



COLORADO

Department of Transportation

Office of the Chief Engineer

Materials and Geotechnical Services
4670 Holly Street
Denver, CO 80216

October 17, 2022

Mr. Joseph Shacat - Director of Sustainable Pavements
National Asphalt Pavement Association
6406 Ivy Lane, Suite 350
Greenbelt, MD 20770

RE: Comments/Requests/Suggestions related to:
Product Category Rules (PCR) for Asphalt Mixtures, Version 2.0
and PCR Annex 1: Prescribed Secondary Data Sources, Version 2.0

Dear Joseph:

As you may be aware, the Colorado Department of Transportation (CDOT) has recently begun to collect Environmental Product Declarations (EPDs) on projects as of July 2022 in compliance with Colorado House Bill 21-1303. Our initial EPD collection efforts are geared toward regional benchmarking the Global Warming Potential associated with materials supplied to CDOT projects in conformance with our CDOT specifications, prior to establishing GWP limits by January 2025. Review of published Colorado EPDs led to an in depth review of the PCR and PCR Annex by our CDOT EPD Implementation Team. Reviews were conducted on Asphalt Mixtures, Ready Mixed Concrete, Precast Concrete and Steel PCRs and our comments/questions will be posted to our [CDOT EPD webpage](#). CDOT has also shared and sought input on these comments with other States/Agencies (MNDOT, WSDOT, ODOT, CALTrans, and PANYNJ) that are interested in or are currently pursuing EPD collection efforts as well. The following comments, requests, and suggestions are a result of that review and have been provided primarily as we look ahead to submittal verification/quality assurance and anticipated data granularity needs for our regional benchmarking efforts here in Colorado. Comments specific to your PCR are:

1. To set up CDOT regional benchmarks it will be good to have mix design specifics. The current EPD format reports the the product ingredients rounded to the nearest whole percentage. CDOT is requesting this to be detailed to the first decimal, or closest 0.1%wt. This is most relevant for the binder content and origin (supplier and location). CDOT will be requesting this information by July 1st, 2023.
2. Would the Emerald tool be able to accommodate an aggregate absorption input and can that information be shared with CDOT or published on the EPD?
3. Can the Emerald tool be adjusted to be able to distinguish between milled limestone, lime, and hydrated lime as used in mixtures? Now only "quicklime" is available in the tool which represents a worst-case for milled limestone as part of the aggregate mix. Additional clarification on whether hydrated lime is to be included as an aggregate input, or an additive may also be warranted as it appears it is currently being input in both areas for Colorado EPDs.
4. While mix temperatures are recorded, the underlying energy model is based on a 12-month period. CDOT wants to be able to see the impact of for example the energy savings of warm mix



in combination with the use of additives. When will the EPD reflect the energy performance of the mix temperature and how can CDOT assist in developing an approach?

5. Biogenic carbon is addressed for the “production/growth” of materials and fuels used in asphalt mixes, also the emissions from combustion or other release, but the content of feedstock materials is not mentioned/addressed. We propose this biogenic content of feedstock materials to be counted as -1kg CO₂e.
6. After reviewing the data sources from Annex 1, we recommend developing a data quality protocol for the use of non-primary data and review the current data against it. Regionalization of data would be desirable, going beyond national averages. This would inform data development and outreach from NAPA to industry representatives to improve the data (recommended). CDOT is willing to support this outreach as we are considering requiring facility-specific data for (the main) mix components by July 1st, 2023. It would be useful to collaborate with the Precast and concrete ready mix program operator for alignment.
7. When will the portable plant aspect be operational in the Emerald tool?
8. We recommend reviewing the PCR and reporting the review in a public document against the ACLCA guidelines <https://aclca.org/pcr/> to assist in transparency and harmonization.
9. Is it possible to require EPDs to disclose and publish the plants burner fuel type?

CDOT greatly appreciates the willingness and support that NAPA continues to offer to CDOT and the asphalt industry during our EPD implementation process. We are hopeful that the comments, questions and suggestions outlined above can be considered and implemented in the immediate future.

If you have any questions related to these comments, please do not hesitate to reach out to us for clarification. I can be reached by phone at 303-398-6501, or by email at craig.wieden@state.co.us. I intend to follow up with you in a week or two to discuss these comments with you and to determine actions and timeframes that may be undertaken to address them.

Sincerely,

Craig Wieden
State Materials Engineer
Colorado Department of Transportation

