

Gap Validation and Verification report form for GS4GG project activities

(Gold Standard for the Global Goals)

BASIC INFORMATION		
Title and GS reference number of the PA	Manaus Landfill Gas Project GS ref. no. – GS11728	
Version number of the validation and verification report	2.1	
Completion date of the validation/verification report	28/09/2023	
Version number of PDD to which this report applies	Version – 11.0 Dated- 28/09/2023	
Project Participants	Conestoga-Rovers Engenharia Ltda.	
Host Parties	Brazil	
Applied methodologies and standardized baselines for the PA	ACM0001 – version 18.0 – Flaring or use of landfill gas	
Sectoral scopes for the PA (Indicate mandatory and conditional sectoral scopes)	Sectoral Scope 13 & 1	
Activity requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A	
Product requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A	
Sustainable Development Goals Targeted / SDG Impact (defined in B.6)	Estimated in PDD	Units or products
SDG 13 (Climate action) / 13.2 emission reductions achieved	676,996	tCO _{2e} /y
SDG 5 (Gender Equality) / 5.5.2: Quantity of women in managerial positions	At least one woman in leadership and decision-making positions by showing signed company functional organizational Number of women in leadership and decision-making positions	

	chart in the determined year	
SDG 7 (Affordable and Clean Energy) / 7.2 – Amount of electricity generated using LFG by the project activity in year y	61,793	MWh/year
SDG 8 (Decent Work and Economic Growth) / Total Jobs generated.	At least one onsite employee in the determined year	Jobs generated as a result of the project
Name of the Gold Standard approved auditor VVB	Earthood Services Private Limited	
Name, position and signature of the approver of the validation report	 Managing Director Dr. Kaviraj Singh	



SECTION A. Executive summary

The project activity consists in capturing and burning methane resulted from the decomposition of organic waste in Manaus Landfill. It uses a collecting system composed by horizontal trenches with a high efficiency enclosed flare unit to burn the LFG, so reducing the greenhouse gas emissions previously emitted into the atmosphere.

The LFG collection and flaring system installed at Manaus landfill is located at km 19 of Highway AM-010 – city of Manaus, State of Amazonas, Brazil – Latitude: 2°57'29.92" S; Longitude: 60°00'54.74" W.

Scope of Validation

Conestoga-Rovers Engenharia Ltda. Has contracted ESPL to perform gap validation of the project. The project has also been registered under CDM and is now seeking registration under GS. The scope of validation is to assess the claims and assumptions made in the project design document (PDD) against the GS4GG Principles and Requirements version 1.2, UNFCCC criteria, including but not limited to, CDM PS, CDM VVS, applied methodology and other relevant rules and requirements established for CDM project activities.

Validation Process and Methodology

The validation process is undertaken by a competent validation team and involves the following:

- A desk review of documents and evidences submitted by the project participant in context to GS for GS criteria along with CDM rules and guidelines issues by CDM EB,
- Conducting site visit, interview and interactions with representatives of the project participant and stakeholders during on-site inspection and phone calls,
- Reporting audit findings w.r.t to clarifications and non-conformity and closure of the findings as appropriate and
- Preparing a draft validation opinion based on the auditing findings and conclusions
- Technical review of the draft validation opinions along with other documents as appropriate by an independent competent technical review team
- Finalization of the validation opinion (this report)
- An independent technical review team reviews the validation report made by the validation/verification team. Once the final report is accepted by the Technical Reviewer, the report is then approved by Earthood Services private Limited which is then further processed according to the GS and CDM procedures.

Conclusion

ESPL has performed the gap validation in GS4GG requirements of the PA "Manaus Landfill Gas Project", with UNFCCC Ref. Number 4211. The validation team has confirmed the implementation of the project as per description in the PDD, the monitoring plan of the PDD and the application of the monitoring methodology (ACM0001 – version 18.0).

The validation team concluded that PA complies with all relevant GS4GG procedures/standards/guidance and, therefore, the Design Certification is being submitted in accordance with the GS4GG procedures.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection*	Interviews*	Verification findings
1.	Team Leader	OR	Sebben	Marcelo	Verifit	Y	Y	Y	Y
2.	Verifier	OR	Kamimura	Camila	Verifit	Y	N	N	Y
3.	Technical Expert (TA 1.2 and 13.1)	OR	Sebben	Marcelo	Verifit	Y	Y	Y	Y
4.	Methodology Expert	OR	Sebben	Marcelo	Verifit	Y	Y	Y	Y
5.	Local Expert	OR	Sebben	Marcelo	Verifit	Y	Y	Y	Y

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Garg	Shreya	Central Office
2.	TE to TR (TA 1.2 and 13.1)	IR	Singh	Kaviraj	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

SECTION C. Means of validation

C.1. Desk/document review

A desk review was conducted by the validation team that included:

- a review of the data and information presented to verify its completeness;
- a review of the proposed monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- an evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of documents/evidences reviewed is included as Appendix 3.

C.2. On-site inspection

Duration of on-site inspection: 30 and 31/03/2022				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening Meeting: introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including venue for closing meeting and any concerns from PP	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
2.	Project Activity (technology, location, implementation, changes)	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
3.	Physical inspection of the project activity: Site visit and interview of monitoring personnel - Walk around landfill area - Residues entrance - Biogas capture - Biogas treatment - Flare station - Electricity generation (if applicable)	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
4.	Monitoring plan (feasibility of monitoring arrangements described in PDD, QA/QC procedures, responsibility of implementation of monitoring plan, data recording & storage procedures)	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben

5.	Extraction of Raw data	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
6.	Compilation of information time for doubts clarifications	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
7.	End of 1 st day of activities	Manaus Landfill – Biogas Plant	30/03/2022	Marcelo Sebben
8.	Transition to GS Interviews to HR regarding parameter Safeguarding principles - (Number of employees having Health & Safety Trainings) - Total number of employee having landfill gas plant technology trainings (onsite and abroad) and total technology equipment imported - Prevention of work accidents - Diseases and health quality communication events - Other as relevant Assessment regarding gender sensitive requirements	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
9.	Check on parameters added due to GS - Odor - Legislation conformity of noise, emissions from flare, emissions from engines and dangerous wastes. - Number of employment - Social health programs - Emission Reduction Purchase Agreement between the project activity and the Norwegian Carbon Procurement Facility (NEFCO).	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
10.	Interviews to Stakeholders 1. Maria Vitória – Neighbor of Landfill 2. Peter Luis Maia Costa – Landfill Manager (Tumpex) 3. Carlo Sass – Operational Manager Landfill (Tumpex)	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben

11.	Lunch time (Suggested)	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
12.	Review of ER calculations in accordance with applied methodology and relevant tools	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
13.	Verification checklist: compliance of monitoring procedures followed at project site with registered PDD and monitoring methodology.	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
14.	GS4GG Transition Checklist	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
15.	Compilation of the audit findings and delivery of Draft validation report.	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben
16.	Closing Meeting: submission of the audit findings to the client and agreement on the issues raised and agreement on timelines	Manaus Landfill – Biogas Plant	31/03/2022	Marcelo Sebben

C.3. Interviews

C.3.1. Interviews with PP:

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			

1.	Sprovieri	João	BENG – Consultancy	30/03/2022 31/03/2022	Site visit Monitoring plan, Monitoring frequency, ER calculation	Marcelo Sebben
2.	Lorenzo	Andrés	O&M Management CRE	30/03/2022 31/03/2022	Operation of Biogas Plant, Site visit, installed technology, monitoring plan Gender sensitive requirements Safeguarding principles	Marcelo Sebben
3.	Eduardo	Carlos	CRE Operator	30/03/2022 31/03/2022	Site visit Operation and maintenance of Biogas plant	Marcelo Sebben
4.	Henrique	Paulo	CRE Operator	30/03/2022 31/03/2022	Site visit Operation and maintenance of Biogas plant	Marcelo Sebben
5.	Veiga	Kadson	CRE Operator	30/03/2022 31/03/2022	Site visit Operation and maintenance of Biogas plant	Marcelo Sebben
6.	Maia	Peter	Landfil Manager – Tumpex	31/03/2022	Landfill Operation	Marcelo Sebben
7.	Sass	Carlos	Landfil Operations Manager – Tumpex	31/03/2022	Landfill Operation Stakeholders to biogas Plant, relation with community	Marcelo Sebben
8.	Vitoria	Maria	Neighbour from Landfill and Biogas Plant*	31/03/2022	Aspects related to impact of Landfill in community,	Marcelo Sebben

The interviews were conducted at on-site, with exception of Mrs. Maria Vitoria, which has been interviewed by phone.

C.3.2. Type of questions asked by the team members:

(a) To Project developers

- Project Implementation status, Location and Technology

- Monitoring Plan (Monitoring Schedule and Data management)
- SDG Contribution and ER calculation
- Sampling Plan

(b) To the local stakeholders*:

- Do you live close to the project activity? Lives 5 minutes from Landfill by car.
- Are you aware about the project activity? She knows the landfill and knows that there is a project with biogas.
- Do you find the project beneficial? Yes. She received people from Landfill at home who informed about residues separation (selective collect)
- Does the project have any positive impact on the environment? She mentioned that the Landfill used to emit an intense odour and from the last 3 year, she recognize that no odour has been felt anymore.
- Does it have any negative impact? Not anymore since the odour has ceased.
- Do you know any social programs related to the Project: No
- Do you know about any programs occurring in surrounding schools? No. She has no familiar attending school at the moment and she is not aware about any such program
- Do you know anyone who works at the landfill or at the biogas plant? No.

C.4. Sampling Approach

No sampling plan was applied by the VVB. As VVB could validate all the details of the project through the interview of the PP representatives and evidence related to project as mentioned in detail under section C.3 of this report.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of Validation/Verification findings	No. of CL	No. of CAR	No. of FAR
General description of project activity	CL 01	-	-
Eligibility Criteria	CL 02	CAR 01	-
Application and selection of methodologies and standardized baselines	-	-	-
Demonstration of additionality	-	-	-
Estimation of emission reductions or net anthropogenic removals or SDG outcomes	-	CAR 02	-
Start date, crediting period type and duration	CL 03	-	-
Safeguarding Principles	-	-	-
Stakeholders' consultation requirements	CL 04	-	-
Total	04	02	00

SECTION D. Validation findings

D.1. General description of project activity

Means of validation	The project activity consists in capturing and burning methane resulted from the decomposition of organic waste in Manaus Landfill. It uses a collecting system composed by horizontal trenches and a high efficiency enclosed flare unit to burn the LFG and by this is reducing the greenhouse gas emissions previously emitted into the atmosphere. The main equipment used at the project activity is given below: - 01 enclosed flare with burning controlled system John Zinc Company LLC – Serial # 9047414; - 02 blowers Gardner Denver – model 74203-GDGI – Serial #s P008374 and P008375; - 01 thermal flow meter Thermal Instrument Co. – model 62-9/9500 – Serial # 2012382; - 01 residual gas analyser Landtec – type FAU-TDL – Serial # 1117; - 01 exhaust gas analyser Landtec – type FEA – Serial # 4722; - 01 set of 4 thermocouples Pakari – type N – Serial #s 7526, 7527, 7528 and 7529; - 01 electricity meter Landis+Gyr – model SAGA (0.2%) – Bidirectional – Serial # 10371482; - 01 diesel generator group Stemac – model MWM 6.10T – Serial # 0150041911; - 01 biogas generator group CHP Brasil – model CHP300-UGN – Serial # DC9W201 (do not belong to project boundary). The project qualifies the eligibility criteria for Gold Standard. The project is located at site Manaus Landfill in Manaus/AM – Brazil, with geographical coordinates 2°57'29.92"S and 60°00'54.74"W. The co-ordinates of the location of the site were appropriately included in the PDD. The location has also been confirmed through website Google Maps^{/11/}. The validation team confirmed the implementation status of the project activity through photographic and documentary evidence^{/12/} along with the data from data loggers and is deemed sufficient for monitoring of emission reductions. It is therefore, confirmed that the project is installed and in operation since July/2009, in line with the PDD. The summary of the proposed project and the technology involved are described in the Transition form^{/06/}, which is in accordance with latest valid version of PDD^{/13/} with sufficient details and clarity. The accuracy of the project description was determined based on the on-site inspection as part of validation/verification audit, review of supporting documents (as mentioned in Appendix 3), and interaction with the key personnel as listed under section C.3 of this report. The baseline scenarios have been found in accordance to the applied methodology ACM0001 V.18.0. No assessment of baseline scenario has been taken place in this transition. This assessment will be carried out at the Crediting period renewal process as applicable.
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	Nevertheless, it is not clear how all sustainable development Indicators will be monitored and a finding has been raised.																				
Findings	CL 01 <i>The following issues were found in the Transition annex report (Manaus_T-PreReview_V1.0-Transition-request-form-project):</i> <i>1. Table 1: it is not clear how the parameter "3 Good Health and Well Being" will be monitored considering that it is being stated that it will be "Not Measurable".</i> <i>2. Section 4.2(pg 11): it is not clear why no eligibility criteria stipulated in Annex A of CSA/RE has been considered as applicable for this project activity</i> <i>3. Sections A.1.1 and A.1.2 have not being completed</i> <i>4. Section B.6: It is not clear how the parameters numbers 3.3, 3.5 and 3.8 will be monitored.</i>																				
Conclusion	The project activity is being transitioning from CDM in accordance with GS4GG requirements. The sustainable development goals and their outcome is transparently discussed under section B.6 of the Transition Request Form^{/06/}. The project is expected to deliver the following estimated sustainable development contributions: <table><tr><th>SDGs</th><th>SDG impact</th><th>Estimated Annual Average</th><th>Unit</th></tr><tr><td>13- Climate action</td><td>13.2</td><td>676,996¹</td><td>tCO_{2e}</td></tr><tr><td>5 Gender Equality</td><td>5.5.2: quantity of women in managerial positions</td><td>At least one woman in leadership and decision-making positions by showing signed company functional organizational chart in the determined year</td><td>Number of women in leadership and decision-making positions</td></tr><tr><td>7 Affordable and clean energy</td><td>7.2 – Amount of electricity generated using LFG by the project activity in year y</td><td>61,793</td><td>MWh/year</td></tr><tr><td>8 Decent Work and</td><td>Total Jobs generated</td><td>At least one onsite employee in</td><td>Jobs generated as</td></tr></table>	SDGs	SDG impact	Estimated Annual Average	Unit	13- Climate action	13.2	676,996 ¹	tCO _{2e}	5 Gender Equality	5.5.2: quantity of women in managerial positions	At least one woman in leadership and decision-making positions by showing signed company functional organizational chart in the determined year	Number of women in leadership and decision-making positions	7 Affordable and clean energy	7.2 – Amount of electricity generated using LFG by the project activity in year y	61,793	MWh/year	8 Decent Work and	Total Jobs generated	At least one onsite employee in	Jobs generated as
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8 Decent Work and	Total Jobs generated	At least one onsite employee in	Jobs generated as																		

¹ Average annual value along the crediting period.

	Economic Growth		the determined year	a result of the project
	The assessment team has checked and reviewed the PDD with supportive evidence and found the details to be correct. The project has been registered under CDM and is now seeking the registration under GS4GG. The validation team looked out for the signs of any ODA that project might have received but did not find anything in this regard. Therefore, it can be confirmed that proposed PA did not receive any ODA. Additionally, a declaration ^{/19/} in this regard was obtained from PP. The PP has applied methodologies ACM0001 V.18.0. No sampling has been conducted during the validation process. The proposed GS project activity is not a CPA that has been excluded from a registered PoA as a result of erroneous inclusion of CPAs and did not find anything to contradict the same. The validation team confirms; (a) The process undertaken to validate the accuracy and completeness of the project is described above (under MoV); (b) The project description contained in the PDD/4/ of the proposed GS project activity is accurate and complete; I The on-site inspection was conducted by the validation team as described in this report. The validation team confirms that the proposed GS project activity meets the eligibility criteria for large-scale project activities. Moreover, the validation team confirms that the description of the proposed GS project activity, as contained in the PDD/4/ sufficiently covers all relevant elements, is accurate and complete and that it provides the reader with a clear understanding of the nature of the proposed GS project activity. Moreover, • The team could confirm that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered CDM project activity are in place. • There are no actual or proposed deviations or changes in the implementation of the registered project activity. • The project activity has been divided in two implementation phases at the PDD: ○ Phase 1: the landfill gas collection is performed by horizontal collecting system connected to a centralized blower system by collecting and transmission pipeline. The destruction of the methane is done by an enclosed flare. This phase has been implemented and it is operational. The validation team has interviewed the employees and visited the installations to confirm this information. ○ Phase 2: although planted, electricity generation from biogas has not started to date. It is important to point out that the generator group of 170 kW was installed on 26/05/2019, for the self-consumption of electricity of			

the biogas plant and landfill. This installation is not considered as part of Phase 2, due to the low capacity of the equipment.

D.2. Eligibility criteria

D.2.1. Eligibility Check for Transition

Means of validation	Each eligibility criterion has been assessed in accordance with GS requirements. They are as follows: <table border="1"> <thead> <tr> <th>Criterion</th><th>Assessment</th></tr> </thead> <tbody> <tr> <td>(a) The project must have a crediting period start date with CDM/other standard on or after 01 January 2016</td><td>The project activity has its crediting period starting on 08/07/2018 on CDM i.e. after 01/01/2016 as per UNFCCC webpage^{14/}. Therefore this condition is fulfilled.</td></tr> <tr> <td>(b) The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue.</td><td>Not applied</td></tr> <tr> <td>The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate how the project has been operational in the absence of carbon revenue, if carbon credits have not been issued to the project in recent years.</td><td>Not applied</td></tr> </tbody> </table> As the justification is not coherent in the Transition Request form, a finding has been raised.	Criterion	Assessment	(a) The project must have a crediting period start date with CDM/other standard on or after 01 January 2016	The project activity has its crediting period starting on 08/07/2018 on CDM i.e. after 01/01/2016 as per UNFCCC webpage ^{14/} . Therefore this condition is fulfilled.	(b) The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue.	Not applied	The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate how the project has been operational in the absence of carbon revenue, if carbon credits have not been issued to the project in recent years.	Not applied
Criterion	Assessment								
(a) The project must have a crediting period start date with CDM/other standard on or after 01 January 2016	The project activity has its crediting period starting on 08/07/2018 on CDM i.e. after 01/01/2016 as per UNFCCC webpage ^{14/} . Therefore this condition is fulfilled.								
(b) The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue.	Not applied								
The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate how the project has been operational in the absence of carbon revenue, if carbon credits have not been issued to the project in recent years.	Not applied								
Findings	CL 02 <i>Eligibility check for transition</i> <i>As per GS4GG requirement,</i> a) "the project must have a crediting period start date with CDM/other standard on or after 01 January 2016" or b) The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue. c) Considering that the project activity has its crediting period starting on 08/07/2018 at CDM, i.e. after 01/01/2016, the justification given in the Transition document is not coherent								
Conclusion	The validation team confirms that the PA meets all the Transition eligibility criteria of the GS4GG as per section TRF 1 Eligibility Check for Transition from Transition Request form								

D.2.2. General eligibility criteria

Means of validation	Each eligibility criterion has been assessed in accordance with GS requirements. Nevertheless, the assessment has not been carried out by the project proponents and therefore a finding has been raised.
Findings	CAR 01

	General eligibility criteria and Activity eligibility criteria have not been evaluated in the Transition report.	
Conclusion	They are as follows:	
	<u>Criterion</u>	<u>Assessment</u>
	(c) <u>Types of Project</u> : eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are identified in the Eligibility Principles and Requirements section.	The project is a Project Activity using biogas (landfill gas), in accordance with Activity Requirements (CSA and REA). The PDD foresees the implementation of electricity generation with biogas. Therefore, the project is in compliance with Renewable Energy Activity Requirements and Community Services Activity Requirements which states that <i>"Methane recovery project activities shall be eligible for emission reductions from both methane avoidance (including from the flared biogas fraction) and non-renewable fuel substitution as long as evidence is provided on time for validation to demonstrate that the system was designed in a way to at least make use of some of the biogas recovered for the delivery of energy services"</i> Therefore, evidences have been checked during the site visit, such as project description and interviews to the project developer, which demonstrated that the system was designed in a way to at least make use of some of the biogas recovered for the delivery of energy services (e.g., electricity, heat), the criteria is fulfilled by the PA.
	(d) <u>Location of Project</u> : projects may be located in any part of the world.	The project is located in Manaus, AM, Brazil and therefore eligible. Therefore, the criteria is fulfilled by the PA. Environmental license has been taken as evidence ^{24/}
	(e) <u>Project Area, Project Boundary and Scale</u> : the Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements.	The project activity (Biogas plant) is located inside the Manaus City Landfill, in Manaus/AM, Brazil. The boundary comprehends: - the site where the LFG is captured (Manaus Landfill) - the site where the LFG is flared/used consists of the collection system, biogas upgrading facility, gas station facilities (including flaring) - Captive power plant(s)

	In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).	(including emergency diesel generators) and power generation sources connected to the grid, which is displaced by electricity generated by captured LFG in the project activity (when installed) - All the power generation sources connected to the Brazilian National Grid once electricity from the grid will be consumed by the LFG plant Project description and site visit were used as evidence. Project corresponds to a large scale project activity. A declaration from Project developers that the project will not claim VERs/CERs from the same vintage from GS and CDM have been provided^{/30-1/} It is confirmed that the method of avoiding double counting is reasonable. Finally, it is confirmed that the project is located in an area where there is no other Gold Standard or any carbon standard programme of similar nature. Comparison with GS project's list (https://registry.goldstandard.org/projects?q=&page=1) has been used for this assessment. Therefore, the criteria is fulfilled by the PA.
	(f) <u>Host Country Requirements:</u> projects shall be in compliance with applicable Host Country's legal, environmental, ecological and social regulations.	The project is in accordance with Brazilian legal, environmental, ecological and social regulations. Therefore, the criteria is fulfilled by the PA. Environmental license has been used as evidence ^{/24/}
	(g) <u>Contact Details:</u> as part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organization (iii) the legal	The PP's name, contact details and legal registration details were checked in the Appendix 2 of the PDD and Cover Letter. Furthermore, through checking the company information, it is confirmed that PP is in good

	registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	standing and legally operating, with no reputational concerns. Therefore, the criteria is fulfilled by the PA. Environmental license has been used for confirming this information^{/24/}
	(h) <u>Legal Ownership</u>: full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.	Conestoga-Rovers Engenharia Ltda. is a private company and is the legal owner of the carbon credits as can be seen in the UNFCCC website, where it is listed as the unique project participant and as can be checked by Environmental license^{/24/}. Therefore, the ownership could be evidenced and the criteria is fulfilled by the PA.
	(i) <u>Other Rights</u>: as well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared	Conestoga-Rovers Engenharia Ltda (CRE) has the right of treating the landfill to extract the biogas as per Environmental license^{/24/}. In addition, the project developer is the owner of all equipment and has all licenses necessary for the implementation and operation of the Biogas Plant. Therefore, the criteria is fulfilled by the PA.

	immediately to Gold Standard by the Project Developer and resolved prior to further project implementation in affected areas.	
	(j) <u>Official Development Assistance (ODA) Declaration</u>: all Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the declaration at the time of Design Certification.	By the ODA declaration signed by the project developer ^{/30-2/} , it is verified that no ODA is provided under the condition that the credits generated by the project will be transferred, either directly or indirectly, to the donor country providing ODA support. Therefore, the criteria is fulfilled by the PA.
The validation team confirms that the PA meets all the eligibility criteria of the GS4GG as per section 3.1.1 of GS4GG Principles & Requirements.		

D.2.3. Activity requirements

Means of validation	By checking the information provided by project proponents, it is not clear which activity requirements will be applicable to the project activity. Moreover, the activity requirements have not been evaluated in the Transition Report and therefore a CAR has been raised.									
Findings	Refer to CAR 1 above.									
Conclusion	They are as follows: <u>Renewable Energy Activity Requirements</u> <table border="1"> <thead> <tr> <th>No.</th><th>Criterion</th><th>Assessment</th></tr> </thead> <tbody> <tr> <td rowspan="2">2.1.2</td><td>In order to be eligible for Gold standard certification, all Renewable Energy Projects, shall meet the following Eligibility Criteria:</td><td>-</td></tr> <tr> <td>a) Projects shall generate and deliver energy services (e.g., mechanical work/electricity/heat) from non-fossil fuel and renewable energy sources</td><td>The project refers to a project activity using Biogas (landfill gas) with plans of generating renewable energy to grid. Project description and interviews have been used as evidence.</td></tr> </tbody> </table>		No.	Criterion	Assessment	2.1.2	In order to be eligible for Gold standard certification, all Renewable Energy Projects, shall meet the following Eligibility Criteria:	-	a) Projects shall generate and deliver energy services (e.g., mechanical work/electricity/heat) from non-fossil fuel and renewable energy sources	The project refers to a project activity using Biogas (landfill gas) with plans of generating renewable energy to grid. Project description and interviews have been used as evidence.
No.	Criterion	Assessment								
2.1.2	In order to be eligible for Gold standard certification, all Renewable Energy Projects, shall meet the following Eligibility Criteria:	-								
	a) Projects shall generate and deliver energy services (e.g., mechanical work/electricity/heat) from non-fossil fuel and renewable energy sources	The project refers to a project activity using Biogas (landfill gas) with plans of generating renewable energy to grid. Project description and interviews have been used as evidence.								

			Therefore, the criteria is fulfilled by the PA.	
		b) Projects shall comprise of renewable energy generation units, such as solar photovoltaic, tidal/wave, wind, hydro, geothermal, waste to energy and renewable biomass, that are: • Supplying energy to a national or a regional grid; OR • Supplying energy to an identified consumer facility via national/regional grid through a contractual agreement such as wheeling.	The project refers to a project activity using Biogas (landfill gas) with plans of generating renewable energy to grid. Project description and interviews have been used as evidence. Therefore, the criteria is fulfilled by the PA.	
		c. Any Project supplying electricity to a mini-grid ¹ shall refer to Community Services Activity Requirements.	Not applied	
		d. Projects generating on-site energy for captive consumption at an industrial facility shall refer to the requirements in this document.	Not applied. The project will generate renewable energy for injecting in grid.	
	2.1.3	New Gold Standard Verified Emission Reductions (GS VER) or Gold Standard labels for Certified Emission Reductions (GS CER), Renewable Energy projects connected to national or a regional electricity grid ² must be located in either a; a. Least Developed Country (LDC), Small Island Developing State (SIDS) or a Land Locked Developing Country (LLDC)³ or b. Low Income and Low Middle-income country where the penetration level of the proposed Renewable Energy Technology type is less than 5% of the total grid installed capacity, at the time of the first submission to preliminary review Renewable Energy projects connected to national or a regional electricity grid are ineligible for GS VERs/CERs, if located in: - an Upper Middle-Income Country or High-Income Country⁵ or - SIDS and LLDC, defined as a High- Income Country⁶	Not applied. Refer to requirement stated in the paragraph 2.1.4 below	
	2.1.4	Grid Connected off-shore wind projects and waste to energy projects that involve utilization of landfill gas/biogas to electricity	As this project refers to utilization of landfill gas/biogas to electricity generation with or without	

	generation with or without thermal energy production are exempted from eligibility requirement outlined in paragraph 2.1.3 from Renewable Energy Activity requirements v1.4.	thermal energy production, paragraph 2.1.3 from Renewable Energy Activity requirements v1.4 does not apply. Project description and interviews have been used as evidence. Therefore, the criteria is fulfilled by the PA.
In addition, besides the GS CSA requirements and Renewable energy activity requirements renewable energy projects seeking Gold Standard certification have to meet the following additional principles and requirements:		
<u>Criterion</u>		<u>Assessment</u>
4.1 <u>Principle 1: Contribution to Climate Security & Sustainable Development</u>		
4.1.1 Project shall mandatorily contribute to SDG 13 (Climate Action) and two other SDGs. It is recommended to include a contribution to SDG 7 (Affordable and Clean Energy) as one of the other 2 SDGs.	The project contributes to SDG 13, SDG 7, SDG 5 and SDG 8. Therefore, the criteria is fulfilled by the PA.	
4.2 <u>Principle 2: Safeguarding Principles</u>		
4.2.1 Project developers shall conduct a Safeguarding Principles Assessment and conform to the Safeguarding Principles & Requirements	The Safeguarding Principles Assessment is performed in Appendix 1 of the PDD and in Section D.2.4 of this report. Therefore, the criteria is fulfilled by the PA.	
4.3 <u>Principle 3 – Stakeholder Inclusivity</u>		
4.3.1 Projects shall identify and engage relevant stakeholders and seek expert stakeholder input where necessary in the design, planning and implementation. Specific stakeholder consultation requirements for hydropower, renewable biomass, MSW incineration projects are outlined in Annex A of this document.	A full stakeholder consultation process has been performed at the original validation process of the PA as it could be checked during the document check carried out during the validation assessment. There are open channels for continuous input and a grievance mechanism in place, as per GS requirements. Interviews to local stakeholders have been conducted to confirm this information. Therefore, the criteria is fulfilled by the PA.	
4.4 <u>Principle 4 – Demonstration of Real Outcomes</u>		
4.4.1 The project start date shall be determined as per paragraph 4.1.39 of Principles & Requirements	The start date of the PA is 25/07/2008 as determined in CDM programme and it is in accordance with GS requirements.	

		Therefore, the criteria is fulfilled by the PA.
	4.4.2 Projects may receive Issuance of Certified Impact Statements or Products for a maximum of three Certification Renewal Cycles i.e., a total of 15 years, unless mentioned otherwise in the Product Requirements	The PA is a transitioned project. As per instruction of GS4GG, the project is retroactive. This crediting period will start on 12/09/2020 and will last until 11/09/2025. Therefore, from the PA start date of CP (08/07/2011) until the end of this crediting period, less than 15 years will have passed. Therefore, the criteria is fulfilled by the PA.
	4.4.3 Projects shall mandatorily undergo Design Certification Renewal every 5 years as per Principles & Requirements	As the PA is a transitioned project and its crediting period will be of 5 years, when it undergoes Design Certification Renewal. Therefore, the criteria is fulfilled by the PA.
	4.4.4 The baseline shall be reassessed at the time of Crediting Period Renewal following the applicable methodology and Principles & Requirements	As this is a transition from CDM to GS4GG and verification and not a renewal of the crediting period. This step is not applied during this process. The baseline will be reassessed. In the end of the current crediting period. Therefore, the criteria is fulfilled by the PA.
	4.5 Principle 5 – Financial Additionality & Ongoing Financial Need	
	4.5.1 Projects seeking the issuance of Certified Impact Statements or Products (for example GS VERs) shall demonstrate financial additionality and Ongoing Financial Need in accordance with Principles & Requirements unless mentioned otherwise in the Product Requirements.	The Ongoing Financial Need of the PA is to be assessed at the renewal of CP. Therefore this step is not applicable.
	4.5.2 Project and VPAs, where applicable may refer to valid CDM TOOL32: Methodological tool: Positive list of technologies to demonstrate additionality. Under no circumstances should deemed automatic additionality conditions imply an exemption from the Gold Standard eligibility criteria related to the technology types.	Not applicable to the PA, as it does not apply TOOL32.
	4.5.3 Projects and VPAs shall meet prior consideration requirements in accordance with paragraph 4.1.49	Not applicable to the PA, as this is a transition from CDM to GS4GG and therefore it is not applicable.

	and 4.1.50 of Principles & Requirements.	
	4.5.4 An eligible Microscale project that meets any one of the criteria below shall be deemed additional: a. The project is located¹⁴ i. In a Least Developed Country (LDC), Small Island Developing States (SIDS) or Land Locked Developing Country (LLDC) or in a special underdeveloped zone (SUZ) of the Host Country; OR ii. In a host country or part of the host country different from those defined above, provided that the Project Developer can demonstrate that project implementation will essentially benefit poor communities. The Project Developer shall seek approval from Gold Standard providing a detailed description as to how the activity will benefit poor communities; b. The project is supplying electricity to regional or national grid; however, convincing evidence can be provided to demonstrate that project implementation will significantly improve access to electricity for the local communities, households or SMEs; c. The project involves the installation of Solar Photovoltaic and Solar Thermal electricity generation, off-shore wind, marine technology, household rooftop wind turbine of size up to 100 kW or biomass integrated gasification combined cycle; d. Other renewable energy technologies or measures for which the CDM EB has adopted the host country recommendation. The end date of the validity shall be before the time of first submission to Gold Standard OR approved by The Gold Standard as part of positive list.	Not applicable to the PA, as it is a large scale project activity.

	4.5.5 In case the deemed additionality criteria are also valid at the time of Renewal of Crediting Period, the Ongoing Financial Needs assessment is deemed to be met unless otherwise stated in product requirements.	As this is a transition from CDM to GS4GG and therefore it is not applicable.
The validation team confirms that the PA meets all the requirements of Renewable energy activity requirements – version 1.4.		

D.2.4. Gender Sensitive Requirements

Means validation of	The Gender Equality Requirements & Guidelines will apply to all new projects that are seeking certification under the Gold Standard for Global Goals (GS4GG). The following questions were answered by project developers		
		Question	Answer from Project developer
	VVB Assessment		
	Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The company has an integrated management system with guidelines on compliance with the labour and human rights policy in its operations. This internal norm foresees, among other things, commitments that ensure gender equity. All employees in management positions must sign a term of awareness of the company's internal policies. The company structure has few employees. However, it is possible to verify the existence of women in management positions and the non-existence of wage discrimination between men and women. It is also important to note that this system includes guidelines for internal and external company communication to ensure that all actors directly or indirectly involved in its operations are well informed about the project. In this sense, it is important to highlight the relevance of the public	Better practices have been observed during the on site inspection. Moreover, evidences of its internal policy have been provided^{/31/}, as well as signed terms of commitment, company's organigram and employments list.

		meeting held in the past about the implementation of the project, which was widely advertised in the community, had an effective participation of the invited actors, and counted with a significant presence of women, as reported in the <i>Stakeholder Consultation Report</i> .	
	Explain how the project aligns with existing country policies, strategies and best practices	Brazil is a signatory to the identified commitment, which can be verified at the following electronic address: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=IV-8&chapter=4&clang=en Additionally, as mentioned in the previous answer, a woman is responsible for the execution of the project, which can be seen in the organization chart of the company.	Better practices have been observed during the on-site inspection. Moreover, evidences of its internal policy and Brazilian Commitment related to Elimination of discrimination against women have been provided ^{/31/} .
	Is an Expert required for the Gender Safeguarding Principles & Requirements?	The project doesn't trigger key Safeguarding Principles and Requirements adopted by the Gold Standard. Section D.1. highlights the project participant's assessment of the key questions on GS Safeguarding Principles & Requirements. The safeguarding principles and requirements are triggered by the project	Not needed for this project activity
	Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	Almost two-thirds of those present at the public consultation meeting were women representing the most diverse local stakeholders. As explained previously, no records of the meeting are available. In this sense, it is no longer possible to ascertain whether the women present made comments and how they were addressed. It should be noted, however, that the project constantly	It could be observed in the Local Stakeholder Consultation that there are several women participating from it.

		receives public visits from schools and the local community and, through the grievance mechanism described below, is open to receive comments at any time	
Findings	-		
Conclusion	The validation team confirms that the PA meets all the requirements of GS4GG Gender Equality Requirements & Guidelines – version 1.1.		

D.3. Application and selection of methodologies and standardized baselines

D.3.1. Application of methodologies and standardized baselines

Means of validation	The PDD employs the approved baseline methodology ACM0001 v. 18.0. The applicability condition of the methodology is duly referenced in the approved CDM PDD and duly validated in this standard. The applicability conditions of this methodology under GS4GG are being assessed below.		
	Applicability criteria as per GHG Emissions Reductions & Sequestration Product Requirements	Justification from PP	MoV
	8.1.1: All Projects shall conform to the relevant Activity Requirements and Gold Standard Approved Methodologies, including eligible CDM Methodologies.	The project applies the version of the methodology and applicable tools applied for CDM/other standard registration or renewal	The validation team confirms that the project activity complies with 427_V2.0_List-of-eligible-CDM-GS-methodologies by applying ACM0001 v.18.0 as can be seen in the approved version of the PDD, in the UNFCCC website.
	Requirements of “ 427_V2.0_List-of-eligible-CDM-GS-methodologies ”		
	Applicability criteria as per 427_V2.0_List-of-eligible-CDM-GS-methodologies	Justification from PP	MoV
	Type of project activity: Project activities that capture landfill gas	The project applies the version of the methodology and applicable tools applied	The validation team confirms that the project activity comprehends

	(LFG) and flare and/or use it to produce energy and/or use to supply consumers through natural gas distribution network.	for CDM/other standard registration or renewal	capture of landfill gas and flare. It is also designed for generating electricity with this gas, measure which is still not implemented. Evidences such as pictures ^{12/} and project design have been used for this conclusion.
	<u>Additional GS4GG requirements:</u> Emission reduction associated with methane avoidance (including from the flared biogas fraction) and for substitution of non-renewable fuel shall be eligible if PP demonstrates that the system is designed in a way to at least make use of some of the biogas recovered for energy services (heat & power generation).	Plant design demonstrates that in phase 2, which will be implemented in 2022, that the plant is designed for generating electricity from biogas. In fact, during the site visit, a small biogas generator have been found installed. Nevertheless, it is not part of the project activity, considering its capacity is below the one informed in the PDD.	The validation team confirms that the project activity comprehends capture of landfill gas and flare. It is also designed for generating electricity with this gas, measure which is still not implemented. Evidences such as pictures ^{12/} and project design have been used for this conclusion.
	The applicability of the methodology was found to be fulfilled, no deviation from methodology was observed.		
Findings	N/A		
Conclusion	The validation team confirms that; • It has critically assessed each applicability condition listed in the selected methodology and the relevant information contained in the PDD against these criteria. • The selected methodology for the proposed GS project activity is applicable. • The methodology was found to be in accordance with the applicable requirements in GS4GG requirements.		

D.3.2. Deviation from methodology and/or methodological tool

Means of validation	Compliance of monitoring plan with respect to the monitoring methodology has been reviewed by the document review, review of the data and information presented, review of the monitoring plan, monitoring methodology including the applicable tool(s), evaluation of data management and the quality assurance and quality control system. The applicability of the methodology was found to be fulfilled, no deviation from methodology was observed.
Findings	No findings were raised

Conclusion	The validation team confirms that no deviation from the selected methodology was applied in the validation of the proposed GS project activity.
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D.3.3. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	The validation team did not find any event/observation, which may raise concern about the applicability or application of the methodology on the project activity.
Findings	No findings were raised
Conclusion	The validation team confirms that no clarification needed on the selected methodology.

D.4. Demonstration of additionality

Means of validation	As per Principle 5 (FINANCIAL ADDITIONALITY AND ONGOING FINANCIAL NEED) of GS4GG PP has demonstrated additionality applying methodological tool is as per clause 3.5.1.2 of GS4GG. The PP has used the methodology ACM0001 v.18.0. According to the guidelines of GHG emissions reduction and sequestration product requirements para 3.1.2, Gold Standard CDM and JI projects do not require to carry out additional assessment for demonstration of additionality over and above what has been done for registration/determination with the CDM EB/JISC unless the Project falls into a category that is deemed non-Additional in an applicable Gold Standard Activity Requirement. In such cases the relevant Activity Requirement shall take precedence. The project activity was registered under CDM on 08/07/2011 and the assessment team confirmed the project's additionality using the validation report^{15/}. As such, additional assessment for the demonstration of additionality is not required and is determined in line with CDM EB requirements. In line with the procedure for the CDM renewal of a crediting period, this section is that applied in the original PDD. The assessment team has reviewed the details in PDD in line with the documentary evidence. The details are also confirmed during site assessment. Hence, the assessment team is of the opinion that the PA is additional. On-going Financial Need: The project is completely dependent on the carbon revenues since the time of its implementation which has been confirmed through the continuous issuances under CDM registry. It was confirmed during the interview of the PP representative that project would have ceased if no carbon revenues were generated through CDM issuances due to its high operating cost and maintenance. Nevertheless, ongoing financial need only need to take place at renewal of crediting period.
Findings	N/A
Conclusion	The validation team confirms that all the documented evidence listed and reviewed during the validation process are found correct and is able to confirm that: a) The GS benefits were considered necessary in the decision to undertake the project as a proposed project activity.

	b) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources; c) All underlying assumptions are appropriate and reasonable in context of the project activity d) The capacity and technology details are correct and in line with the requirements for Auto additional projects.
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D.5. Estimation of emission reductions or net anthropogenic removals or SDG outcomes

Means of validation	SDG 13: The applied methodology ACM0001 defines the methodological steps to determine the emission reduction. The assessment of the determination ERs is already validated in the current valid version of the PDD. The Emission Reductions are determined as Baseline emissions minus Project emissions. No leakage is accounted. The estimated values are as follows: <table><tr><th>Year</th><th>BE_y (tCO₂/yr)</th><th>PE_y (tCO₂/yr)</th><th>ER_y (tCO₂/yr)</th></tr><tr><td>12/09/2020</td><td>408,258</td><td>256</td><td>408,002</td></tr><tr><td>2021</td><td>661,368</td><td>521</td><td>660,847</td></tr><tr><td>2022</td><td>683,248</td><td>521</td><td>682,727</td></tr><tr><td>2023</td><td>697,968</td><td>521</td><td>697,447</td></tr><tr><td>2024</td><td>712,957</td><td>521</td><td>712,436</td></tr><tr><td>11/09/2025</td><td>223,571</td><td>49</td><td>223,521</td></tr></table>	Year	BE _y (tCO ₂ /yr)	PE _y (tCO ₂ /yr)	ER _y (tCO ₂ /yr)	12/09/2020	408,258	256	408,002	2021	661,368	521	660,847	2022	683,248	521	682,727	2023	697,968	521	697,447	2024	712,957	521	712,436	11/09/2025	223,571	49	223,521
	Year	BE _y (tCO ₂ /yr)	PE _y (tCO ₂ /yr)	ER _y (tCO ₂ /yr)																									
	12/09/2020	408,258	256	408,002																									
	2021	661,368	521	660,847																									
	2022	683,248	521	682,727																									
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	2024	712,957	521	712,436																									
	11/09/2025	223,571	49	223,521																									
	SDG 5: the following parameter will be monitored: Number of women in leadership and decision-making positions It is expected at least one woman per year in leadership and decision-making positions.																												
	SDG 7: the following parameter will be monitored: Amount of electricity generated using LFG by the project activity in year y. The estimated value for this parameter will be 61,793 MWh/year when full capacity is implemented.																												
SDG 8: the following parameter will be monitored: Total jobs generated as a result of the project activity in the determined year. It is estimated at least one onsite employee in the determined year.																													
Findings	CAR 02 <i>Baseline and project situation for parameters related to SDGs 3, 7, 8 and 17 have not been described in the Transition form section B.6.</i>																												
Conclusion	The validation team has cross checked the parameters and values related to the emission reduction and confirmed that justification of the mentioned values is correct. Moreover, the parameters related to SDGs 13, 5, 7 and 8 have been duly included in the PDD.																												

D.6. Start date, crediting period type and duration

Means of validation	The start date of the project activity as per GS Principle Requirements, para 4.1.39 was on 25/07/2008. The start date of the 1st crediting period of the project is 08/07/2011, which is also the registration date on CDM. Moreover, the start date of 2nd crediting period under CDM is on 08/07/2018. As per Transition form template, the project refers to a retroactive project and the start date of this crediting period is on 12/09/2020 (two years prior submission of documents to preliminary review), lasting until 11/09/2025.
Findings	CL 03 <i>Transition form, Section C. The mentioned crediting period is not in accordance with GS4GG requirements.</i>
Conclusion	A crediting period of 5 years has been selected by the PP as per principles and requirements of GS4GG in order to fulfil the GS4GG requirements. The expected lifetime of the project is indicated as 25 years in the PDD.

D.7. Safeguarding Principles

Means of validation	of	Each principle has been assessed in accordance with Safeguarding Principles and Requirements. They are as follows:			
		<u>Safeguarding principles</u>	<u>Assessment of relevance to the project (Yes / Potential / No)</u>	<u>Mitigation measure</u>	<u>Assessment</u>
		1. <u>Human Rights</u>			
		1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, which are in accordance with the Universal Declaration of Human Rights and against discrimination.
		2. The Project shall not discriminate with regards to participation and inclusion.			
		2. <u>Gender Equality and Women's Rights</u>			
		1. The Project shall not directly or indirectly reinforce gender-based discrimination and shall not lead to/contribute to adverse impacts on gender equality and/or the situation of women.	No	No mitigation measure is required for this indicator.	Refer to Section D.2.4 for assessment

	Specifically, this shall include (not exhaustive): (a) Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking. (b) Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls. (c) Restriction of women’s rights or access to resources (natural or economic). (d) Recognise women’s ownership rights regardless of marital status – adopt project measures where possible to support to women’s access to inherit and own land, homes, and other assets or natural resources.			
	2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work, specifically: (a) Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities. (b) Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status. (c) Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits.			

	3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.			
	<u>3. Community Health, Safety and Working Conditions</u>			
	1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	Potentially	The project uses urban solid waste as resource to generate biogas and energy. The project has an effective control of people and vehicles at the project site, provides Labour Health Assistance to its employees and counts with valid operational licence issued by the Local Environmental Agency. Therefore, project does not affect any marginalized or vulnerable communities.	The PA is developed in compliance with Brazilian Safety Regulations and Health at Work effect. Parameters "labour health assistance for all employees" and "environmental permit" will be monitored.
	<u>4. Cultural Heritage, Indigenous Peoples, Displacement and Resettlement</u>			
	<u>4.1. Sites of Cultural and Historical Heritage</u>			

	1. The Project shall not involve or be complicit in the alteration, damage or removal of any sites, objects or structures of significant cultural heritage.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and according to reports, there are no critical cultural heritage, historical relics and no rare, threatened or endangered ecosystems in the area.
	2. Where a Project proposes to utilise Cultural Heritage, including the knowledge, innovations, or practices of local communities, affected communities shall be informed of: (a) Their rights under Applicable Law, (b) The scope and nature of the proposed commercial development; and (c) The potential consequences of such development.			
	3. The Project shall provide for equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions.			
	4. The opinions and recommendations of an Expert Stakeholder(s) shall be sought and demonstrated as being included in the project design.			
	4.2. Forced Eviction and Displacement			
	5. The Project shall not involve and shall not be complicit in the involuntary relocation of people.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and it did not involve any kind of resettlement.
6. Projects shall avoid physical (i.e., relocation or loss of shelter) and economic displacement (i.e., loss of assets or access to assets that leads to loss of income sources or means of livelihood), and mitigate displacement impacts on displaced persons and host communities when displacement cannot be avoided. In such cases, the Project shall integrate into				

	the Project documentation a Resettlement Action Plan or Livelihood Action Plan as appropriate. Please refer to UNDP Standard 5: Displacement and Resettlement requirements for further details in this regard.					
	7. The opinions and recommendations of an Expert Stakeholder(s) shall be sought and demonstrated as being included in the project design.					
	4.3. Land Tenure and other rights					
	8. The Project Developer shall identify all such sites/matters potentially affected by the Project. For all such sites/matters identified the Project shall respect and safeguard: (a) Legal rights, or (b) Customary rights (c) Special cultural, ecological, economic, religious or spiritual significance of people shall be demonstrably promoted/protected.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and the PA has all licenses and concessions to perform the activity.		
	9. Changes in legal arrangements must be in line with relevant law and regulation and must be carried out in strict adherence with such laws. All legal disputes must be resolved prior to the Project being carried out in such areas. All such changes must be demonstrated as having been agreed with free, prior and informed consent.					
	10. The Project Developer must hold uncontested land title for the entire Project Boundary to complete Project Design Certification.					
	11. The opinions and recommendations of an Expert Stakeholder(s) shall be sought and demonstrated as being					

	included in the project design.			
	4.4. Indigenous people			
	12. The Project Developer shall identify all communities of Indigenous Peoples within the Project area of influence who may be affected directly or indirectly by the Project.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and the PA is not located at on land claimed by indigenous people.
	13. The Project Developer shall recognise and respect the indigenous people's collective rights to own, use, and develop and control the lands, resources and territories that they have traditionally owned, occupied or otherwise used or acquired, including lands and territories for which they do not yet possess title.			
	14. The Project Developer shall respect, protect, conserve and shall not take the cultural, intellectual, religious and spiritual property of indigenous peoples without their free, prior and informed consent (FPIC).			
	15. The Project Developer shall ensure that the indigenous people are provided with the equitable sharing of benefits to be derived from utilisation and/or commercial development of natural resources on lands and territories or use of their traditional knowledge and practices by the Project. This shall be done in a manner that is culturally appropriate and inclusive and that does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions and housing.			

	16. The opinions and recommendations of an Expert Stakeholder(s) shall be sought and demonstrated as being included in the project design.			
	5. <u>Corruption</u>			
	1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations.
	6. <u>Economic Impacts</u>			
	6.1. <u>Labour Rights</u>			
	1. The Project Developer shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard. It requires that: (a) Workers shall be able to establish and join labour organisations. (b) Working agreements with all individual workers shall be documented and implemented. These shall, at minimum, comprise: i. Working hours (must not exceed 48 hours per week on a regular basis), AND ii. Duties and tasks, AND iii. Remuneration (must include provision for payment of overtime), AND iv. Modalities on health insurance, AND	Potentially	The project developer does not complicit in any form of forced or compulsory labour. All employees offering their services on a voluntary basis and are free to quit the services at any time without a menace or penalty. The project participants are committed to apply safe and healthy working conditions during all phases of the project.	The PA is developed in compliance with Brazilian regulations, and all labour rights/requirements/obligations are followed. Total number of jobs generated by the project activity.

	v. Modalities on termination of the contract with provision for voluntary resignation by employee, AND vi. Provision for annual leave of not less than 10 days per year, not including sick and casual leave.		All employees of the project are protected by the Consolidation of Labour Laws	Brazil signed the Universal Declaration of Human Rights (UDHR), adopted by the United Nations General Assembly.
	2. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property as long as: (a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND (b) The tasks they perform do not harm their physical and mental development AND (c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the project design. (d) The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.			
	6.2. Negative Economic Consequences			
	3. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period. 4. The Projects shall consider economic impacts and demonstrate a consideration of potential	No	No mitigation measure is required for this indicator.	The financial assessment of the PA was presented in the original validation process, in accordance with GS rules.

	risks to the local economy and how these have been taken into account in project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalised social groups in targeted communities and that benefits are socially-inclusive and sustainable.			
	7. Climate and Energy			
	7.1. Emissions			
	1. Projects shall not increase greenhouse gas emissions over the Baseline Scenario unless this is specifically allowed within Activity Requirements or Gold Standard Approved Impact Methodologies.	no	The project will not increase GHG emissions over the baseline scenario.	The PA contributes to the reduction of emissions of GEE.
	7.2. Energy Supply			
	2. The Project shall not affect the availability and reliability of energy supply to other users.	No	The project intends to generate renewable energy to the grid.	The PA contributes to the increase of availability of energy supply.
	8. Water			
	8.1. Impact on Natural Water Patterns/Flows			
	1. The Project shall ensure that water resources are conserved. For surface waters this means: (a) Maintaining credible environmental flows, demonstrated by providing a verifiable calculation that shows conservation is maintained at a level as advised by the independent Expert Stakeholder, and (b) Ensuring that any discharged wastewater is of a high enough standard to allow beneficial reuse. For ground water this means limiting abstractions to levels less than, or equal to, rates of recharge. Managed aquifer recharge may be used to conserve	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and there is no impact on natural water patterns and flows.

	groundwater resources. The project can use historical records, ongoing monitoring and reporting through data logging of physical measurements, online sources and/or government data to assess the project risks/impacts.			
	2. At each Performance Certification the Project shall assess whether it is in an area of physical water stress or scarcity. The project can conduct an analysis of the water scarcity within the Project's physical area of influence (e.g., basin, watershed) and shall monitor the impact frequently. The project can use Aqueduct, GWSP Digital water Atlas, Water Risk Filter, WBCSD Global Water Tool, Water Stress Index Maplecroft, Water Scarcity Index Pfister or other recognised tools for water stress and scarcity assessment within the Project's physical area of influence.			
	3. The Project shall provide verifiable evidence of water stress experienced in the basin(s) in which the Project is active and demonstrate that consumption of water by the Project (over Baseline) is negligible or will bring positive impacts or, at a minimum, not increase the overall annual basin stress.			
	4. The risk(s) of the Project negatively impacting the catchment shall be assessed and addressed to ensure its ongoing, long-term viability and impact on surrounding social-economic and environmental assets. The project can use mapping tools, or other appropriate nationally recognised tools in this regard.			

	Recommended methods include online tools, engineering or physical assessment, historical flow records, land use records, and verbal or written surveys with local agencies and residents. Examination of longitudinal and lateral conductivity to check connectivity of flows, including vertical connectivity (i.e., sufficient flows or dead zones).			
	5. Where the Project is involved in abstraction from water resources required to support biodiversity and other ecosystem services, and flow assessment consistent with good practice, including a modern method outlined in one of the key references listed below must be undertaken. Alternatively, where local, national or regional regulation exists or where alternative approaches may be more appropriate than these may be put forward to Gold Standard for approval.			
	6. Where environmental flow assessments are impractical, the Project is required to demonstrate that the flow rate and variability is maintained from the abstracted water resource. A verifiable calculation shall be provided for each water source demonstrating total flow rates do not fall below levels that are contextually appropriate, as advised by an independent Expert Stakeholder.			
	7. The opinions and recommendations of Expert Stakeholder(s) shall be sought and demonstrated as being included in the project design and Monitoring Plan.			

8.2. Erosion and/or Water Body Instability				
	8. The risk of the Project negatively impacting the catchment and any risks impacting the Project's success shall be assessed and addressed. The project shall ensure its ongoing, long-term viability and impact on surrounding social-economic and environmental assets. The project shall assess the sensitivity of the physical area of influence due to low percentage of impervious cover in a project (e.g., basin, catchment), susceptibility to erosion and water body instability, and lack of terrestrial habitat connectivity. The project can use mapping tools, or other appropriate nationally recognised tools, academic or published studies on the relevant area. The recommended methods include online tools, visual inspection, engineering or physical assessment, historical land use records, aerial photographs, and verbal or written surveys with local agencies and residents on the characterisation of geomorphology of water bodies.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations, and no risk of erosion and/or water body instability is verified.
	9. The Project shall demonstrate that measures to ensure soil protection and minimised erosion are in place prior to the commencement of the Project.			
	10. The Project shall demonstrate that measures will be undertaken to ensure that surface and ground waters are protected from erosion and that these measures are in place prior to the commencement of the Project.			

	11. Measures shall be incorporated to reduce soil erosion on slopes (e.g., hedge and tree rows, natural terracing, infiltration strips, permanent ground cover). For these measures, the concept of the effective slope length shall be taken into account.					
	12. Impact shall be reassessed at a frequency appropriate to the context of the ecosystem affected. The monitoring approach and frequency shall be justified by reference to natural patterns and variations.					
	13. Where the Project takes place in a water scarce or water stressed area, the opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being considered and incorporated into the project design.					
	9. <u>Environment, ecology and land use</u>					Not applicable
	9.1. Landscape Modification and Soil					
	1. The Project shall identify the functions and services provided by the landscape and demonstrate no net degradation in existing landscape function and services.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and it does not involve the use of land and soil for production.		
	2. To ensure healthy soils the following aspects shall be identified, and appropriate measures shall be put in place to protect them: (a) Soil types, AND (b) Biota, AND (c) Erosion					
	3. Measures shall be incorporated to minimise soil degradation (e.g., through crop rotation, composting, no use of heavy machinery, use of N-fixing plants, reduced					

Not applicable

	tillage, no use of ecologically harmful substances).			
	4. Projects that involve the production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities shall adopt the appropriate and culturally sensitive sustainable resource management practices.			
	9.2. Vulnerability to Natural Disaster			
	5. The Project shall avoid or minimise the exacerbation of impacts caused by natural or man-made hazards, such as landslides or floods that could result from land use changes due to Projects. The Project Developer shall include mitigation measures (if possible), the emergency preparedness plan and response strategies. The Project Developer shall disclose appropriate information about emergency preparedness and response Projects, resources, and responsibilities to affected communities.	No	No mitigation measure is required for this indicator.	The activities of the PA do not lead to increase the vulnerability to natural disasters.
	9.3. Genetic Resources			
	6. Projects involving the use of GMOs are not eligible for Gold Standard Project Design Certification.	No	No mitigation measure is required for this indicator.	The PA does not have any impact by used GMOs.
	7. An assessment for the risk of GMO contamination from outside the Project area and reasonable and appropriate counter measures should be taken.			
	9.4. Release of pollutants			
	8. The Project shall avoid the release of pollutants. This applies to the release of pollutants to air, water, and land due to routine, non-routine and accidental circumstances.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and the PA

	9. The Project Developer shall ensure that pollution prevention and control technologies and practices consistent with national regulation or international good practice are applied during the Project life cycle.			has measures to avoid the release of pollutants. The project refers to the biogas collection and flaring, which is in accordance with regulations. Although implemented in a landfill, the landfill itself is not under responsibility of the Project Proponent.
	10. All potential pollution sources that may result from the Project that cause the degradation of the quality of soil, air, surface and groundwater within the Project's area of influence shall be identified. Appropriate mitigation measures and monitoring shall be implemented to ensure the protection of resources. The project can use historical records, ongoing monitoring and reporting through data logging of physical measurements, online sources, government data. The recommended methods include quantitative documentation of all sources and volumes of water abstractions, use of weirs and gauges, flow meters, pump energy consumption, transpiration rates, government data.			
	9.5. Hazardous and Non-hazardous Waste			
	11. Projects shall avoid or, when avoidance is not feasible, minimise and control release of hazardous materials resulting from their production, transportation, handling, storage and use in the Project. Where avoidance is not possible, the health risks, including potential differentiated effects on men, women and children, of the potential use of hazardous materials shall be addressed appropriately.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and has all measures to avoid the release of hazardous and non-hazardous waste.

	12. Projects shall consider the use of less hazardous substitutes for such chemicals and materials and will avoid the manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer.			
	13. All sources of waste and waste products shall be identified and classified. Waste products include amongst others: (a) Chemical wastes, AND (b) CoIners, AND (c) Fuels and oils, AND (d) Ian waste, AND (e) Rubbish (including metals, plastics, organic and paper products), AND (f) Abandoned buildings, machinery or equipment.			
	14. Where waste generation may not be avoided, the Project shall reduce the generation of waste, and recover and reuse waste in a manner that is safe for human health and the environment.			
	15. Where waste may not be recovered or reused, it shall be treated, destroyed, or disposed of in an environmentally sound manner that includes the appropriate control of emissions and residues resulting from the handling and processing of the waste material.			
	16. If the generated waste is considered hazardous, reasonable alternatives for its environmentally sound disposal will be adopted while adhering to the			

	limitations applicable to its transboundary movement.			
	17. The Project shall not make use of chemicals or materials subject to international bans or phase-outs. For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol.			
	9.6. Pesticides & Fertilisers			
	18. Projects involving pest management, the integrated pest management (IPM) and /or integrated vector management (IVM) approaches shall be adopted and aim to reduce reliance on chemical pesticides.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and the activity does not involve the application of pesticides and/or fertilisers.
	19. The health and environmental risks associated with pest management should be minimised with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management.			
	20. When Projects include pest management or the use of pesticides, pesticides that are low in human toxicity, known to be effective against the target species and have minimal effects on non-target species and the environment shall be selected.			
	21. There shall be a 'Chemical Pesticides Policy' that is documented, implemented and regularly updated. This policy shall include at a minimum: (a) Provisions for safe transport, storage,			

	handling and application, AND (b) Provisions for emergency situations.				
	22. The Project Developer shall not purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous) of the World Health Organization Recommended Classification of Pesticides by Hazard.				
	23. Fertilisers shall be avoided, or their use shall be minimised and justified. If the aerial application of fertiliser is used, then measures shall be put in place to prevent drift.				
	9.7. Harvesting of Forests				
	24. The Project shall: (a) Enhance the sustainable management of forests, including the application of independent, credible certification for commercial, industrial-scale timber harvesting, AND (b) Maintain or enhance biodiversity and ecosystem functionality in areas where improved forest management is undertaken.	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and the activity does not involve the harvesting of forests.	
	9.8. Food				
	25. The Project activity shall not negatively influence access to and availability of food for people affected.	No	No mitigation measure is required for this indicator.	The activity has no impact on quantity of food availability.	
	9.9. Animal husbandry				
	26. The welfare of animals shall be ensured by: (a) Provision of sufficient drinking water, AND (b) Access to daylight, AND (c) The prohibition of cattle trainers, AND (d) No hindrance in their sensory perception and performing	No	No mitigation measure is required for this indicator.	The activity does not involve animal husbandry.	

	their basic needs, AND (e) Management policies and staff training to prevent mistreatment (evidence of animal mistreatment shall be treated as an immediate Non-conformity).			
	27. Excessive or inadequate use of veterinary medicines shall be avoided. Thus, all medications shall be: (a) Administered strictly according to label and package instructions, OR (b) According to a trained veterinarian.			
	28. Injured or sick animals shall be treated and isolated, if necessary, for recovery.			
	29. Synthetic growth promoters including hormones shall not be administered.			
	30. Animals shall be exposed to the least stress possible during transportation and slaughtering.			
	31. Appropriate space per animal and stocking rates per land unit should be set according to their developmental and physical needs.			
	9.10. High Conservation Value Areas and Critical Habitats			
32. No Project that potentially impacts identified habitats as identified above shall be implemented unless all of the following are demonstrated: (a) The risk of the Project negatively impacting the catchment and risks impacting project success shall be assessed and addressed to ensure its ongoing, long-term viability and impact on surrounding HCV and ecological assets. (b) No measurable adverse impacts on the criteria or biodiversity values for	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and the activity does not impact any HCV areas and/or critical habitats.	

	which the critical habitat was designated, and on the ecological processes supporting those biodiversity values; (c) A robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan is in place to achieve net gains of those biodiversity values for which the critical habitat was designated.			
	33. Within the Project the area that is managed by the Project Developer and the area of impact downstream, the following shall be identified and protected/enhanced. In the case of downstream impacts, the Project shall ensure mitigation is in place within the Project Boundary such that the Project shall not adversely affect these areas: (a) Existing patches of native tree species, AND (b) Single solitary stems of native tree species, AND (c) All freshwater resources including rivers, lakes, swamps, ephemeral water bodies and wells (d) Habitats of rare, threatened and endangered species, AND (e) Areas relevant for habitat connectivity shall be identified and managed to protect or enhance biological diversity.			
	34. If the Project is located in such habitats; the Project Developer shall: (a) Minimise unwarranted conversion or degradation of the habitat. (b) Identify opportunities to enhance the habitat as part of the Project. For Projects applying the Land Use & Forest Activity Requirements Projects, a minimum 10% of the Project area shall be			

	identified and managed to protect or enhance the biological diversity of native ecosystems. For this, the should be followed (www.HCVnetwork.org). This area has to be located within the project region and managed by the Project Developer. The area may also include the areas of the requirement (for example, buffer zones for water bodies in the case of Land Use & Forests).			
	35. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design. The project can use mapping tools such as LEFT, IUCN Red List, IBAT or other appropriate nationally recognised tools may be used or visual inspection. The recommended methods include online tools, visual inspection, engineering or physical assessment, use historical data and verbal or written surveys with local residents.			
	9.11. Endangered Species			
	36. Under no circumstances shall the Project lead to the reduction or negative impact of any recognised Endangered, Vulnerable or Critically Endangered species	No	No mitigation measure is required for this indicator.	The PA is developed in compliance with Brazilian regulations and the activity does not impact any endangered species.
	37. Habitats of endangered species shall be specifically identified and managed to protect or enhance them.			
38. The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being considered and incorporated into the project design.				
Findings	N/A			

Conclusion	The validation team confirms that the PA meets all GS4GG Safeguarding Principles and Requirements.
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D.8. Stakeholder consultation requirements

Means of validation	Stakeholders' consultation have been carried out during the validation phase of the project activity under CDM on 26/01/2006. Nevertheless, it is not clear in the Transition form whether this Stakeholder consultation fulfils with all GS4GG requirements, therefore a finding has been raised.						
Findings	CL 04 <i>Stakeholder's consultation: during the gap validation of this PA, it is not clear to the validation team, by checking the evidences provided, whether the stakeholder consultation fulfils all GS4GG requirements</i>						
Conclusion	The local stakeholder consultation has been carried out in the validation phase of the project activity under CDM, in accordance with National and local legislation. Moreover, after preliminary review, the Project participants requested a Deviation^{/37-1/} from GS4GG requirements as the stakeholder's consultation carried out did not fulfil some current clauses of Stakeholder consultation and engagement requirements. This deviation was approved on 28/11/2022, but further actions were required, such as carrying out a virtual stakeholder's consultation for minimum 60 days and inviting missing groups of stakeholders, in accordance with GUIDELINE - Stakeholder consultation and engagement. This new Stakeholders consultation was held from 28/12/2022 to 24/03/2023 and it could be evidenced that all required groups of stakeholders were invited. The verification team have access to all information provided during the consultation process^{/37-2/}. Therefore, all requirements for Local Stakeholders consultation from GS4GG have been fulfilled. All evidence were duly provided to the verification team^{/37/}. The validation team can confirm the following: 1. GS requirements on the grievance mechanism have been fulfilled through a registry book available at the company's address. 2. It can be confirmed that the minimum group of stakeholders to be consulted have been duly invited as follows, as per Stakeholder Consultation and Engagement requirements, para 3.3.1: <table border="1"> <tr> <td>Local people, communities and/or representatives who are expected to be directly or indirectly affected (adversely affected or beneficiaries) by the project or may have an interest in the project</td><td>Central Unica Comunitária (Community Center)</td></tr> <tr> <td>Stakeholders with land-tenure rights within or adjacent to the project and marginalised individuals and groups</td><td>TUMPEX – owner of landfill (not biogas project activity) Fundação Dr. Thomas (Dr. Thomas Foundation) – Elderly Foundation nearby PA Brazilian Forum of NGOs and Social Movements ARPA - Associação de Reciclagem e Preservação Ambiental (Recycling and Environmental Preservation Association)</td></tr> <tr> <td>Local policymakers and representatives of local authorities</td><td>Ministério Público do Estado do Amazonas (Public Ministry of the State of Amazonas)</td></tr> </table>	Local people, communities and/or representatives who are expected to be directly or indirectly affected (adversely affected or beneficiaries) by the project or may have an interest in the project	Central Unica Comunitária (Community Center)	Stakeholders with land-tenure rights within or adjacent to the project and marginalised individuals and groups	TUMPEX – owner of landfill (not biogas project activity) Fundação Dr. Thomas (Dr. Thomas Foundation) – Elderly Foundation nearby PA Brazilian Forum of NGOs and Social Movements ARPA - Associação de Reciclagem e Preservação Ambiental (Recycling and Environmental Preservation Association)	Local policymakers and representatives of local authorities	Ministério Público do Estado do Amazonas (Public Ministry of the State of Amazonas)
Local people, communities and/or representatives who are expected to be directly or indirectly affected (adversely affected or beneficiaries) by the project or may have an interest in the project	Central Unica Comunitária (Community Center)						
Stakeholders with land-tenure rights within or adjacent to the project and marginalised individuals and groups	TUMPEX – owner of landfill (not biogas project activity) Fundação Dr. Thomas (Dr. Thomas Foundation) – Elderly Foundation nearby PA Brazilian Forum of NGOs and Social Movements ARPA - Associação de Reciclagem e Preservação Ambiental (Recycling and Environmental Preservation Association)						
Local policymakers and representatives of local authorities	Ministério Público do Estado do Amazonas (Public Ministry of the State of Amazonas)						

		Secretaria Municipal do Trabalho – SEMTRA (<i>Municipal Secretariat of Labour</i>) Secretaria Municipal de Administração e Finanças – SEMAD (<i>Municipal Secretariat of Administration and Finance</i>) Secretaria de Planejamento do Estado do Amazonas – SEPLAN (<i>Secretariat of Planning of the State of Amazonas</i>) Procuradoria do Meio ambiente - Procuradoria Geral do Município (<i>Environmental Attorney General's Office</i>)
	National government officials or National Focal Point, for example, Designated National Authority (DNA) or equivalent body	MCTI – Ministry of Science, Technology and Innovation.
	Local non-governmental organisations (NGOs), Women Groups working on topics relevant to the project or working with communities who are likely to be affected by the project	Brazilian Forum of NGOs and Social Movements ARPA - Associação de Reciclagem e Preservação Ambiental (Recycling and Environmental Preservation Association)
	Gold Standard representative	help@goldstandard.org
	Relevant international Gold Standard NGO Supporters with representation in the region and all Gold Standard NGO Supporters located in the host country of the project	Cool Effect (https://www.cooleffect.org/)

D.9. Implementation of sampling plan

Means of verification	Documents were checked and interviews with PP's representatives and personnel were performed in order check if a sampling plan was used.
Findings	-
Conclusion	Not applicable as no sampling plan was used.

D.10. Assessment of data and calculation of emission reductions or net removals

D.10.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks and baseline SDGs

Means of verification	The calculations of baseline emission have been done in accordance with registered monitoring plan and applied methodology. The equation used is as follows: $BE_y = BE_{CH_4,y} + BE_{EC,y}$ Where: - BE_y: Baseline emissions in year y; - $BE_{CH_4,y}$: Baseline emissions of methane from the SWDS; - $BE_{EC,y}$: Baseline emissions associated with electricity generation.
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	The baseline emissions are calculated using the following equation: $BE_{CH_4,y} = ((1 - OX_{top_layer}) \times F_{CH_4,PJ,y} - F_{CH_4,BL,y}) \times GWP_{CH_4}$ where: - $BE_{CH_4,y}$: Baseline emissions of methane from the SWDS, in year y; - OX_{top_layer}: Fraction of methane that would be oxidized in the top layer of the baseline; - $F_{CH_4,PJ,y}$: Amount of methane in the LFG which is flared and/or used in the project, in year y; - $F_{CH_4,BL,y}$: Amount of methane in the LFG that would be flared in the baseline in year y; - GWP_{CH_4}: Global warming potential value of methane.
Findings	N/A
Conclusion	The validation team confirms that appropriate methods and formulae for calculating baseline GHG emissions have been followed, which are in accordance with applied methodology and tools;

D.10.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks and Project SDGs

Means of verification	Project emission calculations will be done in accordance with registered monitoring plan, applied methodology and tool. The equation used is as follows: $PE_y = PE_{EC,y} + PE_{FC,j,y}$ Where: - PE_y: Project emissions in year y; - $PE_{EC,y}$: Emissions from consumption of electricity due to the project activity, in year y; - $PE_{FC,j,y}$: Emissions from consumption of fossil fuels due to the project activity, for purpose other than electricity generation, in year y (fossil fuels: diesel and LPG). The project emissions are calculated using the following equations: (1) $PE_{EC1,y} = EC_{PJ1,y} \times EF_{grid,CM,y} \times (1 + TDL_y)$, where: - $PE_{EC1,y}$: Project emissions from electricity consumption from the grid; - $EC_{PJ1,y}$: Quantity of electricity consumed from the grid by the project activity, in year y; - $EF_{grid,CM,y}$: Emission factor for the grid in year y; - TDL_y: Average technical transmission and distribution losses in the grid in year y for the voltage level at which electricity is obtained from the grid at the project site. (2) $PE_{EC2,y} = EC_{PJ2,y} \times EF_{diesel\ generator,y} \times (1 + TDL_y)$, where: - $PE_{EC2,y}$: Project emissions from electricity consumption from an off-grid captive power plant (diesel generator); - $EC_{PJ2,y}$: Quantity of electricity consumed from diesel generator by the project activity, in year y; - $EF_{grid,CM,y}$: Emission factor for the diesel generator in year y; - TDL_y: Average technical transmission and distribution losses in the grid in year y for the voltage level at which electricity is obtained from the grid at the project site.
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	(3) $PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$, where: - $PE_{FC,j,y}$ = Project emissions from fossil fuel combustion in process j during the year y; - $FC_{i,j,y}$ = Quantity of fuel type i combusted in process j during year y; - $COEF_{i,y}$ = CO₂ emission coefficient of fuel type i in year y.
Findings	-
Conclusion	The validation team confirms that appropriate methods and formulae for calculating project GHG emissions have been followed;

D.10.3. Calculation of leakage GHG emissions

Means of verification	No leakage emissions are to be considered, as per the applied methodology. $LE_y = 0 \text{ tCO}_2\text{e}$
Findings	-
Conclusion	The validation team confirms that appropriate methods and formulae for calculating baseline GHG emissions have been followed.

D.11. Sustainable development co-benefits

Means of validation	The project will positively contribute to the following: 1. SDG 13- Climate action: it will contribute to the reduction of the emission of GHG. 2. SDG7- Affordable and clean energy 3. SDG 5 (Gender Equality) 4. SDG 8: Decent Work and Economic Growth Nevertheless, no results have been reported and a finding has been raised.
Findings	CAR 08 <i>Parameters related to Safeguarding Principles 6, 3 and 8:</i> - Number of employees having health and Safety trainings - Total number of employees having landfill gas plant technology trainings (onsite and abroad) - Prevention of work accidents - Diseases and health quality communication events - Odour - Evaluation of Noise - Number of employments - Social health programs - Emission Reduction Purchase Agreement between the project activity and the Norwegian Carbon Procurement Facility (NEFCO) <i>No results have been reported in the monitoring report, unlike mentioned in the transition document.</i>
Conclusion	SDG impacts are well discussed in the PDD. The validation team confirms the technology which is implemented reflects the good practice in the host country also contributing to sustainable development of the host country.

SECTION E. Internal quality control

The draft validation report that is prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope to which the project activity is related. All members of technical review team are independent of the verification team.

During the technical review process, additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to GS. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the validation team. The decision taken by the technical reviewer is final and is authorized on behalf of ESPL.

SECTION F. Validation opinion

ESPL was contracted by Conestoga-Rovers Engenharia Ltda for Gap validation of the project activity: Manaus Landfill Gas Project, in Brazil. The Gap validation was performed on the basis of rules and requirements defined by GS4GG principles and requirements.

BENG Consultancy is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

ESPL commenced the validation based on the baseline and monitoring methodology ACM0001 – version 18.0, the monitoring plan contained in the registered PDD, draft Transition form for GS4GG.

ESPL's validation approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the validation by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The validation team confirms that:

- The project activity is fulfilling all GS4GG transition requirements
- The Sustainable Development Goals claimed are reliable and achievable
- The project information has been correctly transferred from CDM registered PDD to transition form without material misstatement
- the project activity was found implemented as per the description given in the registered PDD; and
- the actual operation conforms to the description in the registered PDD.

In our opinion, the GHG emissions reductions reported for the project activity for the monitoring period are fairly stated in the final version of the Monitoring Report. The GHG emission reductions were correctly calculated based on the approved baseline and



monitoring methodology ACM0001 – version 18.0 and the monitoring plan contained in the transition form/PDD.

ESPL is able to declare that the estimated emission reductions of CDM project activity “Manaus Landfill Gas Project”, during the proposed crediting period are as follows:

Sustainable Development Goals Targeted / SDG Impact	Estimated in PDD for the CP	Units or products
SDG 13 (Climate action) / 13.2 emission reductions achieved	676,996	tCO _{2e} /y
SDG 5 (Gender Equality) /5.5.2: Quantity of women in managerial positions	At least one woman in leadership and decision-making positions by showing signed company functional organizational chart in the determined year	Number of women in leadership and decision-making positions
SDG 7 (Affordable and Clean Energy) / 7.2 – Amount of electricity generated using LFG by the project activity in year y	61,793	MWh/year
SDG 8 (Decent Work and Economic Growth) / 8.8.2: Level of national compliance with labour rights based on International Labour Organization (ILO) textual sources and national legislation.	It is estimated that all on-site employees will enjoy labour rights and social records commitments	On-site employees enjoying labour rights and social records commitments in the determined year

Appendix 1. Abbreviations

Abbreviations	Full texts
ACM	Approved Consolidated Methodology
BE	Baseline Emissions
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH ₄	Methane
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CP	Crediting Period
CRE	Conestoga-Rovers Engenharia Ltda.
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact Assessment
EPE	Energy Research Company of the Ministry of Mines and Energy – Brazil
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Green House Gas
GS	Gold Standard
GSC/GSP	Global Stakeholder Consultation Process
GS4GG	Gold Standard for Global Goals
IPAAM	Institute of Environmental Protection of the State of Amazonas
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emissions
LFG	Landfill gas
KP	Kyoto Protocol
LoA	Letter of Approval/Authorization
MP	Monitoring Plan
OM	Operating Margin
PA	Project Activity
PCP	Project Cycle Procedure
PDD	Project Design Document
PE	Project Emissions
PP	Project Participant
PS	Project Standard
SEMMAS	Secretary of the Environment and Sustainability of the City of Manaus
SEMULSP	Department of Urban Cleaning Service of the City of Manaus
tCO ₂ e	Tonnes of Carbon di oxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VT	Verification Team
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical Reviewers

Competence Statement			
Name	Marcelo Sebben		
Country	Brazil		
Education	M.Sc. (Sustainable Energy System) B. Eng. (Chemical Engineering)		
Experience	+12.5 Years		
Field	Chemical process industry, CDM, Energy, Climate Change		
Approved Roles			
Team Leader	Yes		
Validator	Yes		
Verifier	Yes		
Methodology Expert	Yes (ACM0001, ACM0002, ACM0006, AM0065, AMS ID, AMS-I.E, AMS-I.C, AM0026, AMS-I.A, AMS-I.F, AMS-III.E, AMS-III.H, AMS-III.I. AMS-III.J. GS: Ecologically Sound Fuel Switch to Biomass with Reduced Energy Requirement, GS: Technologies and Practices to Displace Decentralized Thermal Energy Consumption)		
Local expert	Brazil, Chile, Honduras, Colombia		
Financial Expert	Yes		
Technical Reviewer	No		
TA Expert	Yes (TA 1.1, 1.2, 4.1, 5.1, 9.1, 13.1)		
Reviewed by	Shreya Garg	Date	29/07/2020
Approved by	Anshika Gupta	Date	29/07/2020

Competence Statement			
Name	Camila Kamimura		
Education	B.Sc. Environmental Engineer		
Experience	9+ years		
Field	Environmental Management		
Approved Roles			
Team Leader	NO		
Validator	YES		
Verifier	YES		
Methodology Expert	NO		
Local expert	YES (Brazil)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	Date	20/06/2023
Approved by	Deepika Mahala (Technical Manager)	Date	20/06/2023

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., AMS.III.BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Shifali Guleria	Date	26/04/2022
Approved by	Deepika Mahala	Date	26/04/2022

Competence Statement			
Name	Kaviraj Singh		
Country	India		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080, ACM0018		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shreya Garg	Date	12/02/2020
Approved by	Anshika Gupta	Date	12/02/2020

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	Gold Standard	Principles & Requirements	Ver 1.2	Others
2.	Gold Standard	VVB-requirements	Ver 1.1	Others
3.	Gold Standard	Transition request form – Project	Version 1.0	Others
4.	PP	Transition form (draft)	version 1 – 25/03/2022	PP
5.	PP	Transition form (Manaus_T-PreReview_V1.0-Transition-request-form-project)(revised/final)	version 2 Version 3 Version 4 – 31/08/2022 Version 5 – 20/09/2022 Version 6 – 18/01/2023 Version 7 – 19/02/2023 Version 8 – 12/04/2023 Version 09 – 20/07/2023 Version 10 – 30/08/2023 Version 11 – 28/09/2023	PP
		Ex-ante ER calculations spreadsheet for the new CP	Version 6 – 18/01/2023	
6.	Google Maps	<u>Geographical coordinates</u> The geographical coordinates of project activity have been checked at google maps	https://www.google.com.br/maps/place/2%C2%B057'29.9%22S+60%C2%B000'54.7%22W/@-2.9583111,-60.0173943,17z/data=!3m1!4b1!4m5!3m4!1s0x0:0xb9616d2a59cf3a1d!8m2!3d-2.9583111!4d-60.0152056	Other

7.	VVB	<u>Pictures of equipment and process taken during the On site inspection</u>	March/2022	Others
8.	PP	Registered PDD	version 5 – 12/05/2020	Others
9.	UNFCCC	Project activity in UNFCCC website	https://cdm.unfccc.int/Projects/DB/SGS-UKL1291802325.34/view	Other
10.	SGS	Validation report CDM.VAL0377 issued on 29/06/2011 by SGS	https://cdm.unfccc.int/Projects/DB/SGS-UKL1291802325.34/view?cp=1	Other
11.	PP	Raw data Spreadsheets	Monthly spreadsheets from January/2021 to February/2022	PP
12.	UNFCCC	<u>Methodology</u> ACM0001 – Flaring or use of landfill gas	version 18.0	Others
13.	UNFCCC	<u>Methodological tools</u> - TOOL02 – Combined tool to identify the baseline scenario and demonstrate additionality	version 07.0	Others
		- TOOL03 – Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion	version 03.0	
		- TOOL04 – Emissions from solid waste disposal sites	version 08.0	
		- TOOL05 – Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation	version 03.0	
		- TOOL06 – Project emissions from flaring	version 02.0.0	
		- TOOL07 – Tool to calculate the emission factor for an electricity system	version 06.0.0	
		- TOOL08 – Tool to determine the mass flow of a greenhouse gas in a gaseous stream	version 03.0	
		- TOOL09 – Determining the baseline efficiency of thermal or electric energy generation systems	version 02.0	

		- TOOL12 – Project and leakage emissions from transportation of freight	version 01.1.0	
14.	EPE	Brazilian Energy Balance 2021 – Summary of Final Report (base year 2020)	https://www.epe.gov.br/pt/publicacoes-dados-abertos/publicacoes/balanco-energetico-nacional-2021	Others
15.	PP	<u>Diesel generator</u> 1. Purchase invoices of diesel 2. Report of the Control and Use of Diesel 3. Resumo Diesel.xls (spreadsheet related to the calculation of the Electricity generation from Diesel Generator referred to the Deviation #1 applied.	January/2021 to February/2022 January/2021 to February/2022	PP
16.	Amazonas Energia	<u>Invoices</u> 1. Electricity	January/2021 to February/2022	PP
	Mercadinho Braga e Silva Hilário Oliveira Muniz Junior Comercial Jotinha	2. LPG	23.02.2022 03.01.2022 03.08.2021	
17.	Stemac	<u>LPG generator</u> 1. Technical data	-	PP
	PP	2. Operating hours Excel spreadsheet	January/2021 to February/2022	
18.	SEMULSP	<u>Legislation</u> 1. Municipal Directive 011/2012 – Prohibition of the disposal of third party's solid waste to Manaus landfill	14/03/2012	Others
		2. Municipal Directive 015/2012 – Regulation of the disposal of solid waste sent to landfill and setting fees for the disposal of waste from industries and class IIA waste of third-party	13/04/2012	

19.	IPAAM IPAAM	<u>License</u> 1. Operation License # 228/14-02 - valid for 01 year 2. Protocol for renewal of the Operation License - Process # 1832/14/V2	16/01/2018 27/07/2018 and 05/02/2019	PP
20.	John Zinc Company	<u>Manuals</u> 1. Operation and Maintenance Manual of Landfill Gas Combustion System - ZTOF® Enclosed	Mar/2006	PP
	Landtec	2. Operation and Maintenance Manual for Field Analytical Unit (FAU) Option 1-01	05/03/2008	
	Landtec	3. Calibration Manual of Flare Emissions Analyser	May/2009	
	Thermal Inst.	4. Installation, Operation and Calibration Instructions for Thermal Mass Flow meter - Model 62-9/9500	-	
	Pakari	5. Catalogue of Thermocouples and Accessories	-	
	CHP Brasil	6. Operation and Maintenance - Biogas Group Generator CHP300	October/2018	
	Stemac	7. Folder of Diesel Generator Group	-	
	Stemac	8. Technical Description of the Diesel Generator Group	-	
	INMETRO	9. Accreditation Certificate of Toledo	#0222	
	ABNT	10. ABNT NBR ISO/IEC 17025	30/09/2005	
21.	PP	<u>Procedures and Records</u> 1. Table A.1 - Verification checklist of pre-operation of the LFG system	January/2021 to February/2022	PP
		2. Table A.3 - Daily inspection reports of the LFG system	January/2021 to February/2022	

		3. Table A.4 – Maintenance activities report of the LFG system	January/2021 to February/2022	
		4. Table A.5 – Weekly inspection of the LFG system	January/2021 to February/2022	
		5. Table A.6 – Monthly monitoring reports of the LFG field	January/2021 to February/2022	
		6. Table A.8 – Annual monitoring reports of the LFG field	January/2021 to February/2022	
		7. Perimeter Extraction Well Monitoring Checklist	January/2021 to February/2022	
		8. Odour Complaint Form	January/2021 to February/2022	
22.	John Zinc Company	Diagram of the flare with location of the thermocouples (202A) – 43441-P-01-0.DWG	16/02/2006	PP
23.	PP	Monthly Employment Record – Duties and Responsibilities	-	PP
24.	TUMPEX	<u>Weighbridge reports</u> - Declaration of the amount of solid waste – January/2021 to February/2022	14/03/2022	PP
25.	PP	Declarations 1. A declaration from Project developers (Conestoga-Rovers Engenharia Ltda) that the project will not claim VERs/CERs from the same vintage from GS and CDM 2. Declaration from project developer stating that no ODA is provided under the condition that the credits generated by the project will be transferred, either directly or indirectly, to the donor country providing ODA support	28/06/2022 28/06/2022	PP
26.	PP	<u>Gender sensitive evidences</u> 1. Internal procedure MGN-012-0 related to Communication and Person's Management.	Rev 0 – 03/09/2018	

		2. Internal Procedure MGN-036-0 - Labour Practices and human rights 3. Company's organigram 4. Employment list 5. Signed term of confidentiality and impartiality where commitment with internal procedures for all employees is stated (signed by Andres Lorenzo on 19/07/2018). 6. Brazilian Signature Evidence to the Convention on the elimination of All Forms of Discrimination against Women	Rev 0 – 07/06/2018 https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtsg_no=IV-8&chapter=4&clang=_en	
27.	-	1. IPCC publications	www.ipcc-nggip.iges.or.jp	
28.	PP	<u>SDG 5 evidences</u> 1. <u>Company organigram indicating all managerial and decision-making positions</u>	2021 to 2023	
29.		<u>SDG 8 evidences</u> 1. <u>Social records of all employees</u>	2021-2022	
30.	-	Brazilian Institute for the Environment	http://www.ibama.gov.br/	Other
31.	-	Institute of Environmental Protection of the State of Amazonas	http://www.ipaam.am.gov.br/	Other
32.	-	Stakeholders consultation process 1. Deviation request from Local stakeholders consultation (DEV_317) approved on 28/11/2022 2. Stakeholder consultation report 3. Website from Conestoga-Rovers where the Local stakeholder consultation was held	Version 4 – 13/08/2023 http://conestoga.com.br/sobre-a-cre/consulta-publica/(last assessed on 13/04/2023)	

		4. Emails to stakeholders with information regarding project activity 5. Proof of reception of invitation letters for stakeholders consultation 6. Comments from stakeholders		
33.	-	UNFCCC	http://cdm.unfccc.int	Other

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. FARs from previous verification

FAR ID	01	Section no.	XX	Date: XX
Description of FAR				
N/A				
Project participant response				Date: XX
Documentation provided by Project Owner				
VVB assessment				Date:

Table 2. CLs from this Project Validation

CL ID	01	Section no.	D.1	Date : 12/05/2022
Description of CL				
<i>The following issues were found in the Transition annex report (Manaus_T-PreReview_V1.0-Transition-request-form-project):</i> <i>Table 1: it is not clear how the parameter "3 Good Health and Well Being" will be monitored considering that it is being stated that it will be "Not Measurable".</i> <i>Section 4.2(pg 11): it is not clear why no eligibility criteria stipulated in Annex A of CSA/RE has been considered as applicable for this project activity</i> <i>Sections A.1.1 and A.1.2 have not being completed</i> <i>Section B.6: It is not clear how the parameters numbers 3.3, 3.5 and 3.8 will be monitored.</i>				
Project participant response				Date : 07/06/2022
<i>Table 1: Parameters were revised in order to be in line with GS Project Design Document Guide.</i> <i>Section 4.2 has been revised and eligibility criteria requirement defined as "Yes".</i> <i>Sections A.1.1 and A.1.2 have been completed in the updated Transition Form.</i> <i>Section B.6. has been entirely revised addressing only the SDG targets and indicator pertinent to the project activity and respective monitored parameters.</i>				
Documentation provided by project participant				
https://globalgoals.goldstandard.org/standards/TGuide-PreReview_V1.2-Project-Design-Document.pdf Manaus_T-PreReview_V1.0-Transition-request-form-project_v1_06_2022_JAS				
DOE assessment				Date: 27/06/2022

1. It is now determined how the parameter will be monitored: it has been stated that the parameter will be monitored with "At least one communication event attendance list and one Labour Heath Report in the determined year". The monitoring is duly referred in the transition annex and it is feasible.
2. The choice has been changed to yes. Moreover, it could be confirmed that all eligibility criteria stipulated in Annex A of CSA/RE requirements have been taken into account for this project activity
3. Sections A.1.1 and A.1.2 have been duly completed in accordance with requirements for completing the transition annex. Moreover, all information could be duly checked and is accurate.
4. The section B.6 has included all SDGs determined for this project activity as well as its monitoring parameters.

CL is closed

CL ID	02	Section no.	D.2.1	Date :	12/05/2022
Description of CL					
Eligibility check for transition As per GS4GG requirement, d) "the project must have a crediting period start date with CDM/other standard on or after 01 January 2016 " or e) The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue. <i>Considering that the project activity has its crediting period starting on 08/07/2018, i.e. after 01/01/2016, the justification given in the Transition document is not coherent.</i>					
Project participant response				Date :	07/06/2022
According to the guidance provided by the Gold Standard (https://www.sustain-cert.com/cdm-project-transition/), Section "ELIGIBILITY SCREENING", project eligibility criteria should take into account the project original crediting period starting date which is 08/04/2011 in CDM (https://cdm.unfccc.int/Projects/DB/SGS-UKL1291802325.34/view?cp=1)					
Documentation provided by project participant					
https://www.sustain-cert.com/cdm-project-transition/ https://cdm.unfccc.int/Projects/DB/SGS-UKL1291802325.34/view?cp=1 , Manaus_T-PreReview_V1.0-Transition-request-form-project_v1_06 2022_JAS					
DOE assessment				Date:	27/06/2022
Although "original crediting period", as per VVBs interpretation, does not mean initial crediting period but current crediting period under previous programme (in this case, under CDM), no demonstration of discontinuation would be necessary. Nevertheless, it is clear to the validation team that the project would not be viable without CERs or VERs revenues and there is no harm in demonstrating the risks of discontinuation of the Project Activity without carbon Revenues. Therefore, the project is eligible for GS4GG.					
CL is closed					

CL ID	03	Section no.	D.6	Date :	12/05/2022
Description of CL					
Transition form, Section C. The mentioned crediting period is not in accordance with GS4GG requirements.					
Project participant response				Date :	07/06/2022
Section C has been amended in order to be in line with GS4GG Requirements. Other sections have been amended accordingly.					
Documentation provided by project participant					
Manaus_T-PreReview_V1.0-Transition-request-form-project_v1_06 2022_JAS					
DOE assessment				Date:	27/06/2022

The current crediting period is now in accordance with GS4GG rules, i.e from 08/07/2018 – 07/07/2023, lasting 5 years.

CL is closed

CL ID	04	Section no.	D.9	Date : 12/05/2022
Description of CL				
<i>Stakeholder's consultation: during the gap validation of this PA, it is not clear to the validation team, by checking the evidences provided, whether the stakeholder consultation fulfils all GS4GG requirements</i>				
Project participant response				Date : 07/06/2022
<i>It is PP's understanding that all requirements related to the GS stakeholder consultation have been met. The project has conducted two rounds of consultation with those affected by the project implementation, one of them consisting of a physical meeting prior to the project implementation.</i> <i>The transition request form was revised to reflect this understanding. All information on how the criteria established by the GS requirements were taken into consideration is detailed in the Local Stakeholder Consultation Report.</i>				
Documentation provided by project participant				
<i>Manaus-Stakeholder-Consultation-Report.docx</i>				
DOE assessment				Date: 09/02/2023
It is clear to the validation team has LSC has been carried out in the validation phase of the project activity as per National Regulations. All information has been duly provided in report provided "Manaus-Stakeholder-Consultation-Report.docx". Nevertheless, according to the Deviation request (DEV_317) approved on 28/11/2022 by Gold Standard, a virtual SFR round of 60 days shall be required. According to the same document, the virtual stakeholder consultation was held from 28/12/2022 up to 03/02/2023. Moreover, as per proof of invitations provided, the last invitation was carried out in 16/01/2023 (Brazilian DNA). Therefore, it is not clear the following: 1. how the current stakeholder consultation complied with minimum 60 days consultation as required by GS. 2. From the minimum group of stakeholders to be consulted, clarification is needed on which stakeholders actually consulted are part of the following groups: a. Local people, communities and/or representatives who are expected to be directly or indirectly affected (adversely affected or beneficiaries) by the project or may have an interest in the project b. Stakeholders with land-tenure rights within or adjacent to the project and marginalised individuals and groups c. Relevant international Gold Standard NGO Supporters with representation in the region and all Gold Standard NGO Supporters located in the host country of the project.				
<u>CL remains open</u>				
Project participant response				Date : 13/02/2023

1 – It is correct to consider 16/01/2023 as the date of the last invitation sent. Thus, the end date should be 16/03/2023.

2.

a) Local people, communities and/or representatives:

- Central Única das Comunidades do Estado do AM – CUC
- Fundação Dr. Thomas
- Instituto de Desenvolvimento Sustentável do Amazonas/Secretaria de Desenvolvimento Sustentável do Estado do Amazonas - IDESAM
- Fundação Manaus de Turismo
- Ministério Público do Estado do Amazonas
- Procuradoria Geral do Município
- Secretaria Municipal de Administração e Finanças - SEMAD
- Secretaria Municipal de Ação Social e Cidadania - SEMASC
- Secretaria Municipal de Economia e Finanças - SEMEF
- Secretaria Municipal de Esportes - SEMESP
- Secretaria Municipal de Defesa do Meio Ambiente - SEDEMA
- Secretaria Municipal do Trabalho - SEMTRA
- Secretaria de Obras Públicas e Gerenciamento de Resíduos da Cidade de Manaus - SEMULSP
- Jornal A Crítica
- ACR - Associação de Catadores de Resíduos e Associação Manauense de Recicláveis
- SEM CORRESPONDÊNCIA ANTERIOR
- ARPA - Associação de Reciclagem e Preservação Ambiental
- Diário do Amazonas
- IPAAM - Instituto de Proteção Ambiental do Amazonas - e Procuradoria do Meio Ambiente
- Ministério Público Federal AM
- Agência Estadual do Ambiente
- Secretaria de Planejamento do Estado do Amazonas - SEPLAN
- Câmara Municipal de Manaus

b) Stakeholders with land-tenure rights within or adjacent to the project and marginalised individuals and groups

- Tumpex
- Fogás
- ENTERPA
- Prefeitura Municipal de Manaus

c) Relevant international Gold Standard NGO Supporters with representation in the region and all Gold Standard NGO Supporters located in the host country of the project.

- Cool Effect
- Gold Standard
- DNA Brasileiro

Documentation provided by project participant

Proof of invitation of all stakeholders stated above^{/35-4 and 35-5/}
Manaus_V2.0-Stakeholder-Consultation-Report^{/35-2/}

DOE assessment

Date: 18/03/2023

1. It is confirmed that the stakeholders consultation period is ended in 16/03/2023. The stakeholders consultation remains opened in the following website:
<http://conestoga.com.br/sobre-a-cre/consulta-publica/>
The site has been checked on 17/03/2023 for confirmation. Therefore, the 60 days of consultation period have been fulfilled.
2. The project proponents provided proof of invitation of the mentioned stakeholders listed above. It is confirmed that all stakeholders required by Stakeholder Consultation and Engagement Requirements, section 3.3.1.

Therefore, it is now confirmed that the stakeholder's consultation for this project activity has been carried out in accordance with GS4GG requirements, especially w.r.t Deviation request (DEV_317) approved on 28/11/2022. Moreover, an updated "Manaus_V2.0-Stakeholder-Consultation-Report"^{35-2/} have been provided, with updated information. No further comments, apart from the ones already listed, have been raised.

CL is closed

Table 3. CARs from this Project Validation/Verification

CAR ID	01	Section no.	D.2.2/D.2.3	Date :	12/05/2022
Description of CAR					
<i>General eligibility criteria and Activity eligibility criteria have not been evaluated in the Transition report.</i>					
Project participant response				Date :	07/06/2022
<i>The evaluation has been carried out according to CL01, item 2 and 3 above on this document.</i>					
Documentation provided by project participant					
<i>Manaus_T-PreReview_V1.0-Transition-request-form-project_v1_06 2022_JAS</i>					
DOE assessment				Date:	27/06/2022
It could be confirmed that all eligibility criteria stipulated by General Principles and Requirements of GS4GG, all specific eligibility criteria as per Annex A of CSA/RE requirements have been taken into account for this project activity Sections A.1.1 and A.1.2 have been duly completed in accordance with requirements for completing the transition annex. Moreover, all information could be duly checked and is accurate.					

CAR ID	02	Section no.	D.5	Date :	12/05/2022
Description of CAR					
<i>Baseline and project situation for parameters related to SDGs 3, 7, 8 and 17 have not been described in the Transition form section B.6.</i>					
Project participant response				Date :	07/06/2022
<i>Section B.6. has been entirely revised in order to address SDGs.</i>					
Documentation provided by project participant					
<i>Manaus_T-PreReview_V1.0-Transition-request-form-project_v1_06 2022_JAS</i>					
DOE assessment				Date:	27/06/2022
It has been clarified that only SDGs 3, 7 and 13 will be applied to this project activity. All project documents have been amended accordingly.					
CAR is closed					

Table 4. FARs from this Validation/Verification

FAR ID	01	Section no.	-	Date:	-
Description of FAR					



Project Owner's response	Date: -
Documentation provided by Project Owner	
VVB assessment	Date: -