



Bogota D.C. November 5, 2021 - 10728

CDM Team
UNFCCC Secretariat
Bonn, Germany

Reference:

- Response to request for review - Request for Issuance for 6411 BRASCARBON Methane Recovery Project BCA-BRA-15 for 18 Jun 19 to 31 Dec 20.

Dear CDM Team:

The indications given by your communication of October 13, 2021, where you request a response to concerns in two options:

- (a) Respond by making any revisions to the monitoring report (MR) and attached spreadsheets, verification report (VR), and/or certification report that they deem necessary to, inter alia, ensure that all facts are clearly stated and sufficiently verified; or*
- (b) Respond in writing by addressing why no revisions to the MR, VR, and/or certification report are necessary.*

The project participants – BRASCARBON and ICONTEC decided to take the Option (a), to attendance the request number 2 related with the amount of Biogas, for this reason the follow documents are reviewed, and it are sent with new versions:

- Monitoring Report (MR) version 4: BCA-BRA-15 MR08_v4 clean.pdf and BCA-BRA-15 MR08_v4 tc.pdf
- CER- spreadsheets (version 3): CER Calculation MR08 - BCA-BRA-15_v3.xls
- Verification Report (VR) version 4: CDM-VCR_v.4_BRA 15_1.10.2021_clean.pdf and CDM-VCR_v.4_BRA 15_1.10.2021_tc.pdf

The option B was taken to attendance the request number 1 related with the monitoring of the parameter Flame_m. The following, the summary response to the issues raised and the action taken. Please find below the response to the two requests prepared jointly by the PP and the DOE.

In addition, the PP sent us the flare manufacturer's statement, which clarifies the accuracy, quality and specifications of the flare system installed and functional for the assigned task.

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Answer request 1:

1) The monitoring report and the verification report describe that parameter “time the flare is operating in a minute ($Flame_m$)” was measured using minute-by-minute thermocouples, whereas the applied methodological tool “Project emissions from flaring”, version 03.0 (Data / Parameter table 10) and the monitoring plan require that the parameter be determined using a flame detector (Ultra Violet detector or Infra-Red or both). The DOE raised a FAR which requires an analysis in the upcoming verification for alternatives such as a revision of the monitoring plan or a possible deviation of the methodology. The DOE is requested to substantiate (i) how it verified the monitoring of $Flame_m$ in compliance with the approved monitoring plan and the applied Tool for this monitoring period and (ii) why it did not consider a permanent change to the monitoring plan or a temporary deviation from the Tool and the monitoring plan, prior to submitting the request for issuance. Please refer to Paragraph 360 of the VVS-PA ver. 02.

Response:

Following the review requested for this request review, the DOE was able to reassess and conclude, after a thorough analysis in addition to the verification process itself, that in the Forms 08 of each farm there are no situation where a temperature in any given minute was close to environmental temperature during the monitoring period (the lowest value of temperature registered in all the farms during the current monitoring period was 141,30°C Registered on the project site BCA-222SP1-15 for the month of February of 2020).

The monitoring methodology requires the parameter $Flame_m$ to be measured once per minute using a fixed installation optical flame detector (Ultraviolet detector or Infra-Red or both), and this flame detector shall provide as output whether the flame was on or off. Both PP and DOE understand that the system implemented by the project to monitor the parameter $Flame_m$ provides the same output required by the monitoring methodology at the same time interval, i.e. the output of the monitored parameter is “Flame on” or “Flame off” based on the temperature of the flare measured every minute. It was also the EB interpretation regarding Brascarbon project BRASCARBON Methane Recovery Project BCA-BRA-09. – UN5492, which is an identical project to the one now in questioning and had its issuance without any questioning in all the three requests for issuance phases.

Hence, this was the only monitoring approach possible since the flare manufacturer provided additional documentation assuring and certifying that the equipment installed in the project sites does not technically support an optical sensor due to the internal conditions of the installation. See annex 1.

In order to adopt an approach that ensures the environmental integrity of the monitoring, the PP added an additional level of conservativeness by assuming that the output of the parameter $Flame_m$ is “off” for an entire hour if there is at least one record of temperature below 500°C during any given minute of the subject hour.



ICONTEC and Brascarbon do acknowledge that this monitoring system is made indirectly since no optical sensor is installed. However, as explained above, ICONTEC considers that the core and main purpose of the parameter, providing an output “Flame on” or “Flame off”, was fairly and reasonably met. The PP and the DOE decided not to request a change in the monitoring plan nor a temporary deviation from the monitoring plan since PP intends to promote a substantive change in the monitoring systems of each farm, by replacing all project flares (and CLPs) by new equipment that will be in full compliance both with the monitoring plan in the registered PDD as well as with the monitoring methodology. Instead, a Forward Action Request was raised to secure that the monitoring system from the replaced flares is aligned with monitoring plan and with monitoring methodology.

In addition, to the above, the records allow demonstrating the proper monitoring that the company performs and the transparency of the information, this continues to be traceable and valid to claim the emissions achieved by the project during the verified period.

In conclusion, it is the ICONTEC opinion that despite the formal inconsistency between the equipment used to monitor the parameter Flame_m and the monitoring plan and monitoring methodology, the essential assessment required for this particular parameter (the flame being ON or OFF in every minute) was satisfactory accomplished by the indirect use of the thermocouple records with the flame burning temperature records of each minute. Additionally, considering the PP position on making a substantive change in the monitoring equipment to fully comply with the monitoring plan and monitoring methodology, the DOE understands that there are no reasons to request any of those changes.

Finally, the permanent change of the plan or the temporary deviation did not apply at the time, although the optical detector is indicated according to the new version of the tool, this new equipment does not necessarily apply to projects such as the one presented by Brascarbon, because the reasonable investment cost for this type of project must be estimated - it is based on the principle of the good faith of the company in the management of the system and also that in practice, the current burning system does not affect the quality of the resulting information; On the other hand, Brascarbon and Icontec have been demanding with the fundamental aspect of the tool, which is the percentage applied to this type of projects in terms of flare efficiency, which went from 90% (version 2) to 80% (version 3) - which implies a greater safety margin and less volume in tons of CO₂ removed and therefore less bonds to be claimed by Brascarbon. Icontec, understanding that the main aspect of the tool is its methodological application, demanded this from Brascarbon.

Answer request 2:

2) The DOE is requested to substantiate how it verified the monthly aggregate values of the amount of Biogas burned below 500°C since there is discrepancy observed between the information in file "CER Calculation MR08 - BCA-BRA-15_v2" and the individual Brascarbon Form 08.001 spreadsheets (i.e. Formulario 08:001). As an example, for Site ID "BCA-

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227SP1-15", the file "CER Calculation MR08 - BCA-BRA-15 v2", workbook "MDy-PEpower,y,expost, cell T102" indicates 250.41 m3 of biogas burned below 500°C for month August 2020, whereas file "BCA-227SP1-15 - Formulario 08.001 - 08-2020" does not show any biogas burned below 500°C for month August 2020. In doing so, the DOE shall address this observation for the entire months of this monitoring period. Please refer to Paragraph 364 of VVS-PA ver. 02.

Response:

ICONTEC verified the project information through a point-by-point review of the data obtained in the field by Brascarbon and then systematized, in addition to the photographic record, review of each of the forms according to the PP's, POP's and interviews with Brascarbon's field technicians; this allowed obtaining the necessary information initially to later compare it with the information consolidated in the CER spreadsheet.

With respect to the information on form 08, the Brascarbon and ICONTEC has realized a thorough revision of each form 08 and do acknowledge the mistake on the identified situation since there was no hour below 500°C for August of 2020. Hence that has produced an increase of the project emissions, hence reducing the total volume of CERs requested for the farm BCA227 – Sitio Rosa dos Ventos. New versions of the Monitoring report (v4 clean and tc) as well as revised v3 of the CER calculation spreadsheet were provided by the PP and attached to this answer.

In the same way ICONTEC attached new version of the VCR – Verification and Certification Report (v4 clean and tc).

Dear CDM team, we hope we have given you the right answers to your requests.

Sincerely,

Juan Sebastián Salazar
Technical Director

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Annex 1: Flare manufacture declaration



LAURY - FRAN

MANUTENÇÃO INDUSTRIAL

Acesso José Alves Machado Nº 1030 Vila Xisto São Miguel Arcanjo - SP
CEP: 18230-000 CNPJ: 13.661.966/0001-11 Fone (015) 99713-7757.

Declaração Flare

A empresa LAURY-FRAN declara que trabalha com a empresa Brascarbon S/A desde o ano de 2010, no projeto, desenvolvimento e implementação dos flares necessários à queima do biogás metano.

Os flares são "Flare fechado", feitos de acordo com a solicitação da empresa contratante, e foram desenhados para garantir, da melhor forma possível, a queima total do biogás originado e em temperaturas superiores a 500°C.

Este desenho e instalação dos flares, foi feito considerando apenas a inclusão de um equipamento de medição de temperatura (termopar), um ignitor (com ignição regulável e programada para ignição a cada 5 segundos para garantir que a chama não seja desligada) e um queimador (responsável pela queima do gás). Assim sendo, a inclusão de um novo equipamento de medição internamente ao sistema (flare fechado) torna-se inviável pela impossibilidade de instalação interna do mesmo nos flares já implantados, isto devido às suas características físicas (material refratário e lacrado) e também pela alta temperatura interna, a qual prejudicará o funcionamento do novo equipamento (sensor/cabos/conectores), uma vez que os mesmos não foram concebidos para essa situação.

Desta forma, após avaliação do sistema como um todo, o nosso entendimento enquanto fabricante que, devido às características de design e construção do flare o mesmo poderia ser fatalmente danificado durante o processo de inclusão de um novo sensor. Assim é nossa conclusão de que será necessário realizar a troca de todos os flares instalados, modificando a sua estrutura física de modo a que a mesma receba o novo item de controle e manter a característica de flare fechado, também será necessário corrigir o programa de registro de dados para que este reconheça esta nova leitura.


Marcelo Ernesto Zaccaro - Diretor
LAURY-FRAN

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Flare Declaration

Laury-FRAN declares that it has been working with Brascarbon S/A since 2010, in the design, development and implementation of flares necessary for the burning of methane biogas.

The flares are "Flare closed", made according to the solicitation of the contracting company, and were designed to ensure, in the best possible way, the total burning of the biogas originated and at temperatures above 500°C.

This drawing and installation of the flares was done considering only the inclusion of a temperature measurement equipment (thermocouple), an ignitor (with regulated ignition and programmed for ignition every 5 seconds to ensure that the flame is not turned off) and a Flare (responsible for burning the gas). Therefore, the inclusion of a new measurement equipment internally to the system (flare closed) becomes unfeasible due to the impossibility of installation internal of the even in the flares Already Deployed, this is due to the characteristics (refractory and sealed material) and also by the high internal temperature, which harm the operation of the new team (sensor/cables/connectors), because they were not designed for this situation.

Thus, after evaluation of the system as a whole and various tests of the system and with novod sensors, we came to the conclusion that for the inclusion of a new measuring equipment, our understanding as a manufacturer, in view, given that due to the characteristics of flare construction the same will be broken during the process, we thus come to the conclusion that it will be necessary to exchange all installed flares, modifying their physical structure so that the same receive the new control item and keep the characteristic of flare closed, it will also be necessary to correct the programmed and record data for it to recognize this new reading.

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