



VERIFICATION PROCEDURES FOR HAZARDOUS AND SPECIAL PRODUCTS (HSP)



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ARTICLE 1 DEFINITIONS

1.1 In this policy, the following terms shall have the following meanings:

- (a) "Advanced Chemical Recycling" has the same meaning as in the Regulation;
- (b) "Authority" means the Alberta Recycling Management Authority;
- (c) "Batteries" has the meaning as set forth in Section 21 of the Regulation. For clarity, batteries include single-use and rechargeable battery chemistries;
- (d) "CCS" means Common Collection System, as defined in the Regulation;
- (e) "Community" has the same meaning as in the Regulation;
- (f) "Designated Material" means hazardous and special products as designated materials for the purposes of sections 1 to 11 and Part 2 of the Regulation pursuant to section 22 of the Regulation;
- (g) "Disposed" and "Disposition" means taken to a landfill that meets the definition in section 1(z) of the *Waste Control Regulation*, AR 192/96;
- (h) "Downcycling" has the same meaning as in the Regulation;
- (i) "End Market" is a person that consumes Recycled material to produce new products or packaging;
- (j) "HSP Bylaws" means the Hazardous and Special Products Bylaws for the Authority;
- (k) "HSP Collection Service Standard" means the standards for the collection of designated material collected from the requisite number of sites required under Sections 25(1) and (2) in the Regulation;
- (l) "HSP Material Type Guide" is a compliance guidance to producers as published by the Authority and amended from time-to-time;
- (m) "Inspections" has the same meaning as in Section 10.1 of the HSP Bylaws;
- (n) "PRO" means a producer responsibility organization as defined in the Regulation;
- (o) "Processed" means Designated Materials that have been Recycled, Advanced Chemical Recycled, Downcycled, Treated or that has become a residue that is to be Disposed;
- (p) "Processing Facility" means a facility or person that receives Designated Materials for Recycling, Downcycling, Treatment or Disposal, or that is an exporter of Designated Materials to a jurisdiction outside Alberta for Recycling, Downcycling, Treatment or Disposal;

- (q) "Producer" means a person determined to be the producer of a Designated Material under sections 23 and 24 of the Regulation for the purposes of Part 2 of the Regulation;
- (r) "Recycle" and "Recycled" mean reclaiming materials to replace raw materials in the production of products and packaging;
- (s) "Registered" means with respect to a HSP Producer, PRO, Processing Facility or a Community, any of the foregoing that is registered with the Authority;
- (t) "Regulation" means the *Extended Producer Responsibility Regulation, AR 194/2022*, as amended or replaced from time to time;
- (u) "Secondary Processor" means a facility or person that receives materials derived from Designated Materials collected in Alberta for the purpose of Recycling, Downcycling, or Treatment;
- (v) "Supply" has the same meaning as in the Regulation;
- (w) "Treatment" and "Treated" means treat as defined in the *Environmental Protection and Enhancement Act, RSA 2000, c E-12*;
- (x) "Verifier" means an accredited third party, either an employee of the business or a hired third-party, who has one of the following designations in good standing and is not the person who prepared the report that is being verified:
 - (i) Chartered Professional Accountant (CPA) in Canada;
 - (ii) Certified Public Accountant (CPA) in the United States of America;
 - (iii) Association of Chartered Certified Accounts (ACCA) Qualification;
 - (iv) Certified Internal Qualified Person (CIQP);
 - (v) Certified Professional Bookkeeper (CPB) in Canada;
 - (vi) Registered Professional Accountant (RPA) in Canada;
 - (vii) A professional engineer as licensed by the Association of Professional Engineers and Geoscientists of Alberta (APEGA);
- (y) "Verify" and "Verification" mean the assessment by a Verifier of the methods by which data or evidence in support of a compliance claim has been collected and used with confirmation of the accuracy of such data or evidence and the methods by which such data or evidence has been used (e.g. mathematically manipulated) to establish a Producer's claim of compliance.

- 1.2 A defined term may be used in the singular, plural, past tense or future tense, regardless of how it is defined herein.

ARTICLE 2 REQUIREMENT TO VERIFY

2.1 Requirement to verify

- (a) Producers are required to implement practices and procedures to comply with the collection and material management requirements and to undertake Verification of compliance in accordance with these procedures. Any data or evidence produced in support of a compliance claim or submitted in an annual report will be Verified by a Verifier. The report prepared by a Verifier shall include an opinion on the accuracy of the reported data and the compliance claim.
- (b) Processing Facilities and Secondary Processors are required to implement practices and procedures to comply with annual reporting requirements under the HSP Bylaws and to undertake Verification of compliance in accordance with these procedures. Any data or evidence produced in support of a compliance claim or submitted in an annual report will be Verified by a Verifier.
- (c) In reaching an opinion, the Verifier is expected to:
 - (i) Assess and document the reasonableness of the Producer's methodology, or the PRO's methodology where a Producer has retained a PRO, to develop the data that is required to be submitted to the Authority; and
 - (ii) Obtain and review supporting evidence, as required.
- (d) Where a Producer has retained the services of a PRO, the PRO can arrange for an independent Verifier to undertake the Verification on the Producer's behalf.
- (e) Where that PRO has more than one subscribing Producer, a single Verification report may be submitted to the Authority on behalf of all subscribing Producers where the Verifier has Verified each Producer's report in Section 2.1(c).

2.2 Review of Verification by Authority

- (a) In reviewing a Verification, the Authority may:
 - (i) Accept the Verification in lieu of the underlying evidence and records;
 - (ii) Inspect any of the underlying evidence and records to confirm the Verification, on twenty-four (24) hours' notice per the Inspection Procedures established by the Authority, as amended from time-to-time;
 - (iii) Reject the Verification, in whole or in part, and require the Producer or Verifier to re-do the Verification if, in the Authority's sole opinion acting reasonably, the

Verification fails to sufficiently provide the information required pursuant to Section 11.2 of the HSP Bylaws.

ARTICLE 3 SUPPLY OF DESIGNATED MATERIALS – BATTERIES

3.1 Determining Battery supply

(a) Determining Battery unit supply

- (i) Producers shall submit to the Authority the weight of the Batteries as defined in section 21 (a) of the Regulation and the HSP Material Type Guide that they Supply into Alberta, for the purpose of determining the Producer’s management requirement.
- (ii) The reported weight must exclude the weight of any packaging that may be supplied with the Batteries that is subject to Part 1 of the Regulation.

To determine the weight of Batteries Supplied into Alberta, the Producer will determine how many Battery units of each size and chemistry are Supplied into Alberta. Battery Producers may choose one of the following methodologies to determine the number of units supplied into Alberta:

- A. The actual number of Battery units.
- B. The number of Battery units calculated using the formula set out in (b) to determine the Alberta portion of the Battery units supplied into Canada.

- (b) To determine the number of units provided into Alberta, Producers can choose to use either the actual units as per 7.1(a) (ii) A. or the calculate the units of Batteries supplied using the following formula:

$$(P1/P2) \times \text{Canada National Sales}$$

“P1” is the population of Alberta, as reported by Statistics Canada in the most recent official census.

“P2” is the total population of provinces and territories in Canada in which the Producer sells Batteries in, as reported by Statistics Canada in the most recent official census.

“Canada National Sales” is the total units of Batteries Producer sold in Canada in the calendar year.

The options described above do not reduce the obligation of a Producer to provide accurate supply data or limit the ability of an Authority inspector to review the data and related records for the purpose of determining compliance.

- (c) Determining Battery supply weight
 - (i) Battery Producers may choose one of the following methodologies to report the weight of the Batteries they Supply into the Alberta market:
 - A. Multiplying the weight of each Battery for each size and chemistry supplied times the respective Battery unit supply in Section 3.1(a); or
 - B. Multiplying the weight of Batteries calculated using the unit to weight conversion “Weight Conversion Factor (WCF)” factors for single-use and rechargeable Batteries in Appendix B times the respective Battery unit supply in Section 3.1(a).

3.2 Verifying Battery supply data

To Verify Battery supply data reporting a Producer shall require its Verifier to:

- (a) Document responses for the following questions:
 - (i) What is the Producer’s marketing process, including how products are Supplied in Alberta (e.g., ecommerce, retail sales, etc.)?
 - (ii) How are products Supplied in Alberta tracked separately from products supplied in other provinces?
 - (iii) How is a SKU (Stock Keeping Unit) set up in the Producer’s ERP/database/system, and what product specifications are included (e.g. product weight, product description, brand name, etc.)?
 - (iv) What are the Producer’s obligations based on the definition of a Producer? (Refer to the Regulation)
 - (v) What are the brand names of products for which the Producer has collection and resource recovery obligations?
 - (vi) What is the Producer’s methodology for determining how the products were Supplied in Alberta (refer to the definition of “Supply” in definition section)?
 - (vii) What is the Producer’s step-by-step process for preparing the product supply report, including what systems or applications are used to track product supply and what reports are used? (Ensure that all details required to understand how the product supply report is prepared are documented.)
 - (viii) What is the Producer’s methodology for determining the weight of the products Supplied in Alberta?

- (ix) How does the Producer determine which products are included in the product supply report and which ones, if any, are excluded, based on the definitions in the *Electronic Designation Regulation, AR 94/2004*?
- (b) Verify the accuracy of the product weights used:
 - (i) Select a sample of obligated SKUs in accordance with Table 1 and perform the following for each:
 - A. If actual weight of a Battery is used, Verify that it is in accordance with the manufacturer's specifications.
 - B. If a calculated weight is used, compare the calculation of the weights used to the Weight Conversion Factors in Appendix B to determine if the products were reported in the correct categories and if the Weight Conversion Factors were applied correctly.
- (c) Verify the accuracy of the product units reported:
 - (i) If actual number of units is used, Verify that they accord with the Producer's sales records; or
 - (ii) If calculated number of units is used:
 - A. Agree the Alberta population to the most recent Statistics Canada official census,
 - B. Agree the population of each province and territory in Canada in which the Producer sells Batteries to the most recent Statistics Canada official census, and
 - C. Recalculate the number of Alberta units supplied based on the formula in Section 3.1(b).
- (d) Select a sample of non-obligated SKUs in accordance with the methodology in Table 1. For each sample selected, Verify that they do not meet the definition of "Battery" as applicable, based on the SKU selected.
- (e) Confirm the accuracy and completeness of the reporting of obligated Batteries Supplied to the Alberta market by sampling one month's data and comparing the raw sales report with the obligated product supply report. Select samples in accordance with Table 1 and scrutinize the variances and validate if they are reasonable.
- (f) Select a sample in accordance with the Table 1 of manual adjustments made to the product supply report and assess if they are reasonable. For example, Batteries Supplied into Alberta and subsequently shipped out of Alberta will result in an adjustment to the supply report.

Table 1: Sampling Methodology

Sample sizes obtained through this sampling methodology are based on four variables: population size (e.g. number of shipment records), 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

ARTICLE 4 SUPPLY OF DESIGNATED MATERIALS – HSP

4.1 Determining HSP Supply

- (a) When reporting their Supply of corrosive product container, corrosive products, flammable products, flammable products container, pesticide, pesticide container, toxic product and toxic product container, Producers must include the weight of the products’ primary packaging Supplied below the thresholds set forth in Section 21 (b), (c), (d) and (e), (g), (h), (i) and (j) of the Regulation respectively. The weight of the product and respective product’s packaging may be reported in aggregate (e.g. the weight of a flammable product and its respective flammable products container may be reported in aggregate).
- (b) For the purposes of determining HSP supply data any primary packaging subject to Part 1 of the Regulation (e.g., corrugated and boxboard boxes, plastic film, shrink wrap or printed materials etc.) should not be reported by the Producer.
- (c) Producers shall report using the number of supplied units multiplied by the actual weights of the units Supplied.
- (d) Calculating the number of Supplied units

- (i) To determine the number of units of each type of HSP Supplied into Alberta, HSP Producers may choose one of the following methodologies:
 - A. The actual number of units of each type of HSP; or
 - B. The number of units of each type of HSP calculated using the formula set out in Section 3.1(b) for Batteries to determine the Alberta portion of the units of each type of HSP supplied into Canada.
- (ii) The options described above do not reduce the obligation of a Producer to provide accurate supply data or limit the ability of the Authority to inspect the data and related records for the purpose of determining compliance.

4.2 Verifying HSP supply data

To verify HSP supply data reporting a Producer shall require its Verifier to:

- (a) Document responses for the following questions:
 - (i) What is the Producer’s marketing process, including how products are Supplied in Alberta (e.g., ecommerce, retail sales, etc.)?
 - (ii) How are products Supplied in Alberta tracked separately from products supplied in other provinces?
 - (iii) How is a SKU (Stock Keeping Unit) set up in the Producer’s ERP/database/system, and what product specifications are included (e.g., product weight, product description, brand name, etc.)?
 - (iv) What are the Producer’s obligations based on the definition of a Producer (refer to Part 2 of the Regulation)?
 - (v) What are the brand names of products for which the Producer has collection and management obligations for?
 - (vi) What is the Producer’s methodology for determining how the products were Supplied in Alberta (refer to the definition of “Supply” in the definition section)?
 - (vii) What is the Producer’s step-by-step process for preparing the product supply report, including what systems or applications are used to track product supply and what reports are used (ensure that all details required to understand how the product supply report is prepared, are documented)?
 - (viii) What is the Producer’s methodology for determining the weight of the products Supplied in Alberta?

- (ix) How does the Producer determine which products are included in the product supply report and which ones, if any, are excluded, based on the definitions in the HSP Regulation?
 - (x) What is the material used for primary packaging (primary packaging material does not include designated materials obligated under Part 1 of the Regulation)?
 - (xi) What is the capacity of the container for the HSP Supplied in Alberta?
 - (xii) What is the Producer’s methodology for determining the weight of the primary packaging of the HSP Supplied in Alberta?
- (b) Verify the accuracy of the weights of Supplied HSP reported
- (i) Verify the product and packaging weights used by selecting samples of products and packaging using the sampling methodology in Section 3.2(f) and measuring their weights.
- (c) Verify the accuracy of the product units reported:
- (i) Verify that the actual number of units used, agrees to the Producer’s sales records.
 - (ii) If calculated number of units is used:
 - A. Verify that the Alberta population to the most recent Statistics Canada official census.
 - B. Verify that the population of each province and territory in Canada in which the Producer sells HSP to the most recent Statistics Canada official census, and
 - C. Recalculate the number of Alberta units supplied using the formula in Section 4.1(d).
- (d) Verify that packaging obligated under Part 1 of the Regulation has not been reported in accordance with Section 4.1(b) by selecting samples in accordance with Table 1 and confirming if the weight of the primary packaging (if any) has been properly excluded.
- (e) Verify any manual adjustments made to reported supply data are reasonable. For example, if adjustments made to account for products Supplied into Alberta that were subsequently shipped out of Alberta are reasonably reflected in the calculation of Supply.

ARTICLE 5 COLLECTION SYSTEM REQUIREMENTS HSP

5.1 Verification of Producer participation in a HSP CCS

- (a) A Producer must Verify that it is participating in a CCS by:

- (i) Providing evidence that it is operating a CCS as per Section 5.2(a);
 - (ii) Providing evidence that it has entered an agreement with a person that is operating a CCS; or
 - (iii) Providing evidence that it has entered an agreement with a Registered PRO that has an agreement with a person that is operating a CCS.
- (b) A Registered PRO may provide the Authority with Verification under Section 5.2(a) on behalf of any Producer with which it has an agreement to provide collection services.

5.2 Verification of HSP CCS established

- (a) Any person operating a CCS for HSP shall provide to the Authority with evidence that it has arrangements (e.g., commercial agreements) in place to achieve the HSP Collection Service Standards in the Regulation and Section 11.2 (a),(b), and (c) of the HSP Bylaw. Such evidence shall be in the form of the cover page, the applicable pages that identify the Registered Community(ies) serviced and the form of collection service provided to the Registered Community(ies) and the signature page of each executed agreement provided as evidence in support of this Section.

5.3 Verification of HSP alternative collection system

- (a) Where the Authority has authorized a Producer to operate an alternative collection system, the Producer shall Verify that:
- (i) it is providing collection services in accordance with the alternative collection system requirements as approved by the Authority.

APPENDIX A - BATTERIES WEIGHT CONVERSION FACTORS

Single-Use Batteries Weight Conversion Factors by Chemistry and Size

Battery Types by Material	Weight (kg)
Alkaline Manganese - Button Cell	0.0015
Zinc-Air - Button Cell	0.0026
Silver Oxide - Button Cell	0.0023
Lithium - Button Cell	0.0026
Lithium - AA	0.0145
Lithium - AAA	0.0076
Lithium - Primary	0.0100
Zinc-Carbon – 6 V oblong lantern	1.2700
Zinc-Carbon – 6 V square lantern	0.6000
Zinc-Carbon – 9 V	0.0375
Zinc-Carbon - D	0.0945
Zinc-Carbon - C	0.0483
Zinc-Carbon - AA	0.0170
Zinc-Carbon - AAA	0.0097
Alkaline Manganese - AAA	0.0112
Alkaline Manganese - AA	0.0234
Alkaline Manganese - C	0.0689
Alkaline Manganese - D	0.1445
Alkaline Manganese – 9 V	0.0455
Alkaline Manganese – 6 V square lantern	0.7485
Alkaline Manganese – 6 V oblong lantern	1.5855

Rechargeable Weight Conversion Factors by Chemistry and Size

Size	Chemistry	Weight (kg)
9 V	Nickel-Cadmium	0.035
	Nickel-Metal Hydride	0.042
N	Nickel-Cadmium	0.010
	Nickel-Metal Hydride	0.011
AAA	Nickel-Cadmium	0.0105
	Nickel-Metal Hydride	0.013
	Other	0.011
AA	Nickel-Cadmium	0.0215
	Nickel-Metal Hydride	0.0271
	Other	0.022
A	Nickel-Cadmium	0.032
	Nickel-Metal Hydride	0.040
C	Nickel-Cadmium	0.073
	Nickel-Metal Hydride	0.080

Size	Chemistry	Weight (kg)	
	Other	0.058	
Sub C	Nickel-Cadmium	0.0529	
	Nickel-Metal Hydride	0.055	
D	Nickel-Cadmium	0.145	
	Nickel-Metal Hydride	0.1628	
	Other	0.104	
F	Nickel-Cadmium	0.231	
	Nickel-Metal Hydride	0.2613	
Pin Cell	Lithium-Ion	0.001	
Button Cell	Lithium-Ion	0.0025	
Prismatic Single Cell	Lithium-Ion	0.0217	
Cylindrical Single Cell	Lithium-Ion	0.0418	
Pouch Cell	55-500 typical nominal mAh	Lithium-Ion	0.0052
	501-1000 typical nominal mAh	Lithium-Ion	0.0158
	1001-2000 typical nominal mAh	Lithium-Ion	0.030
	2001-5000 typical nominal mAh	Lithium-Ion	0.055
	>5001 typical nominal mAh	Lithium-Ion	0.112

Rechargeable Weight Conversion Factors by Application

Application	Chemistry	Weight (kg)
Cell Phones E.g. cellular phones, smartphones	Lithium Cobalt Oxide (LCO)	0.028
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.053
Cameras/Games E.g. video game controller	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide)	0.215
Others portable	Nickel-Metal Hydride (NiMH)	0.042

Application	Chemistry	Weight (kg)
E.g. power banks, shavers, toothbrushes, drones, cordless mice, remote controls, MP3, cordless landline phones	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Iron Phosphate)	0.215
Tablets	Lithium-Ion (Includes: Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide)	0.246
Laptops/Portable PC	Lithium Cobalt Oxide (LCO)	0.341
	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.438
Cordless tools E.g. gardening tools, cordless tools, power tools	Lithium Nickel Manganese Cobalt Oxide (NMC)	0.495
	Nickel-Metal Hydride (NiMH)	0.923
	Nickel-Cadmium (NiCd)	1.182
E-bikes	Lithium-Ion (Includes: Lithium Nickel Manganese Cobalt Oxide, Lithium Manganese Oxide, Lithium Cobalt Oxide, Lithium Iron Phosphate)	2.802
Industrial excluding mobility E.g. pallet lifters, forklifts, energy storage for industrial use, other non- portable	Any Nickel (Includes Nickel-Cadmium Nickel-Metal Hydride)	2.963
	Lithium-Ion (Includes Lithium Manganese Oxide, Lithium Cobalt Oxide, Lithium Nickel Manganese Cobalt Oxide, Lithium Nickel Cobalt Aluminium Oxide, Lithium Iron Phosphate)	2.984
Lighting E.g. security lighting, shielded or full cut-off lamps, control and power lines	Nickel-Cadmium (NiCd)	2.963
Medical E.g. measuring instruments, medical carts and beds, portable defibrillators	Lithium Cobalt Oxide (LCO)	2.984
Uninterruptible Power Supply (UPS)	Lithium Iron Phosphate (LFP)	2.984
Telecom	Lithium Nickel Manganese Cobalt Oxide (NMC)	2.984
Personal Mobility Devices/Light Electric Vehicles E.g. golf carts, mobility scooters	Lithium Nickel Manganese Cobalt Oxide (NMC)	3.284
Off-Grid Energy Storage Eg. solar/wind energy systems, RV/boat energy storage	Lithium Iron Phosphate (LFP)	2.984