



**Approved baseline and monitoring methodology /
methodological tool clarification response form
(Version 02.0)**

INFORMATION TO BE COMPLETED BY THE SECRETARIAT OR PANEL / WG

Date and number of Panel / WG meeting:	23–25 March 2015 / SSC WG 47
Title/Subject of the request for clarification:	The application of AMS-II.D for improving the blast efficiency of explosives used in mining operations
Reference number of the request for clarification:	SSC_718
Exact reference (number, title and version) of the methodology or methodological tool to which the request for clarification applies:	AMS-II.D “Energy efficiency and fuel switching measures for industrial facilities” (Version 13.0)”
Fast track or Regular track:	<input type="checkbox"/> Fast track <input type="checkbox"/> Regular track

Summary of the request for clarification

Original text from Stakeholder:

Our client has developed a novel combination of technology and procedures that improve the blast efficiency of explosives used in mining operations. The interventions consist of mechanical devices used in the placement of detonators, addition of additives to the emulsion explosives and the modification of other aspects of the application of explosives. The intervention can increase the efficiency of the blast by as much as 30%, thereby reducing the amount of explosives used. This, in turn, reduces GHG emissions.

We are writing to request a clarification on the applicability of AMS-II.D ‘Energy efficiency and fuel switching measures for industrial facilities’ (version 13) to this project.

Paragraph 6 of AMS-II.D states that ‘*This category is applicable to project activities where it is possible to directly measure and record the energy use of the project activity within the project boundary (e.g. electricity and/or fossil fuel consumption and/or the energy contained in the energy carrying medium (ECM) such as steam, hot water, compressed air, etc.) and the quantities of such ECMs utilized in the project boundary. The ‘direct measurement’ in the case of thermal energies (fossil fuel, steam/heat consumption) does not have to involve the metering of energy itself but corresponding parameters such as quantity of fossil fuel consumed, temperature/pressure and quantity amount of steam. The energy flow then can be determined using acceptable engineering methods outlined in recognized national or international standards in an accurate or conservative manner for example ASME PTC 4-19984 or BS8455 can be used to determine thermal energy output of a baseline boiler from actual measured baseline data for steam flow, pressure and temperature.*

With regards to this proposed project activity, it will not be possible to directly measure the energy used as a result of the consumption of explosives in both the baseline and project scenarios. However, it will be possible to measure the amount of ECM (the mass of explosives used) within the project boundary to calculate the energy usage from the amount of explosives used and its net calorific values.

Paragraph 11 of AMS-II.D states that ‘*In cases where product output (e.g. hot/fused metal) cannot be measured, the input material (i.e. feedstock) quantities used in the element process can be used as a proxy for determining baseline/project emissions. However, in such cases that input materials are used as a proxy for product output, potential differences in product output characteristics/quality shall be accounted for in the calculation procedures. The calculation procedures shall be sufficiently explained in the PDD (e.g. assumptions, justifications, etc.).*

With regards to this proposed project activity, it will not be possible to measure the output of the use of explosives, which is broken rock, but it will be possible to use the input material quantities (amount of explosives used) as a proxy for determining baseline/project emissions.

As such, we request clarification to confirm that this project activity does meet the applicability criteria of

AMS-II.D version 13.0.

Clarification by the secretariat or Panel / WG

The working group would like to thank the PP for the submission. The working group would like to clarify that:

1. The methodology is not applicable for the proposed activity due to the following reasons:
 - a. The impact of the measures implemented by the project activity, e.g. the reduction of the required kg of explosives per ton of the broken rock, cannot be clearly accounted for and documented, as required in paragraph 7 of the methodology.
 - b. The underlying project activity intends to use less explosives compared to baseline for an equivalent amount of product (broken ore/stone attending the required blast fragmentation efficiency), however it is unclear what is the mechanism resulting in emission reductions. If the emission reduction are due to energy conversion efficiency, it is not in line with the requirements in Para 13 of the methodology.
 - c. AMS-II.D assumes that the capacity of the equipment remains the same before and after the implementation of the project. As a mining operation is not limited by capacity the way that process equipment is, therefore an alternative approach to what currently exists in the methodology is required to estimate baseline emissions.
2. To propose the inclusion of this type of the project activity the project proponent may consider submitting a request for revision of the approved methodology or a proposed new methodology including more elaborated procedure on how the impact of the measures implemented can be accounted for.

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
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)"
01.0	4 July 2013	Initial publication. This document supersedes and replaces the following documents: <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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