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Resolution on grievance by Eion on CORC quantification and issuance based on Enhanced Rock Weathering edition 2022

Eion, an ERW supplier in the US, submitted to Puro.earth a grievance regarding the quantification of the CORCs issued for their Twinterstellar 3021 project and the issuance of 748 CORCs on 24 September 2025.

The grievance was processed according to Puro.earth Grievance Policy in place for situations when a customer is dissatisfied with a decision taken by Puro.earth. For grievances related to adoption of methodology requirements and GHG emissions and removals accounting, the Advisory Board is the resolution point. The Advisory Body made its resolution based on investigation of the grievance matter in their meeting on 23 April 2026.

Submitter and project owner: *Company Eion Carbon (later Terradot)*
Project name: *Eion Twinterstellar 3021*
Methodology: *Puro Enhanced Rock Weathering, edition 2022*
Audit Report: *PFA_09.2025_Report_Twinterstellar3021_387867.pdf, on 24 September 2025 issuance of 748 CORCs based on the audit*
Monitoring Period: *10 May 2023 - 03 Dec 2024*
Puro Registry Link: [project ID 387867](#)
Claim: *grievance request to issue additional +769.49 CORCs for that Monitoring Period*

In their grievance, Eion requests the issuance of additional 769 CORCs based on claims relating to 3 distinct topics as follows:

1. Plant Uptake: 88.73 tCO₂e
2. Riverine Losses: 112.76 tCO₂e
3. Background Weathering: 568 tCO₂e

Request for Plant uptake adjustment

The plant uptake adjustment claim is centered around the use of satellite imaging data and a derived normalized difference vegetation index data as evidence in the sense of rule 6.7.3 (c) regarding losses from plant update of major cations. The Advisory Board determined that use of remote sensing data is not compliant with the requirement of "direct measurement of the total base cation content of harvested plant

biomass" stated in rule 6.7.3 (c), and therefore the request to adjust the loss term from the methodology-specified default value is rejected. The Board further advises the project developer to plan and collect plant biomass sampling and direct measurements as required in the rule 6.7.3, or continue using the 5% default discount.

Request for Riverine loss adjustment

The riverine loss adjustment claim is centered around the use of a project-specified value for the loss term, utilizing on comments and drafted requirements for an ERW major update, which were ongoing at the time. The Advisory Board determined that the relevant rule 6.7.3 e) gives no provisions for the use of a project-specified riverine loss term instead of the methodology-defined default value, and that it is not possible for project developers to pick or mix requirements from different versions/editions of the methodologies. The claim related to riverine loss adjustment is therefore rejected by the Advisory Board.

Request for Background weathering adjustment

In this early ERW project, the originally planned approach (approach 1, see below) for background weathering quantification was found ineligible, which resulted in the project proponent developing other approaches for quantifying the background weathering. The auditor had assessed approach 2 to be compliant with the ERW methodology edition 2022, and the issuance was based on that quantification of background weathering. All approaches exhibited certain sources of inaccuracy such as use of unintended (ad hoc) control sites, low number of data points, and outliers in the data sets.

The three approaches Eion has presented resulted in calculated annual Mg leaching rate of approximately

- 15 kg/ha (approach 1 - Porewater-based method relying on measurements from lysimeters)
- 127 kg/ha (approach 2 - Soil-based method relying on soil sample measurements from ad hoc control points which, despite being intended as application areas, did not ultimately receive weathering material amendment)
- 80.2 kg/ha (approach 3 - Flux-based method estimating background weathering rates based on measurements from lysimeters combined with external datasets)

On a global scale, Mg leaching ranges from approximately 10 to over 100 kg/ha have been reported (See e.g. [Gransee & Führs, 2012](#); [Adomaitis et al., 2013](#); [Wilczewski et al., 2016](#); [Chaudhry et al., 2021](#); [Wang et al., 2025](#)), with specific conditions influencing where values fall on this spectrum. Some articles point to values even higher in certain regions; for example 9.4–156.8 kg/ha in Lithuania ([Adomaitis et al., 2013](#)). Eion cites as reference ([Gransee & Führs, 2012](#)), which gives a range of about 9.5–70 kg/ha.

According to rule 6.3.1 of the Puro Standard General Rules “The CO2 Removal Supplier must use conservative assumptions, values, and procedures to ensure that the CO2 Removal issued as CORCs is not overstated.” Further, according to rule 6.4.1 (c) of the ERW methodology version 2022 in force at the time “The verification of the eligibility of the submitted quantification approach for CORC issuance is made by the Auditor during the Production Facility or Output Audit.”

The Board acknowledges that the results from approach 2 are excessively high, yet not completely impossible for the region. Considering the above requirements for conservativeness in the Puro Standard, the Board found that the evidence presented in the grievance in support of quantification approach 3 is not sufficient to overrule the auditor’s original determination that background weathering must be quantified in accordance with approach 2. The claim related to background weathering adjustment is therefore rejected by the Advisory Board.

Resolution

The Advisory Board in their meeting on 23 April 2026 resolved to reject quantification adjustments requested in the grievance submitted by Eion to issue additional 769.49 CORCs.

Impartiality

All members and the Chair of the Advisory Board were found to be impartial in this matter.

References

- Puro methodology [Enhanced Rock Weathering edition 2022](#)
- Puro.earth [Grievance Policy](#)
- Puro.earth [Conflict of Interest Policy](#)
- Puro.earth [Record of Grievances](#)
- [Advisory Board](#)

Helsinki, 20 May 2026

DocuSigned by:
Marianne Tikkanen
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Signature

Marianne Tikkanen
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