Errata and Clarification

METHODOLOGY FOR THE QUANTIFICATION, MONITORING, REPORTING AND VERIFICATION OF GREENHOUSE GAS EMISSIONS REDUCTIONS AND REMOVALS FROM CAPTURING AND DESTROYING METHANE FROM COAL AND TRONA MINES IN NORTH AMERICA

VERSION 1.1

2023-04-28

This is a supplemental document to the ACR Methodology *Capturing and Destroying Methane from Coal and Trona Mines in North America*. It is intended that topics in this document will be incorporated into the updated ACR Methodology *Capturing and Destroying Methane from Coal and Trona Mines in North America, Version 2.0*. As supplemental information or clarifications are needed on future versions of this methodology, updates may be found in this document.

1. Erratum: Eligible End-Use Management Options (2023-04-28)

Section 3.1.I.C states the following text.

> "I. Offset projects that use this methodology must: …
>
> "C. Destroy the captured mine methane through an eligible end-use management option per Section 3.4."

By this Erratum, "Section 3.4" is corrected to "Section 3.3."

2. Clarification: Eligible End-Use Management Options (2023-04-28)

Section 3.3.II.B.i states that "destruction of extracted mine methane from any end-use management option other than pipeline injection automatically satisfies the performance standard evaluation," and Section 3.3.II.D.i states that "destruction of extracted mine methane

from any end-use management option automatically satisfies the performance standard evaluation."

By this Clarification, one such eligible end-use management option is as a feedstock for manufacturing processes or manufactured products.

3. Clarification: SSR1 for Active Underground Mine Methane Drainage Activities (2023-04-28)

SSR1 and its description in Table 2 under Section 4.2.II read, respectively as follows: "1 Active underground mine VAM emissions" and "Emissions from the venting of mine methane extracted through methane drainage system."

By this Erratum, the text in Table 2 is revised as follows: "1 Active underground mine methane emissions" and "Emissions from the venting of mine methane extracted through methane drainage systems," respectively.

4. Erratum: Leakage Emissions (2023-04-28)

Equations 1, 9, 18, and 30 calculate GHG emission reductions (ER) as follows: "ER = BE - PE" (where "BE" represents "baseline emissions" and "PE" represents "project emissions.")

Whereas it is recognized that MMC project activities do not pose a risk for GHG emission leakage by activity-shifting or market transformation, it is possible for an increase in GHG emissions to occur outside project boundaries resulting from project implementation in the context of captured mine methane as a feedstock for manufactured products. This is because some products manufactured from captured mine methane feedstock might generate end-of-life GHG emissions based on disposal method (e.g., composting, landfilling).

By this Erratum, the text in each equation is revised as follows: "ER = BE - PE - LE" (where "LE" represents "leakage emissions.") In addition, the following text is included in a footnote after each equation.

> "If an MMC project's end-use management option is based on combustion (e.g., via onsite electricity generation, onsite flaring, pipeline injection) of the captured mine methane, then LE may be assumed to be zero (0). If captured mine methane as a manufacturing feedstock serves as the MMC project's eligible end-use management option and if project leakage emissions exist from the disposal and end-of-life of the manufactured products, the Project Proponent will provide to the Validation/Verification Body for review and approval end-of-life GHG testing results that are relevant to the applicable disposal conditions (e.g., third-

party accredited ASTM D6400 reports for Industrial Composting, TUV Home Compost results for Home Composting, ASTM D5511 for landfill disposal). In the absence of actual and traceable end-of-life disposal location data (i.e., percent of product composted, landfilled, incinerated, etc.), the Project Proponent will use best available estimates consistent with the EPA WARM Waste Reduction Model for location breakdown percentages by product type. https://www.epa.gov/sites/default/files/2015-09/documents/renz_warm.pdf."

5. Erratum: Monitoring Requirements (2023-04-28)

Sections 6.5.II, 6.6.II, and 6.7.II include the following sentence: "The flow rate of MG sent to a destruction device must be measured continuously, recordings must not exceed 15-minute intervals, and adjusted for temperature and pressure, if applicable, to calculate daily volume of MG sent to a destruction device."

By this Erratum, the text in each section is revised as follows: "The flow rate of MG sent to a destruction device must be measured continuously, recordings must not exceed 15-minute intervals, and adjusted for temperature and pressure, if applicable."

6. Erratum: Electricity Emission Factors (2023-04-28)

Equations 5, 14, 26, and 35 require the emission factor of electricity (MT CO2e/MWh) used for offset project activities to come from Appendix A's "Table 10: Emissions & Generation Resource Integrated Database (eGRID2016)," where the source of the data is shown as "Source: U.S. EPA eGRID2016, Version 1.0 Year 2016 GHG Annual Output Emission Rates (Created February 2018) https://www.epa.gov/sites/production/files/2018-02/documents/egrid2016_summarytables.pdf."

By this Erratum, the text in Appendix A is revised as follows:

> "Project Proponents must use the carbon dioxide emission factor for total output electricity (lb CO2/MWh) used in the USEPA eGRID subregion where the offset project is located. The eGRID subregion corresponding to a project's location can be determined from https://www.epa.gov/egrid/power-profiler#/.
>
> "In addition, Project Proponents must the USEPA eGRID subregion total output carbon dioxide emission factor corresponding to the calendar year for when the project activity emissions occurred (e.g., eGRID2019 for CY20219 project activity emissions and eGRDI2020 for CY2020 project activity emissions). Should eGRID data be unavailable for the calendar year when project activity emissions occurred, then Project Proponents must use the latest published eGRID data (e.g., eGRID2021 for

CY2022 project activity emissions because eGRID2022 is not yet available). The eGRID datasets may be found at https://www.epa.gov/egrid/download-data.

7. Clarification: Default Methane Destruction Efficiency (2023-04-28)

Appendix B's "Table 12: Default Methane Destruction Efficiencies [DMDE] by Destruction Device" provides a DMDE value of 98.1% for the destruction device termed "upgrade and injection into natural gas transmission and distribution pipeline."

By this Clarification, Table 12's DMDE value for the "upgrade and injection into natural gas transmission and distribution pipeline" is based on the offsite combustion – as fuel for power generation (e.g., natural gas combined cycle [NGCC] power plant), for heat recovery or steam generation at a manufacturing facility, etc. – of the captured mine methane. This clarification is consistent with the SSR9 description (i.e., "emissions resulting from mine methane combustion resulting from pipeline injection / Emissions resulting from incomplete combustion resulting from pipeline injection") in Tables 2, 3, and 4 in Sections 4.2.II, 4.3.II, and 4.4.II, respectively.