CLARIFICATIONS TO *ACM0022 ALTERNATIVE WASTE TREATMENT PROCESSES*

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This document provides clarifications applicable to *ACM0022 Alternative waste treatment processes, v3.0*. Such clarifications are effective on their issuance date. Project proponents and validation/verification bodies (VVBs) shall apply and interpret *ACM0022 v3.0* consistent with the clarifications set out in this document.

Correction/ Clarification	Description	Document and Section Reference	Effective Date
Clarification 1	Applicability to insect composting	*ACM0022 v3.0*, Section 2.2 Applicability	Effective immediately, including all project requests currently in the Verra project review process
Clarification 2	Determination of the methane and nitrous oxide project emission factors	*ACM0022 v3.0* refers to *CDM TOOL13*	Effective immediately, including all project requests currently in the Verra project review process
Clarification 3	Applicable types of waste for *ACM0022 v3.0*	*ACM0022 v3.0*, Section 2.2 Applicability Conditions, Table 2	Effective immediately, including all project requests currently in the Verra project review process
Clarification 4	Demonstration of sufficient landfill capacity as required by footnote 3, *ACM0022 v3.0*	*ACM0022 v3.0*, Section 2.2 Applicability Conditions	Effective immediately, including all project requests currently in the Verra project review

			process
Clarification 5	Use of the latest version of IPCC documents, except for the GWP values	*ACM0022 v3.0*	Effective immediately, including all project requests currently in the Verra project review process

1 CLARIFICATION 1: Applicability to composting using insects, earthworms, and others

Clarification:

Composting under the methodology covers any type of controlled aerobic biological treatment, including microorganisms, insects, earthworms and others. Composting activities involving insects are also included in the methodology.

The same applies to the Clean Development Mechanism (CDM) *TOOL13 Project and leakage emissions from composting*, referenced by the methodology to determine project emissions from composting.

Background:

Composting using insects is a controlled biological treatment of biomass or other organic matter under aerobic conditions.

2 CLARIFICATION 2: Determination of methane and nitrous oxide emission factors

Clarification:

When applying *TOOL13* for composting activities using insects, the following Option 3 may be applied to determine methane (CH_4) and nitrous oxide (N_2O) emission factors ($EF_{CH4,y}$ and $EF_{N20,y}$),

Emission factors may be sourced from relevant and recent peer-reviewed scientific literature in addition to the options provided in *TOOL13*. However, the values must comply with the most recent version of the *VCS Methodology Requirements,* Section 2.4, Models, Default Factors and Proxies. Project participants must justify that the project composting conditions are comparable to those in the literature source. Further, the value applied must be either (a) confirmed by an independent third-

party organization or an external expert, or (b) a conservative factor must be applied based on the uncertainty of the values reported in the literature. A conservative (i.e., higher) value must be selected if literature sources provide a range.

Further, the VVB must assess that the selected emission factors are conservative and representative of on-site conditions, i.e., that the conditions of the literature values are comparable to those of the project. The VVB must also cross-check the emission factors against values of other relevant sources or similar projects, if available.

This clarification does not apply to composting projects using microorganisms.

Background:

To determine the project emissions from composting, *ACM0022 v3.0* refers to *TOOL13*. Composting activities using insects, such as black soldier flies (BSF), may have different emission factors compared to those of other composting activities with microorganisms. Given that the default values in *TOOL13* are based on microorganisms, they may not reflect the specific conditions when using insects.

3 CLARIFICATION 3: Applicable types of waste for *ACM0022*

Clarification:

The types of waste applicable to composting and co-composting activities using *ACM0022* include fresh waste, wastewater, wastewater discharge, agricultural wastes, digestate, and animal manure.

Background:

While *ACM0022* refers to *TOOL13* to determine the types of waste for composting activities, *TOOL13* does not explicitly include all waste types.

4 CLARIFICATION 4: Demonstration of sufficient landfill capacity

Clarification:

When demonstrating the applicability condition under paragraph 4(a), the baseline must be determined based on the identified solid waste disposal site (SWDS). If the current landfill is nearing maximum capacity and cannot be used, the baseline should be determined based on the nearest solid waste disposal site (SWDS) that offers a feasible alternative. The feasibility must be demonstrated by considering factors such as reasonable transport distance of waste, accessibility of alternative SWDS, available capacity of alternative SWDS, and compliance with permits and

regulatory requirements. If this option is applied, the baseline conditions for the project activity must be based on the more conservative scenario between the identified SWDS and the original SWDS.

Background:

ACM0022 footnote 3 requires the project developer to *"demonstrate that sufficient landfill capacity would be available to dispose waste at a SWDS with a comparable annual waste acceptance rate and with the same operating lifetime as the project activity."* If the identified landfill reaches its maximum capacity, the waste may have been disposed of at a nearby alternative SWDS.

5 CLARIFICATION 5: GWP and IPCC guidelines

Clarification:

The global warming potential (GWP) must be applied per the most recent version of the *VCS Standard*. For all other parameters referring to the *IPCC Guidelines for National GHG Inventories,* the most recent version must be applied.

Background:

ACM0022 refers to the *2006 IPCC Guidelines for National GHG Inventories*. However, as per the *VCS Standard*, Section 1.1, when such documents are updated, the most recent version must be used.