

PROJECT REVIEW REPORT

This project review report includes findings raised during Verra’s review of the project specified below. The VVB must address the findings before the project request can be considered for approval by Verra. The project review report will be made publicly available on the Verra Registry. Confidential information may be provided in separate attachments.

Project ID	4289
Project Name	Brascarbon Methane Recovery Project BCA-BRA-19
Review Type	Registration & Verification Approval
Program(s)	VCS Program
Verification Period	[05/01/2021] – [31/12/2022]
Project Proponent	Brascarbon Consultoria Projetos e Representação S/A
Methodology	AMS-III.D: Methane recovery in animal manure management systems, version 21.0
VVB	ICONTEC International
Assessment Criteria	VCS Standard, v4.4
Date of First Issue	04 December 2023
Review Conclusion	Approved
Date of Final Issue	19 February 2024

FINDINGS

1	Inconsistent information on the project start date		
	<p><u>Issue</u> The project start date is stated as 02/01/2022. However, the earliest operation date of the project site is 29/12/2021 as per the "Table 1 – Relevant dates of project implementation" in page 10 of the Joint PD-MR, and some typo regarding the operational dates of the 10 project sites are also observed in the same table.</p> <p><u>Action Required</u> 1.The VVB must ensure that PP define the project start date in accordance with the most recent VCS standard and update the joint PD-MR accordingly. 2. The VVB must validate this information and update JVVR as required.</p> <p><u>Program Rule(s)</u> Section 1.8 of Joint Project Description & Monitoring Report Template v4.2; Section 3.8 of VCS Standard version 4.4.</p>	<p>Round 1</p>	Closed
		<p><u>VVB Response</u></p> <p>The information in Table 1 which states the date of 29/12/2021 is referring to the start-up and test that is the phase that precedes the start of the monitoring period phase. The start up and test phase aims to test the full implementation of the system. However the project start date was misreferred since it was stating the date of 02/01/2022 whereas the first farm to have the monitoring phase started was on 05/01/2022. Hence the new version 3 of the PD-MR has that date dully corrected. Likewise, the Joint VVR was adjusted throughout in the new Version 3, where changes to the document are reflected.</p>	
		<p><u>Verra Response</u></p> <p>VVB has confirmed the start date and the start date has been corrected. This finding is closed.</p>	
2	Further information on existing scenario prior to project implementation		
	<p><u>Issue</u> It is not clear whether the swine farms are existing or new (i.e. when it started its operation and when the disposal site in the pre-project scenario started operation) and how much manure is generated from the swine farm annually.</p> <p><u>Action Required</u> 1.The VVB must ensure that PP provides information on the swine farm and its disposal site of each swine manure prior to</p>	<p>Round 1</p>	Closed
		<p><u>VVB Response</u></p> <p>The farms were had their swine producing activity before the project activity. Hence the farms were not new but all the equipment within the project boundary of the project activity are new. That means the biodigester, the flare, the monitoring equipment (flow meter, thermocouple) and the gas pipeline to the flare are all new. That could also be confirmed during the VVB site visit.</p>	

<p>the project implementation. 2. The VVB must validate this information and update JVVR as required.</p> <p><u>Program Rule(s)</u> Section 1.11 of Joint Project Description & Monitoring Report Template v4.2; Paragraph 9 of AMS-III.F, v12.</p>	<p>The ten pig farms have been in operation as pig farming entities for over 8 years, considering the historical inventory data from the census in the region and the legal documents provided by the Project Proponent (PP). The current environmental licenses, which correspond to the operating permits and are granted for a period of 4 years, represent the renewals of these licenses between 2020 and 2021. This ensures that each farm was already established before the start of the CDM project, and their inclusion in the CDM project is subsequent, aligning with the implementation start in 2022, as previously indicated. This was confirmed during the site visit to each location. See section 1.1.1 PD-MR -table 1 PD-MR v.3 and section 3.4.3. - 4.3.3. JVVRv.3.</p> <p>According with the methodology AMS III-D, the manure generated does not required measurement since the values associated with the animal genetics, feed, among other parameters. The dimensioning of the biodigestor obviously required the knowledge of the manure produced in order to accommodate all the effluent to be received but after the design of the civil work and its following physical implementation, the manure produced is no longer measured in terms of monitoring plan requirements.</p> <p>Before the project, the farms had oxidation or stabilization lagoons, which were required to obtain the environmental or operating license. With the implementation of the project (biogas digester, flare, and aforementioned monitoring equipment), these facilities were strategically positioned just before the manure from the farm was directed to the stabilization lagoons. This placement was designed to capture the maximum amount of methane (CH₄) emissions, in accordance with the AMS-III.D methodology.</p> <p>See section 1.1.1 PD-MR -table 1 PD-MR v.3 and JVVRv.3 Regarding the annual pig manure production, it is estimated to</p>	
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	<p>be between 6- 12 liters per day. Please refer to the adjustments made in alignment with this explanation in PD- MR and JVVR and in section 3.4.2 applicabilty JVVR v.3 , and therefore AMS -III.F Not involved.</p>	
	<p><u>Verra Response</u> The justification for baseline scenario has been provided. This finding is closed.</p>	

3 Further information on the stakeholder consultation during the 30-day public comment period		
<p><u>Issue</u> It is not clear whether the project has been listed on the project pipeline for a 30-day public comment period, as per section “Public Comment Period” of VCS Standard version 4.4.</p> <p><u>Action Required</u> 1. The VVB must ensure that the project has been listed on the project pipeline for a 30-day public comment period and the joint PD-MR specifies the information on the public comments collected during such public comment period. 2. The VVB must validate this information and update JVVR as required.</p> <p><u>Program Rule(s)</u> Section 2.4 of Joint Validation and Verification Report Template, v4.2. section “Public Comment Period” of VCS Standard version 4.4</p>	<p>Round 1</p> <p><u>VVB Response</u> The project was submitted for a 30-day public comment period, as per section “Public Comment Period” of VCS Standard version 4.4, from 03/05/2023 until 02/06/2023 and Brascarbon has not received any comment on the project. In the new versions of the project documents, both the Joint VVR and the PD-MR have been adjusted to provide clarification compared to previous versions, aligning the information with Verra's version 4.4 Standard.</p>	Closed
	<p><u>Verra Response</u> The details of public comment period have been provided. This finding is closed.</p>	

4 Further information on the regulatory plus		
<p><u>Issue</u> Page 36 of JVVR concluded no information on any regulations requiring the collection and destruction of methane from swine manure in Brazil. However, the JVVR does not specify which</p>	<p>Round 1</p> <p><u>VVB Response</u> Adjustments are made for greater clarity in the section related to additionality for the VVB in JVVR v.3 (section 3.4.5), and for the</p>	Closed
	<p><u>Verra Response</u> The details of public comment period have been provided. This finding is closed.</p>	

	<p>specific laws and/or regulations have been checked by the VVB so that the VVB has concluded such laws/regulations do not require collection and destruction of biogas from swine farm.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. The VVB must ensure that the compliance with regulatory surplus is illustrated and justified in the Joint PD-MR. 2. The VVB must validate this information and update JVVR as required. <p><u>Program Rule(s)</u></p> <p>Section 3.5 of Joint Project Description & Monitoring Report Template v4.2.</p>	<p>PP in the PD-MR v.3</p>	
		<p><u>Verra Response</u></p> <p>The JVVR has been revised to confirm regulatory surplus. This finding is closed.</p>	

5 Information on Implementation Status of the project activity			
	<p><u>Issue</u></p> <p>The joint PD-MR does not report the Implementation Status of the project activity.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. The VVB must ensure that joint PD-MR includes information on the Implementation Status of the project activity. 2. The VVB must validate this information and update JVVR as required. <p><u>Program Rule(s)</u></p> <p>Section 4.1 of Joint Project Description & Monitoring Report Template v4.2</p>	<p>Round 1</p> <p><u>VVB Response</u></p> <p>The new version 3 of the Joint VVR and version 3 of the PD-MR have that information included as required.</p>	Closed
		<p><u>Verra Response</u></p> <p>Implementation status has been provided. This finding is closed.</p>	

6 Compliance of the chosen baseline parameters with methodology requirement			
	<p><u>Issue</u></p> <p>Several parameters related to baseline emission calculation has chosen IPCC value for the Region Western Europe, instead</p>	<p>Round 1</p> <p><u>VVB Response</u></p> <p>The project location is indeed different than the location of the</p>	Closed

<p>of the project located region (Latin America), considering the genetic sources of the livestock in project farms originate from an Annex I Party. However, the JVVR does not provide a clarity on how the VVB has validated that the genetic sources of the livestock in project farms originate from an Annex I Party and neither specify which Annex I Party, and which specific evidence have been checked to confirm such information in accordance with paragraph 18(d) of AMS III.D version 21.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. The VVB must ensure that the project has determined the baseline parameters in accordance with the methodology requirement. 2. The VVB must validate this information with verifiable evidence and update JVVR as required. <p><u>Program Rule(s)</u></p> <p>Section 5.2 of Joint Project Description & Monitoring Report Template v4.2; paragraph 18(d) of AMS III.D version 21.</p>	<p>genetics considered in the project activity. That is due to the fact that the genetic sources regarding swine, in Brazil, are generally not originated in the country. In the particular case of the project activity, it was possible for VVB to confirm and attest, by the access to purchase invoices, that the genetic source is, indeed, from the Western Europe Region. That could be double checked during the site visit conducted by the DOE. Hence the application of the IPCC value for the Region Western Europe is correctly applicable.</p> <p>PD-MRv.3 and JVVRv.3</p> <p>Notwithstanding the above, parameter 14 of the genetic source was supplemented in the JVVR v.3.</p> <p><u>Verra Response</u></p> <p>VVB has confirmed that genetic source is from Western Europe Region and the values applied therefore. This finding is closed.</p>	
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7 Further information on the project emissions from use of fossil fuels or electricity for the operation of all the installed project facilities		
<p><u>Issue</u></p> <p>Page 57 of the Joint PD-MR states “No fossil fuel or electricity will be used in the project, therefore, PE_{power,y} = zero”. Further page 42 of the JVVR states that (a) no pump or blower was used; (b) the monitoring equipment present in each project site is powered by photovoltaic cells. However, it is still not clear how the biogas is driven and sent to the flare and whether this process consume any form of energy.</p> <p><u>Action Required</u></p> <ol style="list-style-type: none"> 1. The VVB must ensure that the project emissions from use of fossil fuels or electricity for the operation of all the installed 	<p>Round 1</p> <p><u>VVB Response</u></p> <p>The project activity has no connection to the electric grid within its project boundary. The reason why PE_{power,y} = zero is due to the fact that all the electronic equipment (CLP, thermocouple and flow meter), although having energy consumption, this energy is provided by photovoltaic cells which are connect to a battery. The gas goes to the flare by the pressure existing in the biodigester and the flow from the farms to the biodigester occurs gravitationally, hence without any pumps. All these issues were dully confirmed in field by the VVB in the project site visit.</p>	<p>Closed</p>

	<p>facilities are determined in line with the applied methodology and tool.</p> <p>2. The VVB must explain how it has validated all the installed facilities have been considered and update JVVR as applicable.</p>	<p>PD-MRv.3 and JVVRv.3 (adjusted section 3.4.6)</p>	
	<p><u>Program Rule(s)</u> Section 5.2 of Joint Project Description & Monitoring Report Template v4.2; Paragraph 23 of AMS III.D version 21.</p>	<p><u>Verra Response</u> VVB has confirmed that the project activity is not connected to the grid. This finding is closed.</p>	

8 Correctness of the applied version of VCS Standard			
	<p><u>Issue</u> VCS Standard version 4.3 is applied by the PP and VVB. However, such version is already expired.</p> <p><u>Action Required</u> 1.The VVB must ensure that PP applies the valid version of VCS Standard. 2. The VVB must validate the project in accordance with the valid version of VCS Standard and update JVVR as required.</p> <p><u>Program Rule(s)</u></p>	<p>Round 1</p>	Closed
		<p><u>VVB Response</u> The revised version 4.4 was dully updated in the new version 3 of the Joint VVRv.3</p>	
		<p><u>Verra Response</u> The VCS Standard version has been corrected. This finding is closed.</p>	