



**Approved baseline and monitoring methodology /
methodological tool clarification response form
(Version 03.0)**

INFORMATION TO BE COMPLETED BY THE SECRETARIAT OR PANEL / WG

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| Date and number of Panel / WG meeting: | N/A |
| Title/Subject of the request for clarification: | Clarification on applicable value of methane density and appropriateness of emission sources from soil application of waste by-products and storage of digestate |
| Reference number of the request for clarification: | AM_CLA_0283 |
| Exact reference (number, title and version) of the methodology or methodological tool to which the request for clarification applies: | ACM0022: Alternative waste treatment processes TOOL14: Project and leakage emissions from anaerobic digesters |
| Fast track or Regular track: | <input checked="" type="checkbox"/> Fast track <input type="checkbox"/> Regular track |

Summary of the request for clarification

- According to para 4 of ACM0022 (v2), if the baseline scenario corresponds to (a), it shall be demonstrated that land is available to construct a new SWDS with a comparable annual waste acceptance rate and operating lifetime as the project activity.
What does this phrase mean?
Is it to show that we are carrying out this project even though there are enough vacant lots to build the new SWDS?
- According to para 96 of ACM0022 (v2), if waste by-products are used for soil application, leakage emission shall be neglected. In a proposed project activity, the digestate is generated as by-product from anaerobic digester. It is applied to soil by external organization after a simple treatment (e.g. evaporation, mixing with woodchips) on-site by project participant.
In that case,
 - Shall leakage emissions be calculated as per equation 31 even though processed digestate is applied to soil?
 - If leakage may be neglected, should we check when the external organization use the digestate in the soil?
 - if leakage shall be calculated, should the simple treatment be considered to be composting as described by para 98 of ACM0022?
 - If digestate (liquid and/or solid) is stored for few days on-site before the simple treatment, shall the storage and treatment process be considered to be anaerobic condition? (the storage is not in an un-aerated lagoon that has a depth of more than one meter; or in a SWDS as described by para 26 of Tool 14. It will be stored in a ordinary tank without aeration system.)
- According to Tool14, when calculating emissions associated with digestate storage, Is there a standard about storage period?
- Even if I keep it for a few days, should I calculate it? If it is stored in an ordinary tank in an anaerobic state, should it be calculated?
- Density of methane at normal conditions (0°C, 1atm) is shown as 0.00067 tCH₄ / m³CH₄ in Tool14, pg11, Table2, but 0.716 kg / m³ in Tool6, pg14, Table 1. Which value is right?

Clarification by the secretariat or Panel / WG2

The Methodologies Panel (MP) of the CDM Executive Board would like to thank the author for the submission.

The MP agreed to clarify as follows:

- 1) Paragraph 4 of ACM0022 v02 implies that when the procedure for the selection of the most plausible baseline scenario identifies the disposal of the fresh waste in a SWDS with or without a partial LFG capture system as the baseline scenario, for it to be considered plausible, it shall be demonstrated that sufficient land would be available to construct a new SWDS with a comparable annual waste acceptance rate and operating lifetime as the project activity. Fulfilment of this requirement is intended to support the claim that in the absence of the project activity, the most likely scenario is the continued disposal of fresh waste in a SWDS, either by expanding the capacity of existing landfills or building new landfills to meet the demand.
- 2) Paragraph 96 implies that leakage emissions associated with the composting/co-composting, anaerobic digestion and the use of RDF/SB that is exported outside the project boundary shall be neglected where it can be demonstrated that the waste by-products are used for soil application. However, it may be conditional upon the following:
 - If the waste by-products are treated before soil application through a process which involves composting, the associated leakage emissions shall be considered as per paragraph 98, i.e. in accordance with the methodological tool "Project and leakage emissions from composting" (TOOL 14).
 - If digestate is stored under anaerobic conditions, as paragraph 25 of the tool states, leakage (or project) emissions depend on how the digestate is managed. While the tool does not specify a standard retention time, paragraph 26 requires this source of emissions to be considered in cases where the digestate is stored either in an un-aerated lagoon that has a depth of more than one meter or in a SWDS, including stockpiles that are considered a SWDS.
- 3) Table 2 of TOOL14 provides the value of methane density at normal conditions (20°C, 1atm), while TOOL06 provides the value at reference conditions (0°C, 1atm). Project participants shall use the value as per the applicable methodological tool to ensure consistency with the monitoring conditions.

Version(s) of the approved methodology / methodological tool to which the clarification is applicable:

ACM0022: Alternative waste treatment processes.

TOOL14: Project and leakage emissions from anaerobic digesters.

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Document information

| <i>Version</i> | <i>Date</i> | <i>Description</i> |
|----------------|--------------|--|
| 03.0 | 13 May 2016 | Revised to include the row "Version(s) of the approved methodology / methodological tool to which the clarification is applicable" |
| 02.0 | 18 July 2013 | Revised to remove the row "Date and signature of the chair and vice chair of Panel/WG (in case of clarification by Panel/WG)" |

| <i>Version</i> | <i>Date</i> | <i>Description</i> |
|--|-------------|--|
| 01.0 | 4 July 2013 | <p>Initial publication. This document supersedes and replaces the following documents:</p> <ul style="list-style-type: none">• Recommendation Form for Small Scale Methodologies (F-CDM-SSCwg) (Version 01.1)• Recommendation Form for Small Scale A/R Methodologies and Procedures (F-CDM-SSC-AR) (Version 01.1) |
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