Part B: Combat vehicles (version 1.0)
August 19, 2026 | Sustainable Minds | Contact Kim Hammer (kim@sustainableminds.com)

EPD use case goal: 2

EPD use levels are cumulative. Transparency is the baseline. To create a 'Data source' conformant PCR, all criteria in all checklists must be documented.

1. Program Operator (PO) checklist Version 1.0, May 25, 2022 | ACLCA PCR Open Standard 2022

3 Data source
2 Procurement
1 Transparency

Categories	#	Criteria	ISO reference	Supporting documentation	EPD use	How criteria were met	Due
Organizational	**Ground rules**						
	☑ 1	Prior to using the ACLCA PCR Guidance 2022 to develop PCRs, the PO **shall** use this guidance to develop and publish conformant program instructions that describe the process of PCR development aligned with ISO/TS 14027.	**This guidance**	**General program instructions (governance document):** • ACLCA PCR Guidance 2022 conformant statement with version number	**1 Transparency**	Updated program instructions published to SM website https://www.sustainableminds.com/files/transparency/SM_Governance_and_program_rules_v4-0.pdf	Complete
	☑ 2	PO **shall** use this checklist to guide the creation of a PCR, identify how criteria were met, and provide the completed Program Operator Checklist and PCR Review Panel Checklist to the PCR Review Panel.	**This guidance**	**PCR supporting documentation:** • Completed checklist	**1 Transparency**	Completed checklists saved with the PCR supporting documentation.	Complete
	☑ 3	PO **shall** be the secretariat of the PCR and manage an open and transparent process to develop or update a PCR. This process **shall** include public notices prior to PCR development and an open consultation process with interested parties while the PCR Committee remains active. PO **shall** publish the intention to develop (or update) a PCR on its website, in relevant industry and trade publications and/or news services, and through centralized notification mechanisms. The announcements **shall** include contact information that allows interested parties to request more information about participation in the PCR development or review process. Interested parties may include material suppliers, manufacturers, trade associations, purchasers (such as architects, designers, specifiers, contractors, and engineers), users, non-governmental organizations (NGOs), and public agencies.	**14027 Clause 6.4.1**	**PCR supporting documentation:** • Date(s) announcement(s) were posted and where	**1 Transparency**	Public notice on the Sustainable Minds website announcing the new version of water-resistive and air barriers Part B on September 26, 2025: http://www.sustainableminds.com/transparency-report-program/part-b Email blast on September 26, 2025 to mailing lists of LCA professionals, combat vehicle industry associations and manufacturers, component suppliers, and government representatives.	Complete
	☑ 4	PO **shall** determine whether to create a new PCR or to adapt an existing PCR from other geographic regions. The PO **shall** justify the determination in the PCR.	**14027 Clause 6.4.2, 6.4.3**	**PCR:** • Identify existing PCRs considered, and provide justification for creating a new PCR. • If new, identify the supporting LCA. • Describe how existing PCRs will be adapted.	**2 Procurement**	No existing PCRs were identified for combat vehicles. Underlying LCA listed in Program operator responsibilities section.	Complete
	☑ 5	PO **shall** evaluate upstream and downstream PCRs in the value chain to be considered for alignment. PO **shall** list relevant PCRs in the PCR. *Note: Also see Criterion 15 for the process of determining when a PCR may be updated.*	**14044** **14027 Clause 6.4.3** **This guidance**	**PCR supporting documentation:** • Identify existing upstream PCRs for the major inputs to the product(s) considered in the PCR. • Describe differences in allocation rules or other potential conflicts and how they were resolved. • Identify existing downstream PCRs that use products/materials from the PCR and how inconsistencies were resolved.	**3 Data source**	N/A	N/A
	☑ 6	PO **shall** harmonize PCR activities with other EPD programs to avoid unnecessary duplication and proliferation of similar PCRs, and align on mutual recognition agreement (MRA) requirements. PO **shall** list relevant PCRs in the PCR. *Note: Refer to both the ACLCA's PCR library and the North American PCR Catalog: Building & Construction Materials https://www.transparencycatalog.com/na-pcr-catalog-building-products*	**14027 Clause 6.5.5** **14029 Clause 7, 9.2**	**PCR supporting documentation:** • Identify whether this criteria is applicable. • Identify other POs engaged to harmonize PCR activities and opportunities explored (joint development of new, merging, application of existing, or adaption of existing). • MRA between POs one exists.	**1 Transparency**	Addressed in Program operator responsibilities section of Part B.	Complete
	☑ 7	PO **shall** publish and implement procedures for an appeals mechanism to ensure prompt and impartial handling of procedural complaints regarding any action or inaction of the PCR Committee, PCR Review Panel, or Program Operator.	**14027 Clause 6.4.4**	**General program instructions (governance document):** • Explanation of appeals process	**1 Transparency**	Addressed in section 10.0 of the governance document.	Complete
	☑ 8	PO **should** include a method for addressing data quality in its general program instructions. *Note: Refer to the addendum "Assessing Data Quality of Background Life Cycle Inventory Datasets"* for an example data quality assessment method.		**General program instructions (governance document):** • Method for Data Quality Assessment	**2 Procurement**	Addressed in section 5.6 of the governance document. Per the recommendations in the ACLCA PCR Open Standard addendum "Assessing Data Quality of Background Life Cycle Inventory Datasets", data quality followed guidance in the Enhanced Pedigree Matrix. Appendix A prescribes data sets, describes data gaps, and requires goals to drive dataset selection.	Complete
	PCR committee formation					**How criteria were met**	**Due**
	☑ 9	PO **shall** actively reach out to interested parties (including parties outside the PO's country or region) to ensure that the PCR Committee is composed of independent members, making sure that the interests of one party do not dominate the PCR development process. No single interested party category (at individual, organizational, or sectoral levels) shall dominate the membership of a PCR Committee. Interested parties may include material suppliers, manufacturers, trade associations, purchasers (such as architects, designers, specifiers, contractors, and engineers), users, non-governmental organizations (NGOs), and public agencies.	**14025 Clause 5.5, 6.5, & 9.3** **14027 Clause 6.4.1 and 6.4.2**	**PCR:** • List of PCR Committee members with employer and/or other entity on behalf of which they are participating. **PCR supporting documentation:** • Description of interested party outreach efforts and explanation of interested parties that did not participate.	**1 Transparency**	Working group members listed on page 1 of the Part B.	Complete

☑	10	PO **shall** address potential conflicts of interest developing the PCR and fully disclose funding sources for the management to interested parties. If significant external funding was made by one or more parties to support the development, the PO **should** put in place procedures to ensure that no conflict of interest occurrs in the PCR process. 'Significant funding' is defined as more than $10,000 or its in-kind equivalent, or 20% or more of the anticipated funding needs.	**US EPA Environmentally Preferable Purchasing Program Framework for the Assessment of Environmental Performance Standards and Ecolabels for Federal Purchasing. https://www.epa.gov/system/files/documents/2022-02/updated-framework_020222.pdf**	**PCR supporing documentation:** - The policy or procedure in use when the PCR was developed covering conflicts of interest, separation of organizational functions necessary to address any potential conflict of interest. - Attestation that this policy or procedure was followed during the development. The evidence must also include one of the following: - Documentation that original sources of funding were disclosed to interested parties, such as a disclosure statement, or in meeting minutes for relevant working groups.	**1 Transparency**	Conflict statement included in the Part B development information table of the Part B.	Complete
Content of PCR						**How criteria were met**	**Due**
☑	11	The PCR **shall** report on the following items: • Name and registration number of the PCR • General information about the program: name of the program, contact information, logo, and website if applicable • PCR Committee members and affiliations • Publication date • Expiration date and renewal schedule • Types of product claims covered by the PCR, with references to standards • Product category • Geographical representativeness of the PCR • Original language and translations (if existing) • How to make comments to the PCR	**14027 Clause 6.5**	**PCR:** • Draft PCR that includes all items reported	**1 Transparency**	Part A section 1.1 addresses the use of SM PCRs to create ISO 14025 Type III environmental declarations, and also language availabillity. https://www.sustainableminds.com/files/transparency/SM_Part_A_v4-0_LCA_calculation_rules_and_report_requirements.pdf All other items are addressed in the Part B.	Complete
☑	12	The PCR **shall** report the following information about the review process and background of the PCR: • Review panel member information • Open consultation period and participants • Other existing PCRs for the product category and reasons for developing a new one • Reference to underlying LCAs • Confirmation statement that the PCR was created in conformance with this ACLCA PCR Guidance (including version number)	**14025 Clause 5.5, 8.2 14027 Clause 5.2, 6.4.4 14025 Clause 6.7.1, 6.7.2 14027 Clause 6.1, 6.4.3, 6.5.3, 7.1d**	**PCR:** • Draft PCR that includes all items except 'open consultation period' **PCR supporting documentation:** • Open consultation period and participants	**1 Transparency**	All items except open consultation participants addressed in Part B. Aggregated technical and public comments spreadsheet, including commenter names and committee responses, are available in the Detailed Review Report.	Complete
PCR review process						**How criteria were met**	**Due**
☑	13	PO **shall** set up an independent third-party review panel composed of a minimum of three members (a chair and two members). The combined competencies of the panel **shall** include, at a minimum, expertise in LCA and in the relevant product sector. *Note: Refer to the PCR Review Panel Checklist for review panel expectations.*	**14027 Clause 7.1, 7.2, 7.3, 14025 Clause 8.2.3**	**PCR:** • List of review panel members	**1 Transparency**	Working group members listed on page 1 of the Part B.	Complete
☑	14	PO **shall** also set up an open consultation review.	**14027 Clause 6.4.4, 7.3**	**PCR supporting documentation:** • Date(s) open consultation period(s) announced, where/how; aggregated comments spreadsheet	**1 Transparency**	Aggregated technical and public comments spreadsheet, including commenter names and committee responses, available in the Detailed Review Report.	Complete
☑	15	PO **shall** ensure the PCR Review Panel provides comments within a 90-day period.	**This guidance**	**PCR supporting documentation:** • Date(s) PCR review period	**1 Transparency**	Due date less than 90 days provided to PCR reviewers (May 25 - Jun 12).	Complete
Publication, new and updated PCRs						**How criteria were met**	**Due**
☑	16	PO **shall** be responsible for publishing and maintaining the PCR. The published PCR shall be publicly available on the PO's website, free for any other PO to use. PO **shall** write out the publication date (e.g., June 25, 2022) and expiration date (e.g., June 24, 2027). PCRs **shall** have a validity period of no more than five years from the publication date. PCRs are invalid beyond the expiration date. PO **shall** provide the schedule for renewal, if applicable. PO **should** include a statement adjacent to the PCR Review Panel attribution to indicate conformance with this guidance (including version number) and the EPD use case level. PO **should not** act as a barrier to translating the PCR and should act as a facilitator for the translation	**14025 Clause 6.4, 6.7.1 14027 Clause 8.1.1 This guidance**	**PCR supporting documentation:** • URL of PO's published PCRs page • URL PCR will be available at when published **PCR:** • Validity period of PCR • Conformance statement and EPD use case level	**1 Transparency**	A link to the SM Part B page is included the Part B. Completed Part Bs are uploaded to that page when published. The URL of the Part B when published is as follows: https://www.sustainableminds.com/files/transparency/pgds/Part_B_Product_Group_Definition_Combat_Vehicles_v1-0.pdf Part B contains validity period, conformance statement, and EPD use case level.	Complete

	☑	17	To manage the expectations of PCR users, the PO **shall** post update information on its website at least four months in advance of the expiration date. The update options include: extending the current PCR, updating the PCR, or letting the PCR expire with no update. If information is not provided within this timeframe, other POs may proceed with the update and post PCR update information on their website.	**This guidance**	• URL of PO's PCRs undergoing updates	**1 Transparency**	Public notice on the Sustainable Minds website announcing the new version of water-resistive and air barriers Part B on September 26, 2025: http://www.sustainableminds.com/transparency-report-program/part-b Email blast on September 26, 2025 to mailing lists of LCA professionals, combat vehicle industry associations and manufacturers, component suppliers, and government representatives.	Complete
	☑	18	To update a PCR during the validity period, the PO **shall**: 1. Notify the original PCR Committee members and original Review Panel. 2. Consult ISO 14027 to confirm the reason to update is valid. 3. Create or update the ACLCA PCR Guidance Checklists for the PCR. 4. Open consultation to interested parties. 5. Update the PCR. 6. Obtain sign-off by PCR Review Panel. 7. Republish an updated version and include a change log at the start of the document. 8. Announce the updated version. 9. Update the ACLCA PCR Repository. In the case that an existing PCR does not meet the requirements for creating EPDs for public or private procurement purposes, the PO **shall** make an effort to first engage the commissioner of the PCR to reconvene the PCR Committee in order to make the required updates. If the PCR commissioner does not reconvene the PCR Committee within 30 days of the PO's request, then the PO may proceed to develop a new PCR using the existing PCR as an informative input document.	**14027 Clause 9**	**PCR:** • Valid update reason **PCR supporting documentation:** • Checklists	**1 Transparency**	New Part B; not an updated PCR.	Complete
	☑	19	For substantial PCR updates (e.g., updates that impact the results of an EPD), the PO **shall** contact manufacturers in their program with valid EPDs and other POs to bring attention to the PCR changes and encourage that they update accordingly.	**14027 Clause 9**	**PCR supporting documentation:** • Description of notification and dates of outreach	**1 Transparency**	New Part B; not an updated PCR.	Complete
	EPD template						**How criteria were met**	**Due**
	☑	20	PO **shall** create a standard EPD template to be used for all EPDs that can be customized per PCR to identify requirements unique to each. Consider both digital and print (PDF) publishing. *Note: Refer to the 'EPD Comparatibility and Digital EPDs / Open EPD addendum.* PO **shall** include a statement adjacent to the PCR name to indicate conformance with this guidance and the EPD use case level.	**This guidance**	**PCR:** • EPD template document prepared for this PCR • Statement text included in EPD template	**1 Transparency**	A standard EPD template is included in Appendix C of Part A. Under the name of the Part B is a statement indicating conformance to this guidance and the EPD use case level.	Complete
	☑	21	PO **shall** ensure that the type of EPD developed is clearly noted on the EPD. *Note: Refer the 'EPD Types' addendum.*	**This guidance**	**PCR:** • Statement text included in EPD template	**1 Transparency**	Requirement listed in the Verification statement section in Appendix C of Part A (EPD template).	Complete
Goal and scope	☑	22	Product categories **shall** be primarily defined and sufficiently described by product functionality, technical performance, and use. The PCR **shall** clearly define the product groups for which the rules apply, both by using descriptive language and by using the relevant codes for any of the existing classification systems relevant to the product category and region. Products NOT covered by the PCR **shall** be clearly listed (as a clarification when products are similar). PO **should** ensure that the product classification systems are not to be the single determining factor for defining the product category. The PCR is encouraged to provide sufficient information to clearly describe the scope of products and services for which the rules apply.	**14027 Clause 8.1.1**	**PCR:** • Draft PCR which includes all the items	**2 Procurement**	Product group section lists description and exclusions. Product classification codes are not relevant for this product category.	Complete

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2. PCR Committee checklist Version 1.0, May 25, 2022 | ACLCA PCR Open Standard 2022

3 Data source
2 Procurement
1 Transparency

Categories	#	Criteria	ISO reference	Supporting documentation	EPD use	How criteria were met	Due
Documentation	Ground rules					How criteria were met	Due
	☑ 1	PCR Committee **shall** use this checklist to guide the creation of a PCR, identify how criteria were met, and provide the completed checklist to the Program Operator to provide to the PCR Review Panel.	**This guidance**	**PCR supporting documentation:** • Completed checklist	1 Transparency	Completed checklists saved with the PCR supporting documentation.	Complete
	☑ 2	PCR Committee **shall** thoroughly document the use of an existing PCR as an informative document in any adaptation to create a new PCR. Include the PO name, existing PCR name, product category classification, link to the existing PCR, and provide justification for adapting the existing PCR.	**14027 Clause 6.4.3 and this guidance**	**PCR:** • Link to PCR Committee's documentation of adaptation	2 Procurement	New Part B; not an updated PCR.	Complete
	☑ 3	PCR Committee **shall** respond to each comment from the PCR Review Panel and public consultation. Responses should address any conflicting comments provided by the PCR Review Panel.	**This guidance**	**PCR supporting documentation:** • Link to PCR Committee's documented public response to comments and consultation on PO's website (aggregated comments spreadsheet).	1 Transparency	Aggregated public comments and review panel comments, including committee responses, created and published on the SM website with the PCR supporting documentation.	Complete
	☑ 4	PCR Committee **shall** provide a limited description of the involvement of interested parties for open consultation. Specifically, the PCR should provide: **• The name and/or affiliation of the stakeholders who participated in the open consultation.** **• The dates of the open consultation period.** Public consultation should be utilized during the PCR review process. The public consultation of the completed draft PCR should include at a minimum a 30-calendar-day time period for comments to be submitted.	**14025 Clause 5.5** **14027 Clause 5.2, 6.4.4**	**PCR:** • Draft PCR that includes list of participating interested parties and dates of consultation period.	1 Transparency	Open consultation period listed in 'Open consultation' section of the Part B development table. Aggregated technical and public comments spreadsheet, including commenter names and committee responses, available in the Detailed Review Report.	Complete
Compliance	☑ 5	PCR Committee **shall** ensure that the underlying LCA meets the requirements of ISO 14044 and other pertinent standards and that, according to these standards, it has either been critically reviewed by a third party or has undergone an internal verification, either by the PCR Committee itself or appointed independent LCA expert.	**14025 Clause 6.7.1, 6.7.2, 8.1.3, 8.2.1, 8.2.2** **14027 Clause 5.1, 6.1, 6.5.3, 7.1d**	**PCR supporting documentation:** • Link to documentation of LCA review or internal verification.	2 Procurement	Underlying LCA listed in Program operator responsibilities section, including that it was reviewed internally to ensure it meets the requirements of ISO 14044.	Complete
	☑ 6	PCR Committee **shall** ensure that the PCR is compliant with any referenced standards and relevant program instructions under which it is developed.		**PCR:** • List of referenced standards and link to relevant program instructions.	1 Transparency	Use of Part B in conjunction with SM Part A is addressed in Program operator responsibilities section of each Part B. SM Part A section 1.1. lists the standards required for conformance. The last section of each Part B contains a link to where to find the SM program instructions (governance document).	Complete
	☑ 7	PCR Committee **shall** establish LCA requirements that are consistent with ISO 14044. The PCR Committee is encouraged to develop end-use case scenarios for the PCR-compliant EPDs and to incorporate considerations for these use cases into the underlying LCA.	**14025 Clause 6.7.1, 6.7.2** **14027 Clause 5.1, 6.1, 6.5.3, 7.1d**	**PCR supporting documentation:** • Third-party reviewed ISO 14040/44 conformant LCA of the product categories under consideration. The LCA will reflect cases in which the EPD may be interpreted in use.	1 Transparency	Underlying LCA listed in Program operator responsibilities section, including that it was reviewed internally to ensure it meets the requirements of ISO 14044.	Complete
Goal and scope	Ground rules					How criteria were met	Due
	☑ 8	PCR Committee **shall** ensure that all rules for LCA are specified and harmonized with upstream and downstream PCRs (if available) in conformance with relevant standards, including: specification of the functional unit, scope of the study, inventory collection, any allocation rules, impact assessment, and rules for additional information.	**14044** **14027 Clause 6.5.3**	**PCR:** • Draft PCR with list of specifications	3 Data source	N/A	N/A
	☑ 9	PCR Committee **shall** ensure that the product category used in the underlying LCA supporting the PCR is directly applicable to the PCR.	**14025 Clause 3.14, 6.6, 6.7.2** **14027 Clause 6.5.2, 6.5.3**	**PCR:** • Specification and justification of the product category and applicable functional unit.	2 Procurement	A PCR Committee member manufacturer provided primary data for a combat vehicle to support the PCR development process, and the LCA practitioner provided updates to the committee and made updates to the model according to their decisions.	Complete
	☑ 10	PCR Committee **shall** define the study scope and EPD type for construction products and services.	**21930 Clause 5.2.1, 5.2.2**	**PCR:** • Draft PCR with specification of scope as cradle-to-gate or cradle-to-gate with options or cradle-to-grave.	1 Transparency	Part B specifies the scope as as cradle-to-grave.	Complete
	☑ 11	PCR Committee **shall** ensure that a clearly defined and measurable functional or declared unit is included in the PCR for construction products and services.	**21930 Clause 7.1.2, 7.1.3**	**PCR:** • Draft PCR with detailed description of the application and suitability of defining functional and declared units, respectively.	1 Transparency	Part B provides a description of the functional unit.	Complete

	☑	12	The PCR Committee **shall** determine which EPD types may be developed (ex: product-specific, industry-wide) and state the specific data requirements for each type. Any other terminology describing types of EPDs should be discouraged. *Note: Refer to the 'EPD Types' addendum for descriptions.*	**ISO 21930 Annex B and 'EPD Types' addendum**	**PCR:** • Draft PCR with description of the EPD types with specific data requirements	**1 Transparency**	Part B specifies EPD types in the Additional rules for comparability section. Specific data requirements are listed in the Additional rules to Part A section of Part B.	Complete
	System boundary						**How criteria were met**	**Due**
	☑	13	PCR Committee **shall** determine the level of granularity of unit processes specified by the PCR to be included in the underlying LCA supporting the EPD and ensure that these are consistent with the study's goal of using well-identified and explained criteria.	**14044 4.2.3.3** **14027 Clause 6.5.3** **21930 Clause 7.1.9 for construction products & services**	**PCR:** • Draft PCR with list of all unit processes that include all service, material, and energy flows directly connected to the study project and its ability to perform its function.	**3 Data source**	N/A	N/A
	☑	14	PCR Committee **shall** ensure that the PCR requires: 1) at minimum, a cradle-to-gate[1] system boundary and that any deviation is explicitly specified and justified; and 2) the use of the recycled content (i.e., cut-off) approach for end-of-life allocation of environmental burdens between product systems. [1] "Gate" represents the finished and packaged product at the manufacturing facility just prior to shipping.	**14044 Clause 4.2.3.3.1** **14025 6.7.2b, 6.7.2c, 6.7.2j, 7.2.5** **14027 6.5.3b, 6.5.6**	**PCR:** • Draft specification of the system boundary and justification of any system boundary minimum requirement deviations (where applicable).	**2 Procurement**	Part B specifies a cradle-to-grave system boundary. Part A section 8.5 specifies the use of the cut-off approach.	Complete
	☑	15	PCR Committee **shall** ensure that the PCR specifies the capital goods and infrastructure to be included in cases whenever it is feasible. The PCR Committee is encouraged to specify lifetimes or standardized methods of computing lifetimes, as well as the depreciation method utilized to allocate the burden of capital goods over their service period, with any deviations from the default approach explicitly specified and justified.	**This guidance**	**PCR:** • Draft PCR that includes all items	**2 Procurement**	System boundary section of Part B specifies tthat capital goods and infrastructure that have allocated impacts larger than the defined cut-off threshold shall be included in the system boundary, where feasible.	Complete
	☑	16	PCR Committee **shall** develop scenarios representing a set of domain-specific standard guidelines for any and each life cycle stage to be included beyond cradle-to-gate (i.e., A1-A3) in the PCR scope and require LCA results for these be reported. The PCR **shall** also prescribe assumptions for scenarios in cases where there is no discernable difference between one product and another in the same category for use and end-of-life stages. The PCR Committee **should** include criteria in the PCR for deviation from the prescribed scenarios.	**This guidance**	**PCR:** • Where applicable, list of scenarios and associated assumptions.	**2 Procurement**	Part B provides conservative default assumptions for scenarios beyond the gate or requires that primary data be provided.	Complete
	☑	17	PCR Committee **shall** specify whether the benefits and loads beyond the system boundary (i.e., Module D) are to be included in the EPD. If so, the PCR **shall** describe the specific scenario(s), benefits, and loads to be considered and reported separately in relevant EPDs communicating the full life cycle (cradle-to-grave) impacts of a product. *Note: Refer to the 'Circular Scenarios (Module D)' addendum.*	**This guidance and 'Circular Scenarios (Module D)' addendum**	**PCR:** • Where applicable, list of scenarios and concomitant benefits and loads to be included.	**2 Procurement**	Part B specifies that module D is excluded.	Complete
Life cycle inventory	**Data collection**						**How criteria were met**	**Due**
	☑	18	PCR Committee **shall** prescribe acceptable primary data collection practices and clearly specify the scope and data quality for secondary data with recommendations for use of specific datasets or databases facilitating this process. Datasets used for calculations **shall** have been updated within the last 10 years for background data and within the last 5 years for producer-specific (foreground) data; deviations shall be justified. Where databases are required, alternatives or modifications shall be proposed for geographic areas or technologies beyond the scope of the specified dataset(s). Any deviation from the recommended background (secondary) datasets in the PCR shall be clearly specified and justified. In addition, the PCR **shall** require EPDs to disclose the reporting period for primary and secondary data. *Note: Refer to the 'Assessing Data Quality of Background Life Cycle Inventory Datasets' addendum.*	**ISO 21930 Clause 7.1.9 and 'Data Quality and Secondary Background Datasets' addendum**	**PCR:** • Draft PCR that includes all items	**2 Procurement**	Part B Additional data quality requirements section lists acceptable data sources for each activity, and Appendix A prescribes required data sets. Part A requires that primary data is less than 5 years old and background data less than 10 years old unless otherwise justified. Part B requires that EPDs disclose the reporting period for primary and secondary data.	Complete
	☑	19	PCR Committee **shall** identify and ensure that the PCR specifies the selected LCIA indicators or additional information requirements for which relevant inventory information shall be collected.	**14025 Clause 7.2.2, 7.2.3** **14027 Clause 6.5.4, 6.5.5, 6.6**	**PCR:** • Draft PCR that includes all items	**1 Transparency**	SM Part A includes the list of selected LCIA indicators.	Complete
	☑	20	PCR Committee **shall** specify, based on the underlying LCA and/or additional studies informing the PCR, all the data that are to be collected (rather than specifying cut-off criteria for the inventory).	**14025 Clause 7.2.3, 7.2.4** **14027 Clause 6.6**	**PCR:** • Draft PCR that includes all items	**2 Procurement**	Part B Additional data quality requirements section lists acceptable data sources for each activity.	Complete
	☑	21	PCR Committee **shall** specify the type of data to be collected. The committee is encouraged to follow standard data collection examples for foreground (primary) data collection.	**21930 Clause 7.1.9** **14044 Annex A**	**PCR:** • Draft PCR with data collection sheet example specific to PCR	**2 Procurement**	Part B specifies where data is required to be provided by the manufacturer.	Complete
	Data quality						**How criteria were met**	**Due**

☑	22	PCR Committee **shall** refer to relevant guidance to consider parameters for assessing data quality of both foreground (primary) and background (secondary) data. *Note: Refer to the 'Assessing Data Quality of Background Life Cycle Inventory Datasets' addendum which provides a data quality assessment method.*	**21930 Clause 7.1.9** **14044 Clause 4.2.3.6** **14025 Clause 6.7.2** **14027 Clause 6.2**	**PCR supporting documentation:** • Complete data quality assessment for both foreground (primary) and background (secondary) data. This information shall also be included in the underlying LCA, and reviewed.	**1 Transparency**	The author of the underlying LCA completed a data quality assessment of primary and secondary data and provided PCR-related recommendations to the committee.	Complete
Background/secondary data						**How criteria were met**	**Due**
☑	23	PCR Committee shall ensure that the PCR specifies background (secondary) data quality requirements such that differences between claim results are rooted in actual technical differences, rather than artifacts of background data or the platform. If a secondary data source does not meet the required quality specified by the PCR, it shall be verified by the program operator that better data is not available. *Note: Refer to the 'Assessing Data Quality of Background Life Cycle Inventory Datasets' addendum which provides a data quality assessment method.* For example, as detailed in this addendum, the most recent version of background data for baseline electricity from Federal LCA Commons met the data quality requirements and is recommended to be specified across PCRs (with the LCI and method compatible with the Federal Elementary Flow List (FEDEFL) from https://www.lcacommons.gov/.	**Assessing Data Quality of Background Life Cycle Inventory Datasets' addendum**	**PCR:** • Draft PCR with list of background (secondary) data sources and default LCIA method(s)	**2 Procurement**	Part B Appendix A prescribes required data sets.	Complete
Foreground/primary data						**How criteria were met**	**Due**
☑	24	PCR Committee **shall** ensure that the PCR specifies primary data be collected for every process in the product system under the control of the organization making the product claim. The PCR Committee is encouraged to specify that data specific to the investigated product scope and supply chain are preferable to generic data, particularly in unit processes considered to have a significant contribution to the product life cycle. For EPDs seeking transparency-level conformance with this guidance, the PCR **shall** require the following: EPDs that use secondary data for any unit process that contributes 30% or more to any disclosed environmental impact category shall disclose the data source (database name and version, dataset name, dataset geography, and dataset allocation method).	**This guidance**	**PCR supporting documentation:** • Foreground (primary) data collected in conducting the underlying LCA, and the sensitivity of LCIA outcomes to variability in the foreground data. A facility-specific data collection protocol shall also be included.	**1 Transparency**	SM Part A section 7.6 states that primary data shall be collected for every process in the product system under the control of the organization(s) developing the LCA. Part B contains a statement in the Additional rules to Part A section which states: EPDs that use secondary data for any unit process that contributes 30% or more to any disclosed environmental impact category shall disclose the data source (database name and version, LCA modeling software type and version implemented, dataset name, dataset geography, and dataset allocation method) The underlying LCA reference describes that primary data were collected for processes under manufacturer control and that it supported an analysis on sensitivity to variability in the primary data.	Complete
☑	25	For EPDs seeking procurement-level conformance with this guidance, the PCR **shall** require that EPDs use facility-specific data for upstream unit processes that cumulatively contribute 50% or more to the disclosed global warming potential. In situations where facility-specific data is not available for the upstream unit processes, and such a facility is required to report to the EPA Greenhouse Gas Reporting Program (GHGRP), the PCR **shall** require the EPD to disclose in the Additional Environmental Information section: the carbon intensity of the manufacturing plant (carbon emitted per metric ton of product manufactured) from which these products, and/or the quartile in which in which the manufacturing plant resides where benchmarks have been published [https://www.epa.gov/ghgreporting/ghgrp-minerals]. Carbon intensity shall be calculated by dividing the emissions reported to the EPA GHGRP by plant production. Emission and production data must be from the same reporting period using the most recent year of data. When a published ENERGY STAR Energy Performance Indicator is available for a product or constituent upstream product, the PCR **shall** require the EPD to disclose in the Additional Environmental Information section: the ENERGY STAR Energy Performance Score for the manufacturing plant in which the product or constituent upstream product was manufactured, and the reporting period of the underlying data. See https://www.energystar.gov/industrial_plants/energy_star_plant_certification/buy_clean_procurement_and_energy_star_0 for more information.	**This guidance**	**PCR:** • Draft PCR that includes all items	**2 Procurement**	Part B Default life cycle stage scenario(s) section includes this requirement.	Complete
☑	26	PCR Committee **shall** ensure that the PCR specifies the means by which primary data should be collected and may provide templates to facilitate harmonized data collection, metadata recording, and results reporting. If the specified data collection means are unachievable for a specific EPD developer, the PCR **shall** designate that the developer records the data collection method(s) utilized in the data description.	**14025 Clause 6.7.2**	**PCR:** • Specification of data collection methods (e.g., measured, calculated, estimated)	**1 Transparency**	SM Part A section 7.6 states: The method of data collection shall be specified (e.g., measured, calculated, estimated).	Complete
Data assumptions						**How criteria were met**	**Due**

☑	27	PCR Committee **shall** specify all parameters of assumed scenarios for use and end-of-life stages so as to ensure comparability and consistency of results. If a manufacturer wishes to define their own scenario(s), they **shall** be based on primary data.	**This guidance and the 'Circular Scenarios (Module D)' and the 'Allocating Materials Shared Across Product Systems' addendu**	**PCR:** • List of parameters for use and end-of-life stage scenarios	**2 Procurement**	Part B provides conservative default assumptions for scenarios beyond the gate or requires that primary data be provided.	Complete
☑	28	PCR Committee **shall** ensure that the PCR provides worst-case (i.e., 'conservative') default values for scenario data of the specified processes where no data are available for the EPD developer.	**This guidance**	**PCR:** • List of worst-case (i.e., 'conservative') default scenario values	**2 Procurement**	Part B provides conservative default assumptions for scenarios beyond the gate or requires that primary data be provided.	Complete
Data compliance						**How criteria were met**	**Due**
☑	29	PCR Committee **shall** ensure that claims made in the PCR are based on the results of an LCIA, LCI, and/or substantiated and verifiable additional information modules relevant to the product category.	**14027 Clause 6.6**	**PCR:** • An underlying LCA with supporting LCIA and LCI for all PCR guidelines	**1 Transparency**	The underlying LCA reference includes that results informed various aspects of the PCR.	Complete
☑	30	PCR Committee **shall** ensure that the PCR states data quality requirements for all data applicable for use in claims. These data **shall** be verified to be compliant with the established PCR data quality requirements and those for foreground (primary) and background (secondary) data. The PCR **shall** specify that a data quality assessment be performed on all collected foreground (primary) data and may provide templates to facilitate harmonized primary data collection, assessment, reporting, and verification. *Note: Refer to the 'Assessing Data Quality of Background Life Cycle Inventory Datasets' addendum.*	**This guidance**	**PCR:** • Data quality assessment criteria and/or template	**3 Data source**	N/A	N/A
☑	31	PCR Committee **shall** ensure that PCR-designated background (secondary) data sources be specified and verified such that: • Data for electricity, transportation, basic fuels, and heavy equipment operation are the most current versions from common public background data (e.g., for North America, LCI and method compatible with the Federal Elementary Flow List (FEDEFL) from https://www.lcacommons.gov/). • Temporal, geographical, and technological coverage of the secondary data is compatible with the scope of the PCR. • System boundaries are equivalent, and reference flows are adaptable to the product system specified in the PCR. • Sources of secondary data are cited. • Allocation procedures used for secondary data are appropriate for the system under study.	**This guidance and 'Assessing Data Quality of Background Life Cycle Inventory Datasets' and the 'Allocating Materials Shared Across Product Systems' addenda**	**PCR:** • Draft PCR with list of background (secondary) data sources and default LCIA method(s)	**2 Procurement**	Part B Appendix A prescribes required data sets.	Complete
Allocation						**How criteria were met**	**Due**
☑	32	PCR Committee **shall** ensure that the PCR specifies which processes are to be subdivided if allocation can be avoided in this manner wherever feasible. The PCR **shall** also provide guidelines on how the subdivision should be performed.	**14025 Clause 6.7.1c, 6.7.2c** **14027 Clause 6.5.3**	**PCR** • Draft PCR that lists processes and subdivision method	**2 Procurement**	A hierarchy of allocation methods is provided which addresses subdivision.	Complete
☑	33	PCR Committee **shall** ensure the PCR specifies that where allocation by physical relationship is applied, the PCR **shall** specify the relevant underlying physical relationships to be considered and establish or refer to the relevant allocation rules.	**14025 Clause 6.7.1c, 6.7.2c** **14027 Clause 6.5.3**	**PCR** • Draft PCR that includes specification	**1 Transparency**	Part B prioritizes allocation of resources per number of vehicles produced.	Complete
☑	34	PCR Committee **should** refer to relevant standards for defining allocation procedures for reuse and recycling, as well as waste handling, and for scenarios for treating waste generation during the product life cycle.	**14044 Clause 4.3.4** **21930 Clause 7.1.7.2.7**	**PCR** • Draft PCR that includes specification	**1 Transparency**	Allocation regarding output of waste per ISO standards is listed in section 8 of SM Part A.	Complete
☑	35	PCR Committee **shall** refer to rules for and prioritize stepwise allocation for industrial processes that produce more than one product or deliver more than one service. For example, the refining of crude oil produces more than one different product, such as liquefied petroleum gas, gasoline, naphtha, diesel, asphalt, and others. PCR Committee **shall** refer to rules prohibiting system expansion as a method for avoiding allocation for construction products that may involve the production of co-products; rather, the PCR **shall** prescribe an ISO-compliant method of allocation, or an allocation procedure if multiple methods are allowed.	**14044 Clause 4.3.4.2** **21930 Clause 7.2.5**	**PCR** • Draft PCR including allocation method and procedure (where applicable)	**2 Procurement**	Part B A hierarchy of allocation methods is provided. Part A section 8.3 prohibits system expansion.	Complete
End of life scenario						**How criteria were met**	**Due**
☑	36	PCR Committee **shall** prescribe ISO-compliant rules for allocation between product systems (across the system boundary) and designate whether Module D may be optionally reported in the EPD for construction products and services. If so, the PCR **shall** prescribe detailed calculation rules for any quantitative metrics reported therein. *Note: Refer to the 'Allocating Burdens and Benefits of Materials Shared Across Product Systems'addendum.*	**21930 Clause 7.2.6**	**PCR:** • Draft PCR with allocation rules and calculation rules	**2 Procurement**	Part B does not allow for reporting of module D, and Part A provides rules for allocation between product systems.	Complete

Life cycle impact assessment	☑	**37**	PCR Committee **shall** include all minimally required, core indicators for ISO-compliant EPDs; specifically bulleting the indicator with: 1) the LCA characterization methodology, and 2) reference in parenthesis. Additionally, the PCR is encouraged to specify at least one LCIA method that includes characterization factors for calculating category indicator results for each impact category and each geographical region covered by the PCR.	**21930 Clause 9.5**	**PCR:** • Draft PCR including all items	**1 Transparency**	Core indicators are listed in section 9 of SM Part A.	Complete
Interpretation	☑	**38**	PCR Committee **shall** identify the steps for interpreting the results of the underlying LCA study.	**14044 Clause 4.5** **21930 Clause 9**	**PCR:** • Draft PCR including all items	**1 Transparency**	SM Part A section 9.3 includes steps for interpreting the results of a background LCA.	Complete
	☑	**39**	PCR Committee **shall** ensure that the PCR communicates requirements (either qualitative or quantitative) and reference the methods and format used to report additional environmental information.	**21930 Clause 8.4** **14025 Clause 7.2.3, 7.2.4**	**PCR:** • Detailed specification on requirements and reference methods and format used to report additional environmental information.	**1 Transparency**	SM Part A section 10 includes a description of additional environmental information and the TR/EPD template in Appendix C showing placement of such information.	Complete
	☑	**40**	PCR Committee **shall** ensure that the PCR lists assumptions and limitations associated with the underlying LCA results.	**14044 Clause 4.5.2.1**	**PCR:** • Draft PCR including all items	**1 Transparency**	Reference to underlying LCA includes assumptions and limitations associated with the underlying LCA results.	Complete
	☑	**41**	PCR Committee **shall** specify different types of uncertainties to be propagated in the underlying LCA study and is encouraged to ensure that the PCR describes procedures for reporting uncertainty of results.	**14044 Clause 4.4.4.2** **14025 6.7.1b**	**PCR:** • Draft PCR including all items	**1 Transparency**	Part B Additional data quality requirements section describes sensitivity analyses to be reported.	Complete

Part B: Combat vehicles (version 1.0)
August 19, 2026 | Sustainable Minds | Contact Kim Hammer (kim@sustainableminds.com)

EPD use case goal: 2

EPD use levels are cumulative. Transparency is the baseline. To create a 'Data source' conformant PCR, all criteria in all checklists must be documented.

3. PCR Review Panel checklist Version 1.0, May 25, 2022 | ACLCA PCR Open Standard 2022

Categories		#	Criteria	ISO reference	Supporting documentation	EPD use 3 Data source 2 Procurement 1 Transparency	How criteria were met	Due
Organizational	Ground rules							
	☑	1	The PCR Review Panel **shall** use this checklist to guide their process of reviewing the PCR.	**This guidance**	**PCR supporting documentation:** • Completed checklist	**1 Transparency**	Completed checklists saved with the PCR supporting documentation.	Complete
	☑	2	PCR Review Panel members **shall** disclose any conflicts of interest using the conflict of interest form.	**14027 Clause 7.2** **14071**	**PCR supporting documentation:** • Review panel completed conflict of interest forms	**1 Transparency**	Conflict of interest forms completed by review panel members.	Complete
	☑	3	The PCR Review Panel **shall** meet with the Program Operator to discuss the PCR and how to perform their review. The PCR Review Panel **shall** investigate whether the PCR has been developed in accordance with relevant LCA-based claim standards, general program instructions, specifications, and guidelines, and ensure that it supports the creation of credible and consistent claims. The PCR Review Panel **shall** verify that the EPD template is consistent with the PCR guidelines. The PCR Review Panel **shall** generate and compile their comments in a review report. By the agreed upon date determined by the Program Operator, the review report **shall** be sent to the PCR Committee for consideration.	**14027 Clause 7, 7.3, 7.5** **14071**	**PCR supporting documentation:** • Dated review report	**1 Transparency**	Aggregated technical and public comments spreadsheet, including commenter names and committee responses, created and made available in the Detailed Review Report.	Complete
	☑	4	The PCR Review Panel **shall** confirm that the PCR meets relevant EPD-related federal and/or state procurement requirements (e.g., Buy Clean Legislation) that are specifically referenced in the PCR.	**This guidance and relevant EPD-related federal and/or state procurement requirements**	**PCR supporting documentation:** • Reviewers' sign-off and/or list of any deviations from procurement requirements	**2 Procurement**	Not applicable; no EPD-related federal and/or state procurement requirements exist for combat vehicles as of the date of publication of this PCR.	Complete
	☐	5	The PCR Review Panel **shall** verify conformance the Program Operator and PCR Committee checklists and the appropriate category of EPD use is identified.	**This guidance**	**PCR supporting documentation:** • Reviewers' sign-off below and/or list of any deviations from this guidance. All three completed checklists returned to the PO.	**1 Transparency**	Section below completed by review panel chair, who confirmed sign-off from all review panel members.	Complete

Reviewer acceptance for EPD use case (1, 2, or 3) Date | Reviewer names & email

Date	Reviewer name & email	Acceptance for EPD use case Level 2 (Y/N)
24-Aug-26	Beth Cassese, bcassese@horizonlca.com	Y
24-Aug-26	Jack Geibig, Jgeibig@ecoform.com	Y
26-Aug-26	Hugues Imbeault-Tétreault, hugues@groupeageco.ca	Y

Part B comments worksheet

SM Transparency Report™ Framework Sustainable Minds, PCR Part B: Product group definition | Combat Vehicles, 2026. https://www.sustainableminds.com/files/transparency/pgds/Part_B_Product_Group_Definition_Combat_Vehicles_v1-0.pdf

Part B: Product group definition

Part B name:	Combat vehicles, v1.0
Reviewers:	Hugues Imbeault-Tétreault, Jack Geibig, Beth Cassese, Tejan Adhikari (public consultation)

Topic #	Page #	Section #	Type of comment (Technical/editorial/other)	Reviewer comment	Reviewer's proposed change/solution	Response	Rationale	Reviewer response	SM response
1	1	1	Technical	Please include definition of direct fire unit		Accept	Added definitions for armour, infantry, and direct fire; also adjusted language in functional unit section.	Closed	-
2	2	1	Technical	Concern with geographic representativeness for the product being "used" in North America. A combat vehicle being used in North America would mean there is combat in North America, and North America only, which seems rather unlikely.	Change Geographic representativeness for use as global.	Accept	Updated to 'Products sold or maintained primarily in North America and used globally'	Closed	-
3	2	1	Technical	In the definition of base platform, the drivetrain is included but the powertrain is not. Vehicles cannot function without a powertrain (engine).	Please include powertrain or justify exclusion.	Accept	Added powertrain to base platform for clarity	Closed	-
4	2	2	Editorial	There is no reference to the internal LCA. Internal to whom?	Add more information regarding the study (e.g. organization and year).	Accept	More information needed; added a year and note to the underlying LCA reference stating that primary data was provided by a combat vehicle manufacturer	Closed	-
5	3	2	Editorial	In last row, missing "to"	Sustainable Minds announced the creation of the product group definition **to** other program operators...	Accept	Corrected editorial	Closed	-
6	3	4	Technical	PCR states"The EPD shall specify which category(ies) of capital goods and infrastructure items were included and excluded from the analysis."	I don't know what is meant by category here. Are the categories equipment, building, or supporting system? Pls provide acceptable options or examples. If reviewing,	Accept	Added '(equipment, buildings, or supporting systems)' for clarity	closed	-
7	3	5	Technical	The functional unit does not provide a fair basis of evaluation between combat vehicles. Part A requires: Quantity, performance, application and reference service life.	Add performance and application to the FU.	Accept	Performance and application discussed in product group definition and additional life cycle stage scenario sections but not included in the functional unit description; added 'The vehicle can be used for armour, infantry or direct fire unit applications and shall fulfill the performance attributes defined in the life cycle stage scenarios.'	Closed	-
8	3	5	Technical	Cradle to grave EPD that includes use, which by any reasonable definition would include battlefield conditions in high threat situations. PCR states that repair and refurbishment are to be included.	This PCR is silent on whether repair or refurbishment includes battlefield damage. If this is excluded then it should be clearly stated here.	Accept	Added the following text to the system boundary section: The scope of this PCR excludes repair and refurbishment activities arising from hostile engagements and related operational incidents, as these activities fall outside the boundary of the analysis.	Closed	-
9	3	5	Technical	I'm wondering if one vehicle for 25 years is the best functional unit. The 2 referenced PCRs for industrial trucks and passenger vehicles have functional units that are more closely aligned with the actual run time of the vehicle (hours and transport over a distance). Not including this in the functional unit neglects the actual intended use of the product.	Consider updating the functional unit to include run time and/or provide specific use case scenarios for B6 that include run time over the RSL.	Accept	Added additional rationale to the RSL section. The referenced PCRs are for commercial vehicles designed to maximize operations over time, which is different than a combat vehicle use case.	Closed	-
10	4	7	Technical	Concern that titling this section as "Additional rules for comparability" might lead practitioners to assume this section only applies to the act of comparing, not the implied how to make EPDs comparable.	Suggest updating title to something more specific, like Methodologies.	Accept	Updated to 'Additional rules to support methodological consistency' for clarity	Closed	-
11	4	7	Editiorial	Double negative in the first sentence of section 7. PCR states" "Industry average nor manufacturer average EPDs shall not be created using this EPD"	This sentence can be removed, as it is clarified immediately after with the section that states the types of EPDs that are valid under this PCR	Accept	Corrected editorial, now reads 'Industry-average EPDs and manufacturer-average EPDs shall not be created using this PCR'	Closed	-
12	4	7.1	Technical	The wording for the specificity is a bit confusing. Wouldn't the choice be EPD results or set of EPD results? This statement would be with the results or elsewhere in the EPD?	Suggest separate the requirement to display EPD label as facility specific/product average or facility specific/product specific from the required statement regarding supply chain specificity. Also update required statement to be displayed with results: "Per the ACLCA Guidance for Determining EPD Types and Calculating and Communicating Data Specificity Through the Supply Chain v1, this [choose one: EPD results, set of EPD results] is facility specific and [choose one: product average, product specific] with a supply chain specificity of [choose one: =, ≥] X%"	Accept	Wording corrected for clarity to reflect that the label is not separate from the statement, and that each EPD contains one set or multiple sets of results, which this statement shall accompany.	Closed	-
13	5	7.2	Technical	When requiring IPCC AR6 for GWP - clarify if this will replace the TRACI GWP or if both will be reported.		Accept	The updated Part A requires only IPCC AR6, which is what the committee prefers, so we deleted this sentence.	Closed	-
14	5	7.2	Technical	The section reads: "Nothing in this PCR is intended to require disclosure of classified information or controlled goods. EPDs created from this PCR shall not contain classified information or controlled goods." By disclosing or containing controlled goods, what do you mean? Did you mean to reveal the existence of a controlled good?	Clarify	Accept	Rewritten for clarity: 'Nothing in this PCR is intended to require disclosure of classified information or information restricted under applicable controlled goods regulations. EPDs created from this PCR shall not contain information that is classified, controlled, or otherwise prohibited from public release.'	Closed	-
15	5	7.3	Technical	Is the requirement for facility specific data from upstream of the EPD owner for processes which cumulatively contribute at least 50% to the total disclosed GWP - refering to total A1 GWP or total life cycle GWP?		Accept	Added '(from cradle to grave)' for clarification	Closed	-
16	5	7.3 / A1	Editorial	"Printed circuit boards and its associated…" should be "Printed circuit boards and their associated…".	Update accordingly.	Accept	Corrected editorial	Closed	-
17	5	7.2	Editorial	Standardize unit style:km/hr --> km/h	Update accordingly.	Accept	Corrected editorial	Closed	-
18	6	7.3	Technical	Concern over requirement for upstream material utilization rates. I'm not sure it is realistic to estimate the rate, as this data will be difficult to obtain upstream and estimates will almost always be needed.	Consider either eliminating requirement for upstream material utilization rates or providing defaults for rates when unavailable.	Reject	Part A requires the inclusion of raw material manufacturing wastage in A1, and the underlying LCA showed that the changes to upstream scrap rates did not significanlty impact the results, so default rates were determined not to be needed.	Closed	-
19	6	7.3	Editorial	In section A1, it reads: "the carbon intensity of the facility and/or the quartile **in which in which** the facility resides where benchmarks have been published. "	Update accordingly.	Accept	Corrected editorial	Closed	-

20	6	7 - A2	Technical	A2- PCR states "For processes outside of North America, appropriate regional or national transportation distances and mode(s) shall be used where primary data is unavailable." What regional or national distances are you referencing? Is this supposed to be table 1? As currently written it is unclear if table 1 or nebulous regional / national transport distances and modes should be used	Clarify the intent and language of the cited portion.	Accept	Updated language to clarify the intent. Also separated the second paragraph into two paragraphs such that the third now contains no requirements, but serves as guidance.	Closed	-
21	7	A4	Technical	Transport A4 is missing default scenario information which would be helpful for consistency across EPDs when primary data is unavailable.	Consider adding defaults for A4 and include language to specify use of either primary data or the defaults.	Accept	Added to A4: 'and be based on primary data'. Committee discussed that delivery locations will always be known by the manufacturer for this product type.	Closed	-
22	8		Technical	Based on the description provided for the Add-on Armour - I wonder if this Add-on belongs in A5 instead of module B, as adding the armour is part of making the vehicle operationally ready for use?		Reject	See below	See below	See below
23	8	7-B1	Technical	B1- The discussion of add-on armor makes sense. However, I am unclear why this is being presented under the B1 module. This subject matter clearly falls outside of what B1 is intended to cover. Also, it is unclear what is intended here. Are you suggesting that the B1 module be treated similar to how the b4 module is treated? Are you saying that the impacts from A1-A5 would be assessed and then aggregated in B1? Depending on when thse activities occur, (i.e. in year 1 or year 10) this would impact the assessment of other B modules like repair, refurbishment etc.	Suggest relocating these calculations to a more appropriate module. These could be dealt with in different ways, but I would consider dealing with this in the framework of the A1-A3 modules as a separate configurations (similar to office furniture, or copiers etc)and assess them in a product avg EPD. Alternatively, the armor packages could be calculated independently as add-ons and reported in a product-specific EPD context using factors for each add-on that can be combiined to base model to achieve the desired configuration. This would preserve the ability to assess each configurattion while remaining consistent with the ISO 21930 (yes I know this is not a building) framework which has become the default for how LCAs are conducted in NA.	Reject	We understand the comment and originally did have this activity in A5. However, add-on armour is typically not added to the vehicle during the operational readiness stage, but only prior to deployment to a conflict zone, which the committee felt would be better represented in the use stage. A vehicle may operate for years without add-on armour during typical training operations. This is why we intentionally moved this activity to B1 since the point at which the vehicle gets the add-on armour is variable within the use stage time period and it should be kept separate from maintenance, repair, or refurbishment activities. Added this rationale to B1 so that PCR readers understand this better.	I appreciate and understand the difficulty of this issue. I also realize that this is not a building product and thus the requirements of ISO 21930 do not apply. That said, the module structure defined in ISO 21930 is consistent with (or perhaps has become) what is typically understood to be best LCA practice. That structure hasestablished a definition for the B1 module that would not include the impacts and activities being contemplated here. My concern would be that the differences would not be fully understood or transparent by others less familiar or less educated about the LCA structure, this PCR, or any EPD produced to this PCR and will thus be misinterpretted. While I will defer to the judgement of the committee on the best way to resolve the add-on issue, IMO this would be best addressed by restricting the scope to the main vehicle configuration and assessing the add-ons or loadouts individually as if they are a different product. Assuming that the vehicles and add-ons are manufactured by different suppliers, the eventual use configuration operates more like a product system (with variable functions based on the add-ons) than a single product. This approach would be consistent the vehicles evolution over time. To accomplish this in the PCR, you would have to acknowledge that the vehicles and add-ons are both within scope but separate product systems to be assessed individually under the same rules defined in this PCR. I dont think this would require too many changes...and would solve this issue of reporting when it gets added. Any changes to energy consumption during use can be dealt with easilty in B6 by defining a scenario or two. Anyhow, please consider this simplification to the product system. It might solve alot of the issues you are struggling with, while allowing the PCR to adhere to a structure that aligns with best practice.	PCR Committee agreed to move installation of add-on armour to A5.
24	8	7-B1	Technical	I get 8.4 kWh instead of 8.5 kWh with the values provided in note 7 and 18.7 kWh instead of 18.5 with the note 8 values.	Update accordingly.	Accept	Corrected calculations	Closed	-
25	9	Repair	Technical	This section refers users to Table 2 for failure rates but there are no failure rates listed in Table 2	update for failure rates	Accept	Clarity needed to reflect that failure rates are used to calculate component repairs and replacements needed to meet the use scenarios. Updated to: 'EPD owners shall estimate repairs or replacements of vehicle components during the reference service life of the vehicle based on original equipment manufacturer failure rates. The number of component repairs or replacements shall be calculated to account for the use scenarios defined in Table 2.'	Closed	-
26	9	B2	Technical	In order to be compliant with the ACLCA open standard PCR committee checklist #16 - scenarios shall be developed for post gate activities - Default scenarios for maintenance should be listed.	At least for the required sandblast and repainting listed, please include default scenario. For other maintenance activities, include requirement for LCA report to include details on the recommended manufacturer maintenance and provide default scenarios for where manufacturer maintenance recommendations do not exist. I beleive most military units also have SOPs for maintenance on their vehicles, I would accept this for use as the default scenario as well.	Accept	Updated the "should" to "shall" and added a footnote to the first paragraph to make it clear that manufacturer recommended maintenance schedules should always be available to use and they have an option of using customer-specific maintenance procedures as an alternative. This requirement to use these is the scenario, which will necessarily vary per vehicle. We have added default consumption values for blasting medium and coatings for the sandblast & repainting event. While we couldn't identify detailed data sets for primer & topcoat, a survey of standards and other sources were used to develop proxy compositions for those materials, with a transparent footnote explanation.	Closed	-
27	9	7.3 / B3	Editorial	"parks that leak" should likely be "parts that leak".	Update accordingly.	Accept	Corrected editorial	Closed	-
28	10	table 3	Technical	Percentages for plastics do not add up to 100%. Also, the table does not have any reference for the values.	Update percentages for plastics and cite the source.	Accept	Updated plastic landfill to 75%; added citations for each material; also updated the tire incineration and landfill rates to better align with the cited source (the original values may have been from a mix of sources, but the EPA values are very close and a cleaner citation).	Closed	-
29	10	B7	Technical	Understood that water is pre-mixed with the other chemicals used with vehicle operations, but it is unclear to me where those other chemicals would be accounted for in the use phase?	For example: Initial coolant is included with the delivery of the vehicle at the gate and additional/replacement coolant is included in B2?	Accept	Added for clarity that coolant is included in the manufacturing and maintenance phases.	Closed	-
30	10	EOL	Technical	As mentioned above regarding default scenarios, there should be default scenarios provided for the 7 conversion steps listed for the end of life scenario.	Provide default scenarios	Accept	Rearranged text to be more clear about where activities should be counted in EOL modules; also provided default electricity for Steps 1-6 (in C1) and Step 7 (in C3).	Closed	-
31	11	7.4	Editorial	waste water -> wastewater.	Update accordingly.	Accept	Corrected editorial	Closed	-

32	13	Table A1	Technical	Concern over prescribing certain databases such as ecoinvent or lca commons as this could lead to inconsistency within the EPD itself and could create market issues for database owners, and there are issues with using some of these publicly available datasets within certain softwares. For example, the steel datasets prescribed do not function well with the LCIA indicators in openLCA and the worldsteel datasets are difficult to obtain (i've been waiting 2 months with 2 separate requests for worldsteel to respond to a data request for another project)	Instead of prescribing databases or datasets, prescribe data quality requirements for the selected databases and datasets to follow.	Accept	Revised steel section to reflect data quality requirements instead of required data sets (though data sets are still recommended)	Closed	-
33	14	Appendix A	Editorial	In Table A.1, Aluminum row, revise "transform the purchased aluminum into the relevant steel components" to "aluminum components".	Update accordingly.	Accept	Corrected editorial	Closed	-
34	All	All	Technical	Overall comment - Cradle to grave EPD that includes use, which by any reasonable definition would include battlefield conditions in high threat situations. This PCR is silent on such things. PCR states that repair and refurbishment are to be included. I understand why battlefield damge would be difficult to assess and quantify in an LCA, and honestly expected it to be specifically excluded from this PCR. However, this PCR does consider activities like demilitarization which I assume could include battlefield situations. If so, this is an odd mix in this PCR.	Suggest specifically excluding battlefield damage (or however you refer to such things) which is otherwise the primary function during the use phase of these vehicles. The difficulty of assessing and quantifying such things can be given as justification. If not excluded, then more detail shoul dbe provided on how to assess this portion of the life cyle.	Accept	See response to comment 8	Closed	-
35	Throughout	Throughout	Editorial	Standardize Canadian/U.S. spelling: armour/armor, armoured/armored, modelling/modeling.	Update accordingly.	Accept	Corrected editorial	Closed	-
36	1	Intro	Editorial	comment on combat vehicle PCR page 1 regarding public notices: it says 'update to the PCR'	It should be 'creation of a new PCR'	Accept	Corrected editorial	-	-