audit Procedures for the CSAE 3000 Engagement

The following outlines suggested procedures for auditors in the performance of the CSAE 3000 engagement. Auditors may find that some or all of these procedures are not applicable to their client and this is not an exhaustive list of all possible audit procedures. The following procedures outline the validation of performance defined in section 67 (2) of the Blue Box Regulation.

Notes:

- Any reference below to an activity being performed by a producer or a PRO includes activities being overseen, coordinated or contracted by the producer or PRO.
- For a producer directly engaging an auditor, "PRO" for the remainder of the section can be read as "producer".
- See Appendix E for a suggested format for a PRO to report their performance results.

Where an audit requires qualification, adverse finding, or disclaimer, RPRA may take compliance action. Compliance action may include determining that reported management weights are ineligible to be recognized for satisfaction of management requirement.

1. The weight of recovered resources, by material type, that meet the general conditions and were accepted by an end market for:

- i. Re-use for their original purpose or function; or,**
 - ii. Use in new products or packaging.**
- a) Obtain a listing of all transactions for the PRO that make up the calculated weight of blue box material that were collected and delivered to a registered processor.
 - b) Obtain a listing of all transactions for the PRO that make up the calculated weight of recovered resources derived from blue box material that were processed by a processor.
 - c) Recalculate the calculated weight of blue box materials that were collected and delivered to a processor.
 - d) Recalculate the total weight of recovered resources.
 - e) Compare the recalculated weight based on the listing received to the reported weight of recovered resources in the PRO's annual report.

For each processor of blue box material:

- f) Confirm that recovered resources meet the general conditions.
- g) Use analytical procedures to assess the reasonableness of transactions.
- h) Select a sample of inbound shipments (see Appendix B for suggested sampling methodology).
- i) For each sample, check the accuracy, completeness and validity of the original blue box material recorded (see Appendix A for validation of each material category).
- j) For each sample, agree the calculated weight of blue box material (see Appendix A for validation of each material category).
- k) Select a sample of outbound shipments of recovered resources.
- l) For each sample, confirm the validity of the sale/transfer/charge to the end market (see Appendix B and Appendix C for guidance on assessing validity).
- m) For each sample, confirm the validity of the end market and that the material is going to be used in the manner intended (see Appendix B and Appendix C for guidance on assessing validity).
- n) For each sample, agree the weight of the outbound recovered resources counted towards producer management requirements as outlined in Appendix A to support (see the list of evidence RPRA may ask for during audits, e.g. weight scale ticket, weight of non-blue box material, methodologies used, weight of inputs into recovered resource process, etc.).
- o) Obtain the processing facility's mass balance(s) for the audit period. Reconcile the facilities mass balance data for the audit period against the recovered resources counted towards producer management requirements from the processor, to assess validity. Identify and recalculate the recovery rate per tonne of inbound blue box material, by material category.
- p) Confirm that the total weight of processed material allocated to the PRO equals the total weight of inbound blue box material, by type, allocated to the PRO multiplied by the processor's recovery rate, as confirmed by the mass balance recalculation (see Appendix A for validation of each material category).

2. The weight of recovered resources, by material type, that meet the general conditions and were accepted by an end market for:

- i. Use as aggregate;**
 - ii. Use as product that supports soil health or crop growth; or**
 - iii. Use in a product that is fuel or a fuel supplement or incinerated for the purpose of producing electricity.**
- a) Obtain a listing of all transactions for the PRO that make up the calculated weight of blue box materials that were collected and delivered to a processor.
 - b) Obtain a listing of all transactions for the PRO that make up the calculated weight of recovered resources derived from blue box material that were processed by a processor. This must be completed for each category of end market.
 - c) Recalculate the calculated weight of blue box materials that were collected and delivered to a processor.
 - d) Recalculate the total weight of recovered resources.
 - e) Compare the recalculated weight based on the listing received to the reported weight of recovered resources in the PRO's annual report.

For each processor of blue box material:

- f) Confirm that recovered resources meet the general conditions.
- g) Confirm that recovered resources sent for (iii) had no other practical uses.
- h) Use analytical procedures to assess the reasonableness of transactions.
- i) Select a sample of inbound shipments (see Appendix B for suggested sampling methodology).
- j) For each sample, check the accuracy, completeness and validity of the original blue box material recorded (see Appendix A for validation of each material category).
- k) For each sample, agree the calculated weight of blue box materials (see Appendix A for validation of each material category).
- l) Select a sample of outbound shipments of recovered resources from across the categories of end markets.
- m) For each sample, confirm the validity of the sale/transfer/charge to the end market (see Appendix B and Appendix C for guidance on assessing validity).
- n) For each sample, confirm the validity of the end market and that the material is going to be used in the manner intended (see Appendix B and Appendix C for guidance on assessing validity).
- o) For each sample, agree the weight of the outbound recovered resources counted towards producer management requirements as outlined in Appendix A to support (see the list of evidence RPRA may ask for during audits, e.g. weight scale ticket, weight of Non-Blue Box Material, methodologies used, weight of inputs into recovered resource process, etc.).
- p) Obtain the processing facility's mass balance(s) for the audit period. Reconcile the facilities mass balance data for the audit period against the recovered resources counted towards producer management requirements from the processor, to assess validity. Identify and recalculate the recovery rate per tonne of inbound blue box material, by material category.
- q) Confirm that the total weight of processed material allocated to the PRO equals the total weight of inbound blue box material, by type, allocated to the PRO multiplied by the processor's recovery rate, as confirmed by the mass balance recalculation (see Appendix A for validation of each material category).

3. The weight of blue box material and the weight of processed materials that were:

- i. Land disposed;**
 - ii. Stored, stockpiled, used as daily landfill cover, or otherwise deposited on land;**
 - iii. Incinerated or use in a product that is fuel or fuel supplement, with respect to materials which do not meet the conditions under subsection 41 (5) of the Blue Box Regulation;**
 - iv. Used as aggregate, with respect to any use beyond the 15 per cent maximum permitted under subsection 41 (4) of the Blue Box Regulation;**
 - v. Incinerated or use in a product that is fuel or fuel supplement, with respect to any use beyond the 15 per cent maximum permitted under subsection 41 (5) of the Blue Box Regulation.**
- a) Obtain a listing of all transactions for the PRO, which make up the total weight of processed materials used in each of the categories above.
 - b) Recalculate the total weight of recovered resources that cannot be counted towards producer management requirements.
 - c) Compare the recalculated weight based on the listing received to the reported

calculated weight of blue box materials and the weight of processed materials used in each of the categories above.

For each blue box processor:

- d) Use analytical procedures to assess the reasonableness of transactions.
- e) Select a sample of inbound shipments (see Appendix B for suggested sampling methodology).
- f) For each sample, check the accuracy, completeness and validity of the original blue box material recorded see Appendix A for validation of each material category).
- g) For each sample, agree the calculated weight of blue box material.
- h) Select sample(s) of outbound shipments from across the five categories.
- i) For each sample, confirm the accuracy, completeness of the recording and the validity of the sale/transfer/charge to a non-recycled material destination (see Appendix B and Appendix C for guidance on assessing validity).
- j) For each sample, agree the weight of the outbound material to support (e.g., weight scale ticket).
- k) Obtain the processing facility's mass balance(s) for the audit period (see Appendix B and Appendix C for guidance on assessing validity). Reconcile the facilities mass balance data for the audit period against the recovered resources from the processor, to assess validity. Identify and recalculate the percentage of recovered resources that cannot be counted towards producer management requirements.
- l) Confirm that the total weight of non-recycled material allocated to the PRO equals the total weight of inbound blue box materials allocated to the PRO multiplied by the inverse of the processor's recovery rate as confirmed by the mass balance recalculation.

3. A statement confirming whether the producer satisfied their management requirement.

- a) Using the recalculated weight of recovered resources from procedures 1, 2 and 3 (if they are not the same as reported figures), confirm that the total at least equals the PRO's total weight of management requirement by material category.

If the PRO has not satisfied their management requirement for a material category:

- b) Obtain the PRO's allocation methodology and allocated volumes for each producer they represent to determine how the weight of recovered resources have been allocated to the producer(s).
- c) Review the weight of recovered resources for each PRO broken down by producer to ensure that recovered resources were not allocated to more than one producer.
- d) Confirm which producers, if any, met their management requirement and which did not.

Section 3 – Brewers Retail Inc. and the Liquor Control Board of Ontario

Appendix A – Validating Accounting for Material Management Requirements

Overview

The purpose of the sections below is to:

1. Describe a material-by-material approach to third party auditors for verifying the data, methodologies (i.e., sampling and statistical methods) and procedures (i.e. measurement procedures) used by a producer or PRO to establish their claims of weights of recovered resources against management requirements for each blue box material category set forth in Part VI of the Regulation and in preparing reports under Section 51 and 52 of the Regulation. The sections below also identify key issues that may arise during such verification.
2. Provide producers and PROs with guidance on:
 - a. Where the calculation points are for each blue box material in assessing conformance to the material management requirements,
 - b. Material specific considerations in quantifying and reporting such conformance; and,
 - c. The data, methodologies and procedures in quantifying conformance that will be subject to verification.

Quantities of recovered resources claimed by a producer for a given blue box material category against its respective management requirement must meet the general conditions and be accepted by an end market. These conditions must be met before any data, methodologies and procedures used to measure, calculate and report the weight of recovered resources are eligible to be verified.

Much of the data collected in PRO materials management supply chains is the product of periodic sampling (e.g., sampling of the in-bound composition of collected blue box materials into processing facilities, the out-bound composition of sorted blue box materials from primary processing facilities to secondary processors, the out-bound composition of recovered resources to end markets etc.). As such, Appendix B – Verification of transfer of materials provides guidance to producers, PROs, and auditors on the statistical methods for stating the quality of materials transferred from one facility in the PRO's material management chain to another (focusing on material composition) during the applicable reporting period.

Paper Material Category

Calculation Point

An auditor will verify that the PRO:

1. Has (on behalf of a subscribing producer) counted the weight of recovered resources associated with the paper material category in respect of its management requirement only when those recovered resources were proven to meet the general conditions and have been accepted by an end market.
2. Has ensured that the calculation point used for calculating the quantity of recovered resources associated with the paper material category in respect of a producer's management requirement was the point at which recovered resources were being prepared for shipment to an end market.
3. Has ensured that the weight of recovered resources associated with the paper material category claimed in respect of a producer's management requirement is the weight of paper material net of:

- a. non-blue box material,
 - b. excess moisture, and
 - c. recovered resources not derived from paper material.
- 4. Has accounted for the weight of recovered resources associated with the paper material category accepted by end markets that was recovered from blue box material collected through a collection system as set forth in Parts IV, IV.1 and V of the Regulation.

Check sum

- 5. The sum of the weights of shipments from each processor to its respective end markets accepting recovered resources associated with the paper material category accords with a PRO's claims regarding the total weight of recovered resources associated with the paper material category in respect of its subscribing producers' management requirements.

Evidence

The following sources of data, methodologies and procedures in assessing producer's claims regarding the weight of recovered resources in respect of its management requirement to be considered may include (but are not limited to):

- 6. Information and data held by the PRO:
 - a. Evidence that the person that the PRO is claiming is an end market conforms to the definition of end market (see Appendix C for guidance on assessing validity)
 - b. Outbound weigh scale tickets of recovered resources for shipments of recovered resources to end markets
 - i. Where the PRO marketed recovered resources to end markets itself;
 - ii. Where a third party under agreement with the PRO marketed recovered resources to end markets; and
 - iii. Where a processor under agreement with the PRO marketed recovered resources to end markets.
 - c. In-bound weigh scale tickets of shipments of recovered resources received at end markets where such tickets are made available to the PRO
 - d. Measurements of material composition and quality as shipped from one party to another within the PRO's blue box material management supply-chain.
- 7. Information and data held by processors operating under agreement with the PRO
 - a. Outbound weigh scale tickets associated with shipments of recovered resources to end markets
 - b. In-bound weigh scale tickets at end markets where such tickets are made available to the processor
 - c. Measurements of material quality inbound to the processor

Other information from PRO and/or its contracted processors to be verified:

8. The quality specifications that each processor and end market has established as a condition of receiving recovered resources including the minimum composition of paper and thresholds for non-blue box material, moisture, and non-paper blue box materials.
9. Reconciliation of any quantities of recovered resources shipped to an end market on behalf of a producer making a claim regarding the weight of recovered resources in respect of its management requirement where such a shipment was either rejected or downgraded by the end market.
10. The weights of material that does not meet the general conditions contained in shipments of recovered resources to end markets and the reasonableness of the methodology and underpinning evidence and data used to establish such weights.
 - a. Where a PRO claims a shipment of recovered resources to an end market contains no materials that do not meet the general conditions, the auditor shall satisfy itself that no ineligible materials were received by processors from which the respective shipment of recovered resources was produced.
11. The weight of recovered resources associated with the paper material category that was not shipped to an end market but otherwise disposed of by processors.
12. The method by which the PRO measured the composition of materials destined for end markets to determine the quantity of paper related recovered resources to be attributed to the paper material category and the beverage container material category.

Metal Material Category

Calculation Point

An auditor will verify that the PRO:

1. Has (on behalf of a subscribing producer) counted the weight of recovered resources associated with the metal material category in respect of its management requirement only when those recovered resources meet the general conditions and were proven to have been accepted by an end market.
2. Has ensured that the calculation point used for calculating the quantity of recovered resources associated with the metal material category in respect of a producer's management requirement was the point at which recovered resources were being prepared for shipment to an end market.
3. Has ensured that the weight of recovered resources associated with the metal material category claimed in respect of a producer's management requirement is the weight of metal material net of:
 - a. non-blue box material,
 - b. excess moisture, and
 - c. recovered resources not derived from metal material.
4. Has accounted for the weight of recovered resources associated with the metal material category accepted by end markets that was recovered from blue box

material collected through a collection system as set forth in Parts IV, IV.1 and V of the Regulation.

Check sum

5. The sum of the weights of shipments from each processor to respective end markets accepting recovered resources associated with the metal material category accords with a PRO's claims regarding the total weight of recovered resources associated with the metal material category in respect of its subscribing producers' management requirements.

Evidence

The following sources of data, methodologies and procedures in assessing producer's claims regarding the weight of recovered resources in respect of its management requirement to be considered may include (but are not limited to):

6. Information and data held by the PRO:
 - a. Evidence that the person that the PRO is claiming is an end market conforms to the definition of end market (see Appendix C for guidance on assessing validity)
 - b. Outbound weigh scale tickets of recovered resources for shipments of recovered resources to end markets
 - i. Where the PRO marketed recovered resources to end markets itself;
 - ii. Where a third party under agreement with the PRO marketed recovered resources to end markets; and
 - iii. Where a processor under agreement with the PRO marketed recovered resources to end markets.
 - c. In-bound weigh scale tickets of shipments of recovered resources received at end markets where such tickets are made available to the PRO
7. Information and data held by processors operating under agreement with the PRO
 - a. Outbound weigh scale tickets associated with shipments of recovered resources to end markets.
 - b. In-bound weigh scale tickets at end markets where such tickets are made available to the processor.

Other information from PRO and/or its contracted processors to be verified:

8. The quality specifications that each processor and end market has established as a condition of receiving recovered resources including the minimum composition of metal and thresholds for non-blue box material, moisture, and non-metal blue box materials.
9. Reconciliation of any quantities of recovered resources shipped to an end market on behalf of a producer making a claim regarding the weight of recovered resources in respect of its management requirement where such a shipment was either rejected or downgraded by the end market.
10. The weights of material that does not meet the general conditions contained in shipments of recovered resources to end markets and the reasonableness of the

methodology and underpinning evidence and data used to establish such weights.

- a. Where a PRO claims a shipment of recovered resources to an end market contains no materials that do not meet the general conditions, the auditor shall satisfy itself that no ineligible materials were received by processors from which the respective shipment of recovered resources was produced.
11. The weight of recovered resources associated with the metal material category that was not shipped to an end market but otherwise disposed of by processors.
12. The method by which the PRO measured the composition of materials destined for end markets to determine the quantity of metal related recovered resources to be attributed to the metal material category and the beverage container material category.

Glass Material Category

Calculation Point

An auditor will verify that the PRO:

1. Has (on behalf of a subscribing producer) counted the weight of recovered resources associated with the glass material category in respect of its management requirement only when those recovered resources meet the general conditions and were proven to have been accepted by an end market.
2. Has ensured that the calculation point used for calculated the quantity of recovered resources associated with the glass material category in respect of a producer's management requirement was the point at which recovered resources were being prepared for shipment to an end market.
3. Has ensured that the weight of recovered resources associated with the glass material category claimed in respect of a producer's management requirement is the weight of glass material net of:
 - a. non-blue box material, and
 - b. recovered resources not derived from glass material.
4. Has accounted for the weight of recovered resources associated with the glass material category accepted by end markets that was recovered from blue box material collected through a collection system as set forth in Parts IV, IV.1 and V of the Regulation.

Check sum

5. The sum of the weights of shipments from each processor to respective end markets accepting recovered resources associated with the glass material category accords with a PRO's claims regarding the total weight of recovered resources associated with the glass material category in respect of its subscribing producers' management requirements.

Evidence

The following sources of data, methodologies and procedures in assessing producer's claims regarding the weight of recovered resources in respect of its management requirement to be considered may include (but are not limited to):

6. Information and data held by the PRO:
 - a. Evidence that the person that the PRO is claiming is an end market conforms to the definition of end market (see Appendix C for guidance on assessing validity).
 - b. Outbound weigh scale tickets of recovered resources for shipments of recovered resources to end markets
 - i. Where the PRO marketed recovered resources to end markets itself;
 - ii. Where a third party under agreement with the PRO marketed recovered resources to end markets; and
 - iii. Where a processor under agreement with the PRO marketed recovered resources to end markets.
 - c. In-bound weigh scale tickets of shipments of recovered resources received at end markets where such tickets are made available to the PRO
7. Information and data held by processors operating under agreement with the PRO
 - a. Outbound weigh scale tickets associated with shipments of recovered resources to end markets
 - b. In-bound weigh scale tickets at end markets where such tickets are made available to the processor

Other information from PRO and/or its contracted processors to be verified:

8. The quality specifications that each processor and end market has established as a condition of receiving recovered resources including the minimum composition of glass and thresholds for non-blue box material and non-glass blue box materials.
9. Reconciliation of any quantities of recovered resources shipped to an end market on behalf of a producer making a claim regarding the weight of recovered resources in respect of its management requirement where such a shipment was either rejected or downgraded by the end market.
10. The weights of material that does not meet the general conditions contained in shipments of recovered resources to end markets and the reasonableness of the methodology and underpinning evidence and data used to establish such weights.
 - a. Where a PRO claims a shipment of recovered resources to an end market contains no materials that do not meet the general conditions, the auditor shall satisfy itself that no ineligible materials were received by processors from which the respective shipment of recovered resources was produced.
11. The weight of recovered resources associated with the glass material category that was not shipped to an end market but otherwise disposed of by processors.
12. The method by which the PRO measured the composition of materials destined for end markets to determine the quantity of glass related recovered resources to be attributed to the glass material category and the beverage container material category.

Flexible and Rigid Plastic Material Categories

Calculation Point

An auditor will verify that the PRO:

1. Has (on behalf of a subscribing producer) counted the weight of recovered resources associated with a plastic material category in respect of its management requirement only when those recovered resources meet the general conditions and were proven to have been accepted by an end market.
2. Has ensured that the calculation point used for calculating the quantity of recovered resources associated with a plastic material category in respect of a producer's management requirement was the point at which recovered resources were being prepared for shipment to an end market.
3. Has ensured that the weight of recovered resources associated with a plastic material category claimed in respect of a producer's management requirement is associated with blue box plastic materials net of:
 - a. non-blue box material, and
 - b. recovered resources not derived from the respective plastic material category.
4. Has accounted for the weight of recovered resources associated with the paper material category accepted by end markets that was recovered from blue box material collected through a collection system as set forth in Parts IV, IV.1 and V of the Regulation.

Check sum

5. The sum of the weights of shipments from each processor to respective end markets accepting recovered resources associated with a plastic material category accord with a PRO's claims regarding the total weight of recovered resources associated with the respective plastic material category in respect of its subscribing producers' management requirements.

Plastic processing mass balance and allocation of output of recovered resources to inputs of blue box materials

The auditor shall verify that the following mass balance and allocation procedures were undertaken by the PRO:

6. That where the processor is also processing non-blue box plastics a mass balance method to allocate outputs of recovered resources to inputs of a PRO's supply of a blue box plastic material category was employed.
 - a. That the method accounted for the differences in composition of blue box and non-blue box plastics being co-processed as they may affect the yield and allocation of blue box related recovered resources.
7. The quantity of recovered resources produced by chemical recycling processes with respect to producer's management requirement was calculated using a carbon mass balance approach. Specifically:
 - a. The weight of carbon in a quantity of recovered resources accepted by an end market is expressed as a percentage of the carbon contained in the quantity of the respective plastic material category that was subjected to chemical recycling for the respective reporting period;

- b. That the calculation in (a) employed a reasonable methodology to estimate the carbon composition of quantities of plastic material category related blue box materials that the PRO had subjected to chemical recycling for the respective reporting period; and,
 - c. The percentage in (a) was used to prorate the inbound quantity of plastics into the chemical recycling process to calculate the weight of inbound plastic that was converted into recovered resources delivered to an end market for purposes of a producer's management requirement.
- 8. That where a chemical recycling process produces a chemical intermediary (i.e., pyrolysis oil) that is supplied to a petrochemical cracker facility that produces multiple hydrocarbon outputs that are fuels or materials that may be accepted by an end market (e.g., ethylene, propylene, etc.):
 - a. The allocation of the cracker's output (i.e., fuels and ethylene and/or propylene) to the PRO's input of pyrolysis oil was based on information on the fractional output of the respective petrochemical cracker.
 - b. The approach for allocating the mass balance of materials produced by the petrochemical cracker (e.g., fuels and ethylene) was allocated in the same proportion as the inputs of virgin materials and inputs of pyrolysis oil (i.e., proportional allocation).

Evidence

The following sources of data, methodologies and procedures in assessing producer's claims regarding the weight of recovered resources in respect of its management requirement to be considered may include (but are not limited to):

- 9. Information and data held by the PRO:
 - a. Evidence that the person that the PRO is claiming is an end market conforms to the definition of end market.
 - b. Outbound weigh scale tickets of recovered resources for shipments of recovered resources to end markets
 - i. Where the PRO marketed recovered resources to end markets itself;
 - ii. Where a third party under agreement with the PRO marketed recovered resources to end markets; and
 - iii. Where a processor under agreement with the PRO marketed recovered resources to end markets.
 - c. In-bound weigh scale tickets of shipments of recovered resources received at end markets where such tickets are made available to the PRO
 - d. Measurements of material composition and quality as shipped from one party to another within the PRO's blue box material management supply chain
- 10. Information and data held by Processors operating under agreement with the PRO
 - a. Outbound weigh scale tickets associated with shipments of recovered resources to end markets

- b. In-bound weigh scale tickets at end markets where such tickets are made available to the processor
- c. Measurements of material quality inbound to the processor
- d. Electronic process control telemetry as collected from petrochemical processing facilities

Other information from PRO and/or its contracted processors to be verified:

- 11. The quality specifications that each end market has established as a condition of receiving recovered resources including the minimum composition of plastic and thresholds for non-blue box material and non-plastic blue box materials.
- 12. Reconciliation of any quantities of recovered resources shipped to an end market on behalf of a producer making a claim regarding the weight of recovered resources in respect of its management requirement where such a shipment was either rejected or downgraded by the end market.
- 13. The weights of material that does not meet the general conditions contained in shipments of recovered resources to end markets and the reasonableness of the methodology and underpinning evidence and data used to establish such weights.
 - a. Where a PRO claims a shipment of recovered resources to an end market contains that do not meet the general conditions, the auditor shall satisfy itself that no ineligible materials were received by processors from which the respective shipment of recovered resources was produced.
- 14. The weight of recovered resources associated with the respective plastic material category that was not shipped to an end market but otherwise disposed of by processors.
- 15. The method by which the PRO measured the composition of materials destined for end markets to determine the quantity of flexible plastic related recovered resources to be attributed to the flexible plastic material category and the beverage container material category.

Beverage Container Category

- 1. Once the auditor has verified the quantity of recovered resources for a given blue box material category, they shall apportion recovered resources to the beverage container category and respective material category based on net supply data (supplied weight, not including deducted weight or compostable material weight).

Appendix B – Verifying Transfer of Materials

Purpose

Where a PRO uses an average material composition to determine the weight of recovered resources attributable to one or more material categories, the auditor must assess whether the reported composition is supported by sufficient and appropriate evidence and reasonably represents the material transferred from one facility in the PRO's material management chain to another during the applicable reporting period.

The objective of the verification is to provide assurance that the composition data used by the PRO to calculate achievement of the applicable management requirements are representative of the materials actually managed.

Verification of composition data

The auditor must assess the methodology used to determine the average composition of each material stream for which composition data are used in calculating achievement of a management requirement.

The auditor should determine whether:

- the population of material to which the reported average composition applies has been clearly defined;
- the composition categories used are consistent with the applicable blue box material categories in the Regulation or blue box material sub-categories used by the PRO;
- that material categorised as non-blue box material is not including material from ineligible sources, like commercial, institutional or industrial settings.
- the sampling methodology is appropriate for the material stream and is designed to produce results representative of the population;
- the number, timing and distribution of samples are sufficient to account for reasonably foreseeable variation in the composition of the material stream;
- samples are selected in a manner that minimizes selection bias;
- the method used to obtain a physical sample from a selected load, bale, production run or other sampling unit is appropriate to the material being characterized;
- each composition sample is sorted, classified and weighed using documented and consistently applied procedures;
- scales and other measurement equipment used to determine sample weights are appropriately maintained and calibrated;
- the measured weights of the material categories reconcile to the total measured weight of each composition sample, subject to reasonable measurement and rounding tolerances;
- the calculation used to combine individual sample results into the reported average composition is appropriate and has been applied consistently;
- the reporting period represented by the composition data corresponds to the period for which the average composition is applied; and
- the reported average composition is consistent with other available evidence concerning the nature and quantity of the material transferred between facilities.

Representativeness of sampling

The auditor must assess whether the samples used to calculate average composition are reasonably representative of the population of material to which the resulting composition is applied. See Appendix D for minimum sample size requirements.

In making this assessment, the auditor should consider the total number and weight of shipments or other sampling units in the population and any factors that could reasonably cause composition to vary, including:

- source of the material;
- how many streams are collected residually (dual stream, single stream);
- processing facility or processing line;
- production period;
- operating shift;
- changes in sorting or processing equipment or practices;
- seasonal or other changes in the inbound material stream;
- commodity specifications and quality requirements; and
- changes in end market specifications.

Samples should be distributed across the reporting period and across material streams having materially different characteristics. A PRO should not rely on samples concentrated within a limited period or portion of the population unless it can demonstrate that those samples reasonably represent the population to which the resulting average composition is applied.

Calculation of average composition

For each composition sample, the weight assigned to each applicable material category should be divided by the total measured weight of the sample to determine its percentage by weight.

The auditor must assess whether the method used to aggregate individual sample results produces an average composition that reasonably represents the weight of each material category contained in the population of material transferred during the reporting period.

Where sampling units or the quantities of material represented by individual samples differ materially in weight, the auditor should assess what weighting is necessary to produce a representative estimate of the composition of the total material stream.

The percentages assigned to all applicable material categories, including non-blue box material, residue and other materials identified through the composition audit, should account for 100% of the material characterized, subject to reasonable measurement and rounding tolerances.

Corroborating evidence

Composition sampling should not be considered in isolation. The auditor should assess whether the reported average composition is consistent with other available evidence relating to the material stream.

Relevant evidence may include weigh-scale records, bills of lading, shipping records, receiving records, processor production records, commodity specifications, bale or product quality reports, invoices, downstream processor records, photographs, composition studies and other records describing the quantity or characteristics of the material transferred.

Material inconsistencies between composition sampling results and other available evidence should be investigated and resolved before the composition data are relied upon for determining achievement of a management requirement.

Documentation and traceability

The auditor should confirm that sufficient records have been retained to permit the reported average composition and the resulting weight of recovered resources to be independently reproduced.

At a minimum, records should identify the population to which the composition applies, the sampling units selected, the dates of sampling, the sampling and sorting procedures used, the measured weight assigned to each material category, the individual sample results, the method used to calculate the average composition and the quantity of material to which that composition was applied.

The auditor should be able to trace the reported weight of recovered resources from the underlying composition and weight records through the PRO's calculation of achievement of the applicable management requirement.

Appendix C – Validating Actual Use of Materials

Assessing the validity of end market is a critical component of the audit procedure. The procedure is designed to give reasonable assurance that transfers of ownership of materials to end market are for uses appropriate under the Blue Box Regulation. The following are examples of the types of procedures that may be applied by auditors to gain assurance of valid end market and end market sales.

- Does the end market exist and is it active?
 - What actions has the PRO or processor taken to verify? Can they be relied upon?
 - Contact the company.
 - Check company website.
 - Check company directories.
- Does the type of end market seem like the type of company that would use the material in the manner intended?
 - What actions has the PRO or Processor taken to verify? Can they be relied upon?
 - Contact the company.
 - Check company website.
 - Conduct a site visit.
 - A signed attestation from the company's auditor that supports their stated use, or agreement demonstrating the utilization of the recovered resources by an end market.
 - Evidence that can be obtained from other regulatory bodies.
 - Does the cost of the material to the end market logically suggest that it would be used for the manner intended?
 - Does the cost of transportation of the material, combined with the cost of material or separately, logically suggest that it would be used for the manner intended?

Appendix D – Minimum Sampling Size Requirements

Attribute sampling is the most appropriate audit methodology to efficiently validate compliance. It tests a sample of a population to validate whether the attribute is consistent in a population

Sample sizes obtained through this sampling methodology are based on four variables: population size, confidence level, expected deviation rate, and tolerable deviation rate. Suggested variables are defined below:

Confidence Level = 95%

Expected Deviation Rate = 0%

Tolerable Deviation Rate = 5%

Based on the below populations, this leads to the stated sample sizes:

Population	Sample size required	Deviations
500+	60	0
250	50	0
100	40	0
50	30	0
10	10	0

Appendix E – Reporting Schedule

[Calendar Year]										
Material Category	Net Supply Weight	Collected Weight	Non-Blue Box Material	Unsold Bale Weight	Sold Bale Weight	Recovered Resources Counted Towards Producer Management Requirements				Performance (%)
						Aggregate	Fuel or Incineration	Soil Health or Crop Growth	Recovery or Reuse	
Beverage Container										
Glass										
Flexible Plastic										
Rigid Plastic										
Metal										
Paper										

* report only verified weight

If the auditor has a modified opinion, the auditor must only report in the tables above the weight that could be verified, and outline in text here the nature of the modification, and the weight of material by type subject to the modification.

[Insert PRO name] has satisfied their management requirement	Yes/No
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Revision History

Date	Revisions
Issued June 1, 2021	N/A
Reviewed XXX	Updated to replace Supply Data and Management Performance sections.