JOINT VALIDATION & VERIFICATION REPORT

Treatment of non-hazardous industrial waste to obtain Biocompost

PROJECT ID: BCR-AR-763-13-001

ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, S.A. DE C.V.

A BUREAU VERITAS COMPANY

Validation & Verification Report	
Project Title	*Treatment of non-hazardous industrial waste to obtain Biocompost.*
Project ID	*BCR-AR-763-13-001*
Project holder	*WORMS ARGENTINA S.A.*
Project Type/Project activity	*Waste Management and Disposal / Use or Replacement of Technology to Eliminate or Reduce GHG Generation in Solid Waste Treatment Systems*
Grouped project	*Does not apply*
Version number of the Project Document to which this report applies	*Version 2.*
Applied methodology	*AMS.III.F, Avoid methane emissions through composting, Version 12.0 - Sectoral scope(s): 13.*
Project location	*Country: Argentina* *Region: Santa Fe* *City: Arroyo Seco*
Project starting date	*01/04/2018*
Quantification period of GHG emissions reductions/removals	*01/04/2018 to 31/03/2028*
Estimated total and mean annual amount of GHG emission reductions/removals	*Total estimated GHG reductions: 123,314 tCO2e* *Average annual GHG reductions: 12,331 tCO2e/year*
Monitoring period	*01/04/2018 to 31/03/2023*
Total amount of GHG emission reductions/removals	*Total reductions: 59,574 tCO2e* *Annual average: 11,915 tCO2e/year*
Contribution to Sustainable Development Goals	*9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.*

Validation & Verification Report	
	11. Make cities and human settlements inclusive, safe, resilient and sustainable. *12. Ensure sustainable consumption and production patterns.* *13. Take urgent action to combat climate change and its impacts.*
Special category, related to co-benefits	*Does not apply*
Version and date of issue	*Version 2.0*
Work carried out by	*Chief Verifier: Excalibur Acosta.* *Verifier: Nancy Adriana Barrera* *Independent Reviewer: Janai Monserrat Hernández*
Approved by	*Joel Miguel Ramirez.*

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1 Executive summary

The project Treatment of non-hazardous industrial waste to obtain Biocompost, proposed by Worms Argentina S.A., belongs to the Waste management and disposal sector, focused on the treatment of non-hazardous organic waste from biodiesel, oil and cellulose plants, dairy industry, breweries and agroindustry that produce GHG in the industrial belt region of Greater Rosario (Rosario - San Lorenzo - Puerto General San Martín - Timbúes), capacity of 2,450.82 tons per month average, applying composting. The accreditation period is contemplated for 10 years. The AMS.III.F methodology, avoid methane emissions through composting, Version 12.0, has been applied to calculate the estimated reduction of GHG emissions.

The scope of the GHG project Validation and Verification is under the BioCarbon Registry includes GHG project boundaries, physical infrastructure, activities, technologies and processes, GHG sources, GHG types and reporting period (01/04/2018 to 31/03/2023). For GHG declarations containing emission reductions it includes the material side effects, baseline (verification) and baseline (validation) scenarios described in the Validation and Verification Plan (FOROVV-P01.26).

ANCE conducted a validation and documentary verification with a duration of seven working days, prior to the site visit of the GHG reduction project prepared by Worms Argentina S.A., under an approach based on the existing risk analysis of incurring errors, omissions or misrepresentations by the organization. The site visit took place on December 5 and 6, 2023.

The activities associated with the documentary verification included: a sampling plan, risk analysis of the sampled sources, verification plan and a reproduction of the emission calculations considering emission factors, global warming potentials, conversion factors and calorific powers; analyzing in turn, the consistency of the energy consumption data collected according to the calculation base and complementary documents provided by the organization, through Worms Argentina S.A.

During the review of the information, ANCE found 8 findings: 3 corrective actions and 5 qualifications. After reviewing the documentation and explanations provided by the project owner, all findings were closed in a clear and transparent manner.

2 Objective, scope and criteria

The main objective of the validation and verification audit was to evaluate the controls associated with the information system and the data related to the Greenhouse Gas (GHG) emission reductions reported by WORMS ARGENTINA S.A. This evaluation was carried out by reviewing the input information during the documentary and on-site phase activities, with the purpose of:

- Confirm that the project, its activities, methods and procedures, as described in the PDD WORMS /I/ document and its corresponding annexes, comply with the criteria established in section 2.1 of this report.
- Verify that the information related to the declaration of the GHG project and the Emission Sources associated to it, are duly supported.
- Ensure that information on reported GHG emission reductions consistently demonstrates the veracity of such reductions.

In summary, the validation and verification audit focused on ensuring the integrity and reliability of the information related to the project and its impacts on GHG emissions, ensuring compliance with the standards established in section 2.1 of the report.

2.1 Criteria of Validation / verification

ANCE developed a validation and verification plan and a sampling plan to ensure that all project information and documentation was reviewed, including procedures and criteria for the project, baseline, quality control and assurance, risk management and verification documents.

Evidence included information on internal management controls, calculation procedures, monitoring, quality assurance procedures, compliance with local laws, as well as methodologies and tools used to calculate reductions, formulas for calculating reductions, monitoring equipment, data management and collection, and qualitative data.

The conformity of the validation and verification criteria was evaluated with respect to the following:

a) Protocol: Standard BCR, version 3.2, September 23.2023.

b) Validation and Verification Manual Greenhouse Gas Projects;

c) Methodology: AMS.III.F, Avoid methane emissions through composting, Version 12.0

d) ISO Standard:

e) ISO 14064-2 Greenhouse gases. Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.

f) ISO 14064-3 Greenhouse gases. Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.

2.2 Scope of the Project Validation and verification

The scope of the project validation and verification is in accordance with the following documents:

1. BCR Standard Version 3.2. September 23, 2023;
2. Validation and Verification Manual Greenhouse Gas Projects 8.1 General requirements;
3. criteria of ISO 14064-2:2019 and;
4. the rules, procedures, methodologies and methodological tools of the Clean Development Mechanism: AMS.III.F, Avoid methane emissions through composting, Version 12.0 - Sectoral scope(s): 13.

3 Validation and verification planning

3.1 Validation and verification plan

The Validation and Verification Plan for the Treatment of non-hazardous industrial waste to obtain Biocompost project was executed in accordance with the BCR Version 3.2 scope, September 23, 2023, and those established in the ISO 14064-3 standard. This covers the limits of the project that focuses on the treatment of non-hazardous industrial waste to obtain Biocompost, as well as the physical infrastructure (located in Arroyo Seco, Santa Fe, Argentina), activities, technologies and processes, Greenhouse Gas Emission Sources, types of Greenhouse Gases (GHG) and the monitoring report, the Evidence Collection Plan (sampling), risk analysis, audit team, level of assurance, materiality, validation and verification criteria and activities.

The validation and verification plan were sent before of the on-site visit, this document include the assignment competent personnel to carry out the activities and preparation of validation or verification plan, including objectives and scope, validation or verification team (roles and responsibilities), duration of validation or verification activities, specific requirements, and the level of assurance and materiality, see Annex 4.

Table 1. Project boundary.

PROJECT BOUNDARY							
GHG sources, sinks and reservoirs (SSRs) or project technologies	Reduction of emission			Increase of removal			
	Direct		Indirect	Direct		Indirect	
Landfill	X			N.A.		N.A.	
Composting site (CH_4)	X			N.A.		N.A.	
Composting site (N_2O)	X			N.A.		N.A.	
Mobile equipment	X			N.A.		N.A.	
Others for electrical energy consumption			X	N.A.		N.A.	
Types of GHGs included in the GHG statement:	CO_2	CH_4	N_2O	HFC	PFC	NF_3	SF_6
Data provenance for baseline scenario and GHG project baseline:	Historical data for one year (X) Historical data for an average of several years ( )						

Regarding the duration of the Validation and Verification activities, ANCE provided a schedule of activities with the duration of the activities:

Table 2. Validation / verification activities

Activity	Responsible	Duration (days)
Elaboration of internal No COI Matrix	ANCE	3
Request for GHG declaration and supporting information.	ANCE	1
Submission of supporting information	WORMS	2
Documentary verification	ANCE	7
Development of Risk Analysis/Evidence Gathering Plan (sampling)	ANCE	2
Preparation and Submission of Verification/Verification/Validation Plan	ANCE	2
On-site Verification/Validation and Submission of Findings Report	ANCE – WORMS	2
Delivery of Findings Report	ANCE	1
Client's attention to findings	WORMS	30
Analysis of findings attention by OVV	ANCE	30
Preparation and submission of Consolidated Findings Report	WORMS	5
Validation/Verification of Findings Report	WORMS	3
Elaboration and sending of draft Statement/Opinion and V/V Report	ANCE	7
Review of the draft by the Client	WORMS	3
BioCarbon Registry technical review	BCR	N.D.
Signature and delivery of Verification Statement/Opinion and Verification Report (digital)	ANCE	N.D.

3.2 *Audit team*

Table 3. Validation / verification team

Validation / verification team		Professional profile	Activities
Lead Validator/ Verifier	Excalibur Ernesto Acosta Miranda	Environmental engineer, Graduated of National Polytechnic Institute, Professional License Number: 9409081. Verifier/Validator In the follow scopes: He has carried out 110 verifications to various companies, mostly in the Industrial and Energy sector; 4 validations and verifications of GHG mitigation projects, 2 in the energy sector and 2 in the waste sector, accredited in the following sectors Power Generation and Electric Power Transactions, General Manufacturing (physical or chemical transformation of materials or substances into new products), Oil and Gas Exploration, Extraction, Production and Refining, and pipeline distribution, including Petrochemicals, Metals Production, Mining and Mineral Production, Chemical Production; Transportation and waste handling and disposal.	Documentary information review Site visit Preparation of Validation and Verification Report Documentary information review

Validation / verification team		Professional profile	Activities
Validator/ verifier:	Nancy Adriana Barrera Gómez	Environmental engineer, gradated of National Polytechnic Institute, Professional License Number: 13289456 Lead Verifier (GHG Inventories) in sectors associated with IAF MD 14, covering General Manufacturing, Mining and Mineral Production, Metal Production, Chemical Production, and Pulp, Paper, and Printing. I have executed a total of 21 services in accordance with the criteria of ISO 14064-1:2018 and other protocols	Documentary information review
Independent Reviewer			
Independent Reviewer	Janai Monserrat Hernández Contreras	Environmental engineer, graduated of Autonomous University of Mexico City, Professional License Number: 9763033 Verifier/Validator In the follow scopes: Responsible for the Verification Validation Organization (OVV), performed the following activities: administration of commercial and operational staff, administration and coordination of verification and/or validation services, maintenance of management system, development and implementation of new projects, as well as the administration of the Agency's income and expenses. Lead verifier, independent reviewer and technical expert for the verification and validation of greenhouse gas (GHG) emissions reporting and mitigation projects in sectors such as: industrial, energy, transportation, agriculture and livestock, waste and trade and services; for programs such as the General Law on Climate Change in terms of RENE, ISO 14064-1. ISO 14064- 2, International Aviation Carbon Offsetting and Reduction Scheme - CORSIA, etc.	Independent technical review
Approver	Joel Miguel Ramirez	Electric engineer, graduated of National Polytechnic Institute, Professional License Number: 2731971. Conformity Quality Manager in Association for Standardization and Certification (ANCE), with more than 25 years of experience in evaluation of norms and standards related to industry, commerce and services, occupying different positions in the areas of product certification, quality assurance, management systems, infrastructure, management systems certification, inspection units and GHG validation / verification body. Currently serves as manager of the Systems Certification Body and Validating / Verifying Body of ANCE.	Final approval

The competencies of the CAB and the VV team members can be found in Annex 1.

ANCE is committed to compliance with the BCR Anti-Corruption Policy described in section 8.2. 4 of the BCR Standard Validation and Verification Manual, with the intention of strengthening compliance with this policy ANCE performed the corresponding risk analysis through the Risk Identification and Mitigation Matrix identified as Internal COI Analysis_WORMS (see Annex 5.1 COI ANALYSIS), with the intention of determining that there are no conflict of interest, impartiality and operational risks that prevent the execution of the verification process in an impartial manner. As a conclusion of the analysis ANCE has applied the following mitigation measures:

- (c) The Agency confirms with each member of the verification team before assigning him/her to a verification activity whether he/she is free of conflict of interest.
- d) The Agency notifies the prospective client of the details of the designated verification team members and requests the recusal of any team member or independent reviewer if there is COI of interest.
- e) The Agency shall designate a verification team that has no relationship/family relationship with the prospective client.
- The designated verification team shall adhere to ANCE's policies and shall not accept personal benefits during the performance of verification services.

- j) The Agency shall designate a verification team that does not have any kinship, consanguinity or extra-employment relationship with the potential client.

3.3 Level of assurance and materiality

The activities corresponding to the GHG Project Declaration Validation/Verification Body focused on the validation and verification of the PDD of the Project Treatment of non-hazardous industrial waste to obtain Biocompost developed by WORMS ARGENTINA S.A. /I/, under a reasonable assurance level (≥95%) and a materiality of 5%, complying with the requirements of ISO 14064-3:2019 and ISO 14065:2013 standards and the provisions of the BCR Standard Project Validation and Verification Manual version 2.3, point 10.2.5 Assurance level and materiality:

(a) the level of assurance of validation and verification of the GHG Project shall not be less than 95%. Before the on-site verification, information on the activity data supporting the project's emission reductions was requested from the owner, and a sampling plan (included in the Verification Plan in Annex 4) was prepared to determine which are the most representative sources of emissions in the project scenarios. The baseline and project scenario emissions estimates were evaluated and percentages were calculated for each one, so that it was determined that it was necessary to review 99.82% of the project's information (waste shipments, electricity consumption receipts and fuel consumption statements, see Table 5). During the verification on site the main registers of weight wastes were reviewed,

considering the information of the period 01/04/2018 to 31/03/2028, there were 11,760 data, all these data were reviewed using filtering and matrices in excel, as well as, 922 waste manifests was reviewed.

(b) the material discrepancy of the data supporting the project baseline and the estimated GHG emission reductions or removals is ± 5%. In this validation and verification, the materiality was less than 5%, specifically 0.01%, considering that the project proponent addressed the findings detected by the CAB.

3.4 *Sampling plan*

According to the Validation/Verification Plan (Annex 4), once the project limits were defined, a Sampling Plan was established for the years to be verified (01/04/2018 to 31/03/2023) and for the Project accreditation period (01/04/2018 to 31/03/2028). This plan identifies the project's emission sources, the type of fuel used and the activity that generates the greenhouse gas (GHG) emission reductions, including the amount generated and its respective percentage of significance, which must be equal to or greater than 95%. Those identified with blue color are the ones that should be checked mainly, considering a percentage of emissions covered on site of 99.82%, later, after the site visit it was observed that gasoline was not part of the project scope, so those emissions were discarded, so in the end the 100% review was considered.

As part of the Validation and Verification activities for the collection of evidence, the following techniques were considered for application:

- Observation: is the ocular evaluation carried out to make sure how the operations are executed;
- Recalculation: analysis based on the calculation tools applied.

Table 4. Emissions reduction and total emissions contribution

Period	Emission Source, Baseline Scenario	Emission Source, Project Scenario	Reductions t CO_2e	Representative percentage %
01/04/2018 to 31/03/2019	Landfill		9522	**8%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2019 to 31/03/2020	Landfill		13,051	**11%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2020 to 31/03/2021	Landfill		10,972	**9%**
		Composting site (CH_4)		
		Composting site (N_2O)		

Period	Emission Source, Baseline Scenario	Emission Source, Project Scenario	Reductions t CO_2e	Representative percentage %
		Mobile equipment		
		Others for electricity consumption		
01/04/2021 to 31/03/2022	Landfill		13,259	**11%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2022 to 31/03/2023	Landfill		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2023 to 31/03/2024	Landfill		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2024 to 31/03/2025	Landfall		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2025 to 31/03/2026	Landfill		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2026 to 31/03/2027	Landfill		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		
01/04/2027 to 31/03/2028	Landfill		12,747	**10%**
		Composting site (CH_4)		
		Composting site (N_2O)		
		Mobile equipment		
		Others for electricity consumption		

Table 5. Sample determination

Activity	Origin of the activity data		
	Documental	On site	
	Source	Total of documents	Revised documents
Waste composting	01- Control Camiones Enero	979	922
	02- Control Camiones Febrero	789	
	03- Control Camiones Marzo	933	
	04 - Control Camiones Abril	901	
	05 - Control Camiones Mayo	828	
	06 - Control Camiones - Junio	837	
	07 - Control Camiones - Julio	2663	
	08 - Control Camiones - Agosto	824	
	09 - Control Camiones - Septiembre	700	
	10 - Control Camiones - Octubre	756	
	11 - Control Camiones - Noviembre	797	
	12 - Control Camiones - Diciembre	753	
Illumination	Monthly sheepment of Santa FE of Energy	EPE 0X-202X.pdf	19
Combustion	23.03.2023 Emission Reductions_AMS.III.F based_Worms Argentina_AM (1) (2).xlsx	Estimated	1

The risks to be assessed (see table 6) quantitatively and qualitatively are:

- Inherent risks: risk of errors, misplacements or deviations attributable to the facility's information handling.
- Control risks: risk that the facility's internal control system may fail to prevent, detect and/or correct errors.
Detection risk: risk that the verifier's procedures do not detect errors.

Table 6. VV Risk evaluation

GHG sources	Activity	Description of risks		IR	CR	DR	Verification / Validation Risk
		IR	CR				
Landfill	Application of the calculation methodology based on the GHG program	The calculation methodology is applied according to the applicable GHG Program;	The responsible party effectively identifies and prevents errors or omissions at the source.	L	L	H	**Low**
Composting site (CH_4)	Application of the calculation methodology based on the GHG program.	The calculation methodology is applied according to the applicable GHG Program;	The responsible party effectively identifies and prevents errors or omissions in the source.	L	L	H	**Low**
Composting site (N_2O)	Application of the calculation	Calculation methodology according to the	The responsible party effectively identifies and prevents errors or	L	L	H	**Low**

GHG sources	Activity	Description of risks		IR	CR	DR	Verification / Validation Risk
		IR	CR				
	methodology based on the GHG program.	applicable GHG Program is applied;	omissions in the source.				
Mobil machine	Review of fuel consumption reports in logs/invoices.	The Emission Source must be within the operational / organizational boundaries of the Organization;	Quality control processes are in place for the information involved.	L	L	H	**Low**
Composting site Others for electric power consumption	Review of fuel consumption reports in logs/invoices.	Errors in data processing were detected in the calculation of emissions;	For the calculation of source emissions, are the source data processed in a controlled manner?	L	L	H	**Low**
Mitigation measure							
a) / The OC VV GEI team must verify that the source of emissions is directly related to the organization, requesting invoices for fuel consumption, electric power, steam, input, refrigerant gases, legal documents, agreements, etc. c) / The OC VV GEI team must verify the total information regarding the source of emissions or, if necessary, review a representative sample of data to look for transcription errors. g) / The OC VV-GHG OC team must be strictly guided by the Verification Matrix and Verification Guide. k) / The OC VV GEI team ensures that the verified sources of information are adequately documented and substantiated.							

L: Low; H: High, M Medium

4 Validation and verification procedures and means

4.1 Preliminary assessment

ANCE conducted a documentary verification with a duration of seven (7) working days, prior to the site visit of the Project Treatment of non-hazardous industrial waste to obtain Biocompost developed by WORMS ARGENTINA S.A. The activities associated with the documentary review included: a sampling plan, risk analysis of the sampled sources, verification plan and a reproduction of the emission calculations considering emission factors, global warming potentials, conversion factors and calorific powers, the application of the AMS methodology. III.F, Avoid methane emissions through composting, Version 12.0; analyzing in turn, the consistency of the data collected in accordance with the calculation base and complementary documents provided by the organization; the documentation presented is listed as follows.

4.2 Document review

/I/ Project Document Template - Treatment of non-hazardous industrial waste to obtain Biocompost version 2 (PDD-Worms-Solid V2 211124.doc);

/II/ Emission Reduction Spreadsheet (WORMS solid-211124.xlsx);

/III/ Sealing and verification report (OTN° 307-15719 y 28315) – 2019, 2021 y 2022;

/IV/ Fuel consumption billing records, 2020;

/V/ Fuel consumption billing records, 2021;

/VI/ Fuel consumption billing records, 2022;

/VII/ Electricity consumption invoices, supplier Empresa Provincial de la Energía de Santa Fe (2018 - 2022);

/VIII/ Annual revenue control (2018 - 2022);

/IX/ Logbooks of waste as raw material for composting 2018 (April to December);

/X/ Logbooks of waste as raw material for composting 2019 (January to December);

/XI/ Logbooks of waste as raw material for composting 2020 (January to December);

/XII/ Logbooks of waste as raw material for composting 2021 (January to December);

/XIII/ Logbooks of waste as raw material for composting 2022 (January to December);

/XIV/ Calculation of the CO_2 Emission Factor of the Argentine Electric Power Grid, Energy Data - Calculation of the CO_2 Emission Factor of the Argentine Electric Power Grid (energia.gob.ar);

/XV/ Records of Emission Factors of the Wholesale Electricity Market of Argentina, Emission Factor | CAMMESA;

/XVI/ CO_2 emissions calculated on the basis of retail sales of liquid fuels in EESS - año 2018. Government Secretary of Energy, Argentina;

/XVII/ Joint Resolution 1/2019, RESFC-2019-1-APN-SECCYMA#SGP;

/XVIII/ Amendment record - compost - solids

/XIX/ PE-8.2 Compost quality control (pdf)

/XX/ PE-8.2-01 Effluent discharge procedure (.pdf)

/XXI/ PE-8.2-02 Transport entry control instructions (.pdf)

/XXII/ PE-8.2-04 Instructions for waste acceptance for composting (.pdf)

/XXIII/ Billing of electric energy consumption (01/04/2018 to 31/03/2023)

/XXIV/ Invoicing of diesel consumption (01/04/2018 to 31/03/2028)

/XXV/ BCR_Monitoring-Report-solid of the Project Treatment of non-hazardous industrial waste to obtain Biocompost (BCR_Monitoring-Report-solid V2 211124.doc)

/XXVI/ Diesel and Electric Energy Consumption File, Actual Fuel Used (xlsx)

/XXVII/ SDG Tool: SDG-Tool-2023-WORMS Solid (SDG-WORMS solid 201024.xlsx)

/XXVIII/ Decree (PEP) 2151/14. From 17/07/2014. B.O.: 05/08/2014. Non-Hazardous Waste.

/XXIX/ LAW ON MINIMUM BUDGETS FOR ADAPTATION AND MITIGATION TO GLOBAL CLIMATE CHANGE, Law 27520.

/XXX/ Carbon Footprint Certification Services Contract (.pdf)

/XXXI/ logbooks of waste as raw material for composting 2022 (January to December);

/XXXII/ File cover EX-2023-107869760- -APN-DGTYA#SENASA

/XXXIII/ Municipalidad Arroyo Seco Mayo 24.pdf

/XXXIV/ Minutes of the Board of Directors, N1,N2, N3, N4, N5 (pdf)

/XXXV/ Resolution N° 024/18.pdf

/XXXVI/ Renewal of the Board of Directors, 2021 (2-WORMS Renovación directorio 2021.pdf)

/XXXVII/ Periodic Verification Report No. N° O.T.: 307-28315, Octubre 12, 2022

/XXXVIII/ Enviromental manual, version 1.0

/XXXIX/ Enviomental Manegement System, version 1.0

/XL/ 55-Disp. 287-19 Renov. Reg. RT 0029

/XLI/ Municipalidad Arroyo Seco 20 Mayo 24.pdf (notification of complaints and denunciations)

/XLII/ Minutes of meeting with neighbors

- 18/12/2018, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)
- 15/11/2019, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)
- 10/11/2020, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)
- 01/12/2021, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)
- 15/12/2022, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)

- 18/12/2023, signed by Enersto S. (DNI 11969748) and Doña Teresa S.R.L. (345111026)

/XLIII/ Neighbors complaints and claims book (2019 to 2021)

/XLIV/ Notification of environmental commitment to suppliers (Zofravilla S.A., Santa Fe Aceites, INAGRO)

/XLV/ Customer complaints and claims book (2019 to 2023)

/XLVI/ Employee Grievance Book (2019 to 2023)

/XLVII/ Employee handbook, Worms from 2019 to 2023

/XLVIII/ Ministerio de Ambiente y Desarrollo Sostenible de la República Argentina. (2022). Plan Nacional de Adaptación y Mitigación al Cambio Climático.

/XLIX/ COMPLETE WORMS PAYROLL MAY 2020 TO MAY 2021 (NOMINA WORMS MAYO 2020 A MAYO 2021 COMPLETA.xlsx)

/L/ Report N°9985 – Air quality

/LI/ Report N°9986 – Groundwater water

/LII/ Resolution N° 406/19

/LIII/ Customer Satisfaction Procedure Version 01, Worms.

/LIV/ GENERAL QA/QC PROCEDURES Version 1, Worms.

Methodologies reviewed;

/a/ AMS-III.F., Small-scale methodology: Avoidance of methane emissions through composting. Version 12.0;

/b/ Tool 04 - Methodological tool - CDM, Emissions from solid waste disposal sites. Version 08.1;

/c/ Tool 13 - Methodological tool - CDM, Project and leakage emissions from composting. Version 02.0;

/d/ Methodological tool, Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation, Version 03.;

/e/ Methodological tool, Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion, Version 03.;

/f/ TOOL01 Methodological tool: Tool for the demonstration and assessment of additionality, Version 07.0.0;

/g/ TOOL23 Methodological tool: Additionality of first-of-its-kind project activities, Version 03.0

4.3 *Interviews*

The following table shows the people who have been in direct contact with ANCE during the validation and verification process:

Table 7. Interviews

Name	Position and/or area	Process/activity or associated input	Interview in	Results
Marcos Méndez	environmental consultant	Project Description Tour of the project facilities Methodologies Monitoring plan Sustainable development Environmental impact and Baseline and monitoring	Remote	He is the consultant in environmental topics. He provided the collection of project information through a Google-Drive, through which the calculation of estimated emissions, waste shipments (see table 5), electricity receipts, legal, environmental and social information, and project governance information were obtained.
Andres Beltramo	Commercial Manager	Collection and safekeeping of non-hazardous waste manifests and shipments Consultation with local stakeholders Argentine regulatory framework	On-site	He explains the stages of the process, manage the process with suppliers, customers and government. Ensures that Worms complies with applicable laws. Relationships between stakeholders, In the interview we asked about the main stakeholders, which are workers, customers, local community and suppliers, finally we observed the communication media (website https://worms.ar/ and social media), The meeting minutes with the neighboring company, held from 2018 to 2023, were reviewed. These meetings established an agreement to maintain the road in good condition. Letters from some suppliers were also reviewed, where Worms Argentina reaffirms its commitment to the environment and proper waste management. The complaints book, which is open to clients, was examined, showing no significant complaints since 2019 (only one regarding waiting time, which was addressed). Additionally, the employee complaints book was reviewed, revealing only one complaint since 2019 regarding facility improvements, which was verified that so far there are no environmental or social complaints (see 6.9 section). He shown a statement of Enviromental Secretary Arroyo Seco Locality (Secretaria de Medio Ambiente Municipalidad Arroyo Seco) that Worms don't have any complaints or allegations of any kind (until May, 2024).
Berlits López Camargo	Technical laboratory manager	Parameters and quality control of the composting process	On-site	She explained the quality control applied to the processes. She provided the technical procedures of the activity Project /XIX to XXII/.
Víctor Lepera	Commercial Manager	Strategic Process Management	On-site	He explained the relationship he has with customers and suppliers and how composting is immersed in the axes of sustainability. He explained the consequences to the next communities if intend of composting plant there were a landfill.
Fernando Molinari	RRII	Carbon market advisor	On-site	He is the main promoter for the implementation of carbon credits.

4.4 On-site visit

An on-site visit was conducted by the lead evaluator on December 5 and 6, 2023. This visit included a tour of the facilities of the Treatment of non-hazardous industrial waste to obtain Biocompost Project, as well as the visit to obtain solid waste and all the composting processes, so the weighing scale, the waste storage yard, the compost piles, the quality laboratory and the storage yard were visited. The purpose of this visit was to resolve questions and issues identified during the desk review and to obtain additional information on the project's compliance with the relevant criteria applicable to the BCR Standard. The assessment team has conducted interviews between December 5 and 6, 2023 with operational staff, the project owner and the project developer to assess the information included in the project documentation.

4.5 Clarification, corrective and forward actions request

During the documentary review and on-site inspection carried out by ANCE, the information supporting the statements in the Project Document Treatment of non-hazardous industrial waste to obtain Biocompost was reviewed, considering the Methodological tool, Emissions from solid waste disposal sites. Version 08.1 /b/ and the BCR Standard. Derived from the review ANCE found findings categorized as shown below and as specified in Annex 2. Clarification requests, corrective action requests and forward action requests.

4.5.1 Clarification requests (CLs)

Annex 2 of this report describes the results and the responses provided by the project owner to the five requests for clarification (5 CL) generated by the evaluation team during the validation and verification of the Document Treatment of non-hazardous industrial waste to obtain Biocompost project, as well as the concluding responses provided by the project owner to these queries.

CLs3.- In compliance with the BCR Standard version 3.2, section 12.1 on Conservative Approach and Uncertainty Management, the Project Owner applied a conservative methodology to estimate energy consumption, focusing on diesel and electricity use. Observations and operational data confirmed that gasoline consumption within the Project is zero. This approach aligns with the guideline's emphasis on ensuring that parameters for GHG reduction estimates are consistent with national GHG inventories and reference scenarios, thus eliminating the need to apply additional uncertainty discount factors.

CLs5.- In accordance with the BCR Standard version 3.2, section 10 on Methodological Documents, the Project Holder applied the eligible methodology for emission reduction in full, as required. This includes the comprehensive evaluation of the proposed methodology, particularly addressing its applicability conditions (3.1.1), ensuring that all

tools, parameters, and data referenced by the methodology are fully incorporated into the project's implementation and validation processes.

CLs6.- In accordance with the BCR Standard version 3.2, section 11.5 on Project Length and Quantification Periods, the Project Owner determined the start date of the GHG project and defined its duration as 10 years, with no option for renewal, as specified for non-AFOLU sectors. The estimated emission reductions for the entire project period were calculated and included in the Project Design Document (PDD), ensuring compliance with the standard's requirements for project length and quantification of GHG reductions.

CLs7.- In alignment with the BCR Standard version 3.2, section 12.1 on Quantification and Monitoring of GHG Emission Reductions and Uncertainty Management, the Project Owner applied a conservative approach to ensure accurate estimation of emission reductions. Verified quantities of waste shipments were used in the calculation, and due to the absence of calibration data for certain baseline years, a 2% reduction was applied to the amount of solid waste to avoid overestimating GHG reductions, following the principle of ISO 14064-2:2019. Additionally, the implementation of the "General QA/QC Procedures" ensures systematic management of uncertainty and enhances the reliability of the GHG reduction estimation.

CLs8.- The project demonstrates compliance with sustainable development goals by aligning with SDGs 9, 11, 12, and 13 through actions such as increasing local employment, promoting waste recycling and reuse, and reducing methane emissions via controlled composting. Stakeholder consultation is evident through regular meetings with local communities and authorities, as well as feedback mechanisms like suggestion books, with no significant complaints reported. National legislation compliance is ensured through updated permits and adherence to local and national environmental regulations. The monitoring plan is robust, covering project boundaries, activity execution, emission quantification, and quality control, with mechanisms for data recording and archiving.

4.5.2 Corrective actions request (CARs)

Annex 2 of this report describes the results and the responses provided by the project owner to the three corrective action requests (3 CARs) generated by the evaluation team during the validation and verification of the Document Treatment of non-hazardous industrial waste to obtain Biocompost project, as well as the concluding responses provided by the project owner to these queries.

CAR1.- The project owner considered the verified quantities (based on waste shipments) for the emission reduction estimate calculation, due to the fact that the Project owner did not submit the calibration for the other years in the baseline estimation calculation, the conservative principle of reducing by 2% the amount of solid waste (Wj,x) was applied with the motive of occurring an underestimation that in an overestimation of GHG emission reductions (principle of ISO- 1406464-2:2019). In addition, it has implemented a

procedure "General QA/QC procedures" to reduce uncertainty and improve the quality of the GHG reduction estimation calculation.

CAR2.- In compliance with the BCR Standard version 3.2, section 12.1 on Quantification and Monitoring of GHG Emission Reductions and Uncertainty Management, the Project Owner recalculated the GHG emission reductions using emission factors officially provided by the Ministry of Energy through the Wholesale Electricity Market. This alignment with national data ensures consistency with the parameters used in constructing the national GHG inventory and reference scenario, thus avoiding the need to apply additional discount factors for uncertainty management as outlined in the guidelines.

CAR4.- The compliance with GHG mitigation objectives was corrected by mentioning the proposed activities and the expected mitigation results of the project.

4.5.3 Forward action request (FARs)

Not applicable, during the validation and verification process there was no request for corrective actions.

A total of 8 findings, 5 clarifications and 3 corrective actions were established as a result of the Validation and Verification audit. Annex 2 shows the report on the findings established by ANCE and the resolution carried out by the project proponent.

5 Validation findings

The validation process was carried out considering the BCR Standard Version 3.2, the GHG Project Validation and Verification Manual version 2.3, in addition to the stipulations of ISO 14064-2:2019 and the internal procedures of the ANCE Validation and Verification Body. During the validation and verification process of the Treatment of non-hazardous industrial waste to obtain Biocompost project, a seven-day documentary review was carried out, followed by an on-site inspection visit on December 5 and 6. As a result of the aforementioned reviews, 8 findings were established, of which the following are related to the validation process:

Table 8. Validation findings

No.	Reference to noncompliance	Description of finding	Type of Nonconformity: (CAR, CL, FAR)
3	6.6 Selection of GHG SSRs for monitoring or estimation of GHG emissions and removals, Standard 14064 part 2, 2019.	During the validation and verification of the Project, it was found that diesel and gasoline consumption reported in the invoices (PLANILLA COMBUSTIBLE.xlsx) and energy consumption are overestimated and not adjusted to the project limit, so it is necessary to record the energy consumption	CL

		based on the declaration of the project limit and scope.	
4	2.2 Objective	Correct the wording of the Project Objective in accordance with the BCR Standard: "It is important to note that the project objectives should be consistent with the proposed activities and the expected GHG mitigation results", so it is necessary that the focus is directed to the Project and not to the organization.	CAR
5	3.1.1 Conditions of applicability of the methodology	Clarify the applicability of the methodologies used for the Project's emissions reduction. In the PDD there is a replication of the paragraphs of the methodology without reflecting the application of each one.	CL
6	3.2.3 Time frames and analysis periods	Clarify the specific period covered by the Project considering that it will last 10 years.	CL

5.1 Project description

The project Treatment of non-hazardous industrial waste to obtain Biocompost consists of the treatment of non-hazardous waste from biodiesel, oil and pulp plants, dairy industry, breweries and agro-industries in the area surrounding Worms. ANCE as validating and verifying agency assessed the project according to BCR Standard 10.1.5 Activities related to waste management and disposal, being a project considered with the activity Use or Replacement of technology to eliminate or reduce GHG generation in solid waste treatment systems. F, Avoid methane emissions through composting, Version 12.0 /a/, so these methodology requirements were considered for the estimation of emission reductions.

During the evaluation, it was observed that in the property where the Project is located there are all the operations related to the treatment of solid waste starting with the waste reception area where a review of the shipments and/or manifests of the input is performed, it is worth mentioning that the waste generators have the obligation according to the government regulations of Argentina to manage non-hazardous waste, from its generation to its final disposal (Decree (PEP) 2151/14. From 17/07/2014. B.O.: 05/08/2014. Non-Hazardous Waste.)/XXVIII/. Worms serves as a final disposal company by treating non-hazardous waste with composting and vermicomposting technologies, resulting in a new product and eliminating the waste, giving rise to a circular economy process. Worms weighs the waste to check the weight recorded on the shipment and/or manifest provided by the carrier (procedure PE-8.2-02). Once the cargo transport has been checked, the process input is entered; however, it is not considered suitable for processing until it is subjected to laboratory tests to rule out any hazardous characteristics or that it does not comply with Worms' processes (Procedure PE-8.2-04) /XXII/. The weight data recorded on the consignment and/or manifest is considered a monitorable variable and is entered into the equation of the aforementioned methodology.

Subsequently, the technician in charge of the composting process prepares the compost piles, open-pit and vermicompost. The compost manager ensures that the quality of the compost complies with what is necessary for the process to be efficient and comply with Argentina's operating regulations (P-8.2 Quality controls for compost production)/XIX/:

Table 9. Quality controls for compost.

DRY BASE			
MATERIALS	C%	N%	C/N
Sawdust	40	0.1	400
Cereal Plant Sweeps	45	0.3	150
Sludge from liquid effluent capture systems and manure from livestock pens or feedlots.	8/15	0.5/0.7	11/30

For the vermicomposting process, the same principles of input acceptance as described above apply; however, the composting process has the following characteristics:

Income Streams	Percentage
Filter soils	19 %
Livestock sludge and sludge from livestock farming	11 %
Slurry	5 %
Dust and cereals	58 %
Others	7 %

It is important to mention that, during the on-site inspection, neither methane flaring nor any energy recovery from the treatment was ruled out for both processes.

5.2 *Project type and eligibility*

During the validation and verification process, ANCE evaluated the following criteria based on observation, interviews and review of Project information.

I. The V/V team identified the methodology applicable to the project as established in the CDM and as stated in the project document.

II. The BCR Standard V 3.2 was considered to review the adherence to the program requirements.

III. The project activity was validated as waste management by composting, and also checked against the methodologies described in the CDM (https://cdm.unfccc.int/Registry/index.html).

IV. Scenarios for emission reductions were reviewed, the crediting time declared by the project owner is 10 years.

Table 10. Project type and eligibility

Eligibility criteria	Evaluation by validation body
Scope of the BCR Standard	Steps:

Eligibility criteria	Evaluation by validation body
	1) The limits of the Project are limited to the composting of non-hazardous waste from the activities surrounding Worms Argentina. During the site visit, the waste shipments that have been generated during the existence of the Project were requested, and through interviews with the laboratory personnel, it was validated that the waste is not hazardous or has any characteristic that could damage the food. The physical infrastructure of Project was visited to validate the composting process. 2) It is worth mentioning that during the site visit to WORMS, other activities independent of this project were observed; however, they remain independent of the project. We reviewed the minutes of the board of directors /XXXIV/ where the consolidation of WORMS Argentina S.A. was declared, in which the fiscal address of the property was observed, in such a way that this Project does not overlap geographically with another Project, which was confirmed during the site visit. 3) During the site visit, the composting operations of the Project were observed, as described in the flow diagrams provided by the Owner. It was observed that the main machinery operating in a backhoe that is responsible for the correct aeration of the compost and the lighting fixtures for illumination. 4) Using a spreadsheet /II/ the owner identified and calculated the baseline scenario according to the AMS.III.F, Avoid methane emissions through composting, Version 12.0 methodology. 5) The GHGs evaluated for the baseline were the equivalent CO_2 that could be generated in an open dump, for the Project scenario the GHGs emitted (CO_2, CH_4 and N_2O) by mobile sources and indirect emissions from electricity use were considered, in addition to emissions from the composting of non-hazardous waste. 6) The application was reviewed of the Project's additionality was reviewed (see section 5.5.5). 7) The Project duration was evaluated considering that the Owner of the project decided the project duration is of 10 years (no opction of renewal). 8. The project owner identified the project stakeholders and assessed their interaction in the project (see section 6.9). 9. The project Owner shown the monitorin plan o the verificaction period (see section 6.1.2) Compliance with the laws to which the project is committed was reviewed /XXXV/.
Project type	During the on-site inspection, it was validated that the project corresponds to the Waste Sector, for the treatment of non-hazardous waste by composting.

Eligibility criteria	Evaluation by validation body
Project activity(es)	It was validated that the project activity corresponds to the Use or Replacement of technology to eliminate or reduce GHG generation in solid waste treatment systems, an activity that corresponds to CDM Sector 13: Waste Management and Disposal. During the interviews and through observation, it was validated that the project has replaced landfill disposal with composting technology, thus contributing to the reduction of GHG emissions.
Project scale (if applicable)	ANCE validated the scale of the project against the owner's emission estimation calculation sheet, and also reviewed the applicability of the AMS.III.F methodology, Avoid methane emissions through composting, Version 12.0. Small scale, according to the methodology.

5.3 *Grouped project (if applicable)*

Through ANCE's evaluation of the project, it was noted that the project is not clustered.

5.4 *Other GHG program*

During the documentary review and on-site inspection interviews, it was validated that the Project has not been registered in any other program.

Table 11. Other GHG programs

Program	Website	Was registered?
BCR	https://globalcarbontrace.io/projects?project_id=&project_name=&holder=&sector=3&projectType=&objective=&status=&country=	No.
Cercarbono	https://www.ecoregistry.io/projects-list/cercarbono-co2	No.
CDM	https://cdm.unfccc.int/Projects/projsearch.html	No.
VERRA	https://registry.verra.org/app/search/VCS	No.
Gold Standard	https://marketplace.goldstandard.org/collections/projects/renewable-energy	No.
CSA	https://www.csaregistries.ca/GHG_VR_Listing/CleanProjectProjects	No.

The evaluation across various GHG project registration platforms confirms that the Worms Solid project is not registered in any other system. Therefore, it complies with the requirement that the project must not be part of another registered project in

BIOCARBON or other GHG programs, meeting condition (b) of the BIOCARBON eligibility criteria.

5.5 *Quantification of GHG emission reductions and removals*

ANCE performed the evaluation of the GHG emissions reduction calculation according to VVM 10.3.2 Means of verification and the methodology AMS.III.F, Avoid methane emissions through composting, Version 12.0. /a/, in addition, the analysis of the calculation file used by the project proponent (WORMS solid-201024.xlsx) was performed. The analysis begins by considering the following equation:

$$ERy = BEy - (PEy + LEy)$$

Where:

ER_y: Emission reductions in the year y (tCO_2e)
BE_y: Baseline emissions in year y (tCO_2e)
Pe_y: Project emissions in the year y (tCO_2e)
LE_y: Leakage emissions in the year y (tCO_2e)

The following steps were carried out to evaluate the above equation and calculate the estimated emissions in the Project:

Step 1. Identification of baseline variables

For the determination of the baseline, the project proponent used the equation described in the AMS.III.F methodology, Avoid methane emissions through composting, Version 12.0.:

$$BE_y = BE_{CH_4,SWDS,y} + BE_{ww,y} + BE_{CH_4,manure,y} - MD_{y,reg} \times GWP_{CH_4}$$

Where:

Table 12. Baseline variables

Variable	Concept	Assessment
BE_y	Baseline emissions in year y (tCO2e)	The period of the project is of 1/April/2018 to 31/march/2028, in total 10 years with no renewal option. The owner of the project shown all waste manifest from the start of operations /IX to XIII, XXXI/, in addition, it is consistent with the granting of the operating license of Worms Argentina S.A. /XXXV/.
$BE_{CH_4,SWDS,y}$	Annual potential methane generation from solid waste composted by the project activity	The project proponent applied the stipulations of the methodological tool "Emissions from solid waste landfills".

	during years x from the start of the project activity (x=1) to year y (tCO_2e).	
$BE_{ww,y}$	If applicable, baseline emissions of the co-composted wastewater, calculated according to AMS-III.H procedures. (tCO2e)	ANCE validated that the project scope does not contemplate wastewater treatment.
$BE_{CH_4,manure,y}$	If applicable, baseline emissions of composted manure from project activities, according to AMS-III.D procedures. (tCO2e).	ANCE validated that the project scope does not include manure treatment.
$MD_{y,reg}$	Amount of methane that would have to be captured and flared in the year and to comply with current regulations (ton).	ANCE validated that the project scope does not consider methane flaring.
GWP_{CH_4}	Global warming potential of methane	28

Step 2. Determination of the annual methane generation potential.

The project proponent calculated the annual methane generation potential according to the Methodological Tool, Emissions from solid waste disposal sites V. 8.1 /b/, considering the following constants for the determination of the baseline emissions:

Table 13. Variables of baseline emissions

Variable	Concept	Assessment
Qy, Wx	Quantity of waste composted in year y (wet basis)	During the site visit, ANCE validated that the solid waste entering the process must have acceptance criteria, according to internal procedure PE-8.2-04 /XXII/, including moisture, which must be greater than or equal to 85%. This meets the condition of the parameters of methodologies /b/ and /c/.
x	Years of the time period in which waste is disposed at SWDS, from the first year of the time period (x = 1) to year y (x = y).	ANCE validated what is established in the PDD /I/ of the Project regarding the durability of the project, which is 10 years.
y	Year of the crediting period for which methane missions are calculated (y is a consecutive 12-month period).	
$DOC_{f,y}$	Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions given in the SWDS for year y (fraction by weight).	To obtain the Determination of the fraction of DOC that breaks down in the SWDS, the project proponent used Application B (0.5) non-monitorable value, ANCE agrees with the value.
φ_y	Model correction factor to account for model uncertainties for year y.	The project proponent used option 1 of the calculation options for the Model Correction Factor Determination (0.85), it is considered as a non-monitorable value. ANCE agrees with the value.
OX	Oxidation factor (reflects the amount of methane in SWDS that is oxidized in soil or other material covering the waste).	The project proponent used the default value of the tool (0.1). ANCE agrees with the value.

Variable	Concept	Assessment
$f_{,y}$	Fraction of methane captured in SWDS and flared, flared, or otherwise used in a manner that avoids methane emissions to the atmosphere in year y.	ANCE validated that the Project does not include flaring or any energy use of methane in the scope.
F	Fraction of methane in SWDS gas.	
MCF_y	Methane correction factor for year y	The project proponent used the default value for anaerobically managed solid waste landfills (1), a non-monitorable value. ANCE agrees with the value.
DOC_j	Fraction of degradable organic carbon in waste type j (fraction by weight)	ANCE validated the use of the default value (15%) of DOCj considering that the waste treated is similar to Food, food, beverage and tobacco waste (other than sludge).
k_j	Decomposition rate of waste type j (1/year)	ANCE validates the use of the default value (0.185), the site is in a mostly temperate location.
j	Type of waste or waste types in MSW	The treatment of one type of waste is validated.
GWP_{CH_4}	Global warming potential of methane	28

Step 3. Quantification of solid waste

The project owner keeps track of the amount of non-hazardous solid waste (wet basis) entering the process through manifests and shipments, this activity is part of the Argentine regulation (https://www.argentina.gob.ar/normativa/nacional/ley-25612-76349), so these documents have official validity. The project holder files these documents and the quantities are placed in electronic files on a monthly basis with the following name "*XX – Truck control Month 20XX.xlsx*" (considering that the accreditation of the project is 01/04/2018 to 31/03/2028). The project proponent uses the monthly summation of the amount of non-hazardous waste from manifests and shipments. This data is subject to constant monitoring.

Step 4. Quantification of the project's emissions from electricity consumption

The owner of the Project does not have direct measurements of electricity consumption; therefore, to determine the Project's emissions, an estimate was made based on the equipment and lighting fixtures that use electricity. To carry out the quantification, the Tool to calculate baseline, project and/or leakage emissions from electricity consumption /d/ was applied.

To calculate emissions from electricity consumption, the project owner used the emission factors published by the Wholesale Electricity Market (Emission Factor | CAMMESA) /XV/. ANCE validated the data used.

Step 5. Quantification of project emissions from fossil fuel consumption

The owner of the Project does not have direct measurements of diesel consumption, so to determine the Project's emissions, an estimate was made according to the equipment and mobile sources that consume the fuel. To carry out the quantification of emissions, the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /e/ was applied. ANCE validated the estimate made by the project owner to obtain diesel consumption.

Regarding the use of the emission factor, the emission factor published in the document Emissions of CO_2 calculated based on retail sales of liquid fuels in EESS - year 2018 was used. Government Secretary of Energy, Argentina: 2.61 kgCO2/l.

Step 6. Quantification of the project's emissions from composting

The project proponent applied the tool "TOOL04 Methodological tool Emissions from solid waste disposal sites, Version 08.1 /b/ for the estimation of project emissions, considering the variable factors described in step 2, with the variable to be monitored being the amount of non-hazardous waste entering the composting plant.

Step 7. Calculation of GHG emissions reductions

Considering the equation for calculating emission reductions described in methodology /a/:

$$ERy = BEy - (PEy + LEy)$$

The project holder calculated the baseline according to the methodology /a/, where:

$$BEy = BE_{CH4,SWDS,y}$$

The calculation was performed for the years covered by the project accreditation 01/04/2018 to 31/03/2028.

ANCE validated that the Project has not been transferred from another activity nor is the existing equipment being transferred to another activity, furthermore, the compost is not being subjected to anaerobic storage or disposed of in a SWDR. Therefore, for this project there is no leakage.

$$LEy = 0$$

The project holder calculated the project emissions according to the methodology Project and leakage emissions from composting /c/ considering the following equation:

$$PE_{COMP,y} = PE_{EC,y} + PE_{FC,y} + PE_{CH4,y} + PE_{N2O,y} + PE_{RO,y}$$

Table 14. Variable of project emissions

Variable	Concept	Assessment
$BE_{PE_{COMP,y}}$	Project emissions associated with composting in year y (t CO2e/year)	
$PE_{EC,y}$	Projected emissions from electricity consumption associated with composting in year y (t CO2/year)	ANCE validated the calculation of estimated emissions from estimated electricity consumption as described in Step 4.
$PE_{FC,y}$	Project emissions from fossil fuel consumption associated with composting in year y (t CO2/year)	ANCE validated the calculation of estimated emissions from estimated diesel consumption as described in Step 5.
$PE_{CH4,y}$	Projected methane emissions from the composting process in year y (t CO2e/year)	The project owner calculated the project emissions estimate using the amount of waste input and recorded through manifests and shipments. The information described in Step 2, 3 and 6 was used.
$PE_{N2O,y}$	Projected nitrous oxide emissions from the composting process in year y (t CO2e/year)	
$PE_{RO,y}$	Projected methane emissions from wastewater runoff associated with co-composting in year y (t CO2e/year)	The project scope does not include wastewater treatment.

The project proponent performed the emissions estimation calculation considering the steps described above, ANCE proceeded to analyze and replicate the calculation, obtaining the following.

Table 15. Project Emissions Reductions

Period	ANCE	WORMS
	tCO2e	
2018 – 2019	9,525	9,525
2019 – 2020	13,052	13,052
2020 – 2021	10,973	10,974
2021 – 2022	13,261	13,275
2022 – 2023	12,748	12,748
2023 – 2024	12,748	12,748
2024 – 2025	12,748	12,748
2025 – 2026	12,748	12,748

2026 – 2027	12,748	12,748
2027 – 2028	12,748	12,748
Total	123,302	123,314
	% Materiality:	**0.01**

5.5.1 *Start date and quantification period*

During the validation and verification of the Project it was observed that the start of operations of the Project was on 01/04/2018, this was observed in the non-hazardous waste registration logs in conjunction with the shipments and manifests on file. In addition, the operating document /XXXV/ of Worms Argentina S.A. was reviewed, where it has been resolved that the activity is in Treatment of non-hazardous liquid and solid organic waste, this document was issued and signed by the Municipality of Arroyo SECO, dated March 16, 2018.

The accreditation period of the Project is from 01/04/2018 to 31/03/2028, contemplating 10 years of durability (no option renewal), declaring an emissions reduction of 123,314 tCO_2e. This data was validated by ANCE reporting a materiality of 0.01% and a reasonable assurance level.

5.5.2 *Application of the selected methodology and tools*

5.5.2.1 *Title and Reference*

The approved UNFCCC methodology for baseline, project emissions and monitoring are AMS-III.F. " Small-scale methodology Avoidance of methane emissions through composting" (version 12.0) /a/ has been applied by the GHG mitigation project.

In addition, the project activity also uses the following tools:

- Methodological tool - CDM, Project and leakage emissions from composting. Version 02.0; /c/
- Methodological tool - CDM, Emissions from solid waste disposal sites. Version 08.1 /b/;
- Tool to calculate baseline, project and/or leakage emissions from electricity consumption /d/;
- Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /e/;

5.5.2.2 *Applicability*

The project activity meets the applicability criteria of the /a/ methodology as the project consists of controlled aerobic treatment by composting of non-hazardous waste, and the project activity does not recover or flared gas. ANCE validated and verified this assertion as follows:

Table 16. Applicability

No.	Applicability	Evaluation by ANCE
2.	This methodology includes measures to avoid methane emissions to the atmosphere from biomass or other organic matter that would otherwise have been left to decompose anaerobically in a solid waste landfill (SDS), or in an animal waste management system (AWMS), or in a wastewater treatment system (WTS). Controlled aerobic treatment by biomass composting is introduced in the project activity.	Through the on-site inspection and interviews ANCE validated that the project activity is for composting of non-hazardous waste.
3.	The project activity does not recover or flare gas from the disposal site (unlike AMS-III.G "Landfill methane recovery"), and does not carry out controlled combustion of waste that is not biologically treated in a first step (unlike AMS-III.E "Avoidance of methane production from biomass decomposition by controlled combustion, gasification or mechanical/thermal treatment"). Project activities that recover biogas from wastewater treatment will use AMS-III.H "Methane recovery from wastewater treatment" methodology. Project activities involving co-digestion of organic materials will apply the methodology AMS-III.AO "Methane recovery by controlled anaerobic digestion".	Through the on-site inspection and interviews ANCE validated that the project activity does not generate gas (CH_4).
4.	Activities are limited to those that result in emission reductions of less than or equal to 60 kt CO_2 equivalent per year.	During the validation and verification, the calculation file II.
5.	This methodology is applicable to the composting of the organic fraction of municipal solid waste and biomass waste from agricultural or agro-industrial activities, including manure.	Through on-site inspection and interviews ANCE validated that the project activity receives non-hazardous waste from surrounding grain processing companies /VIII/, /IX/, /X/, /XI/, /XII/, /XIII/.
6.	This methodology includes the construction and expansion of treatment facilities, as well as activities that increase the capacity utilization of an existing facility. For project activities that increase capacity utilization at existing facilities, project participants shall demonstrate that special efforts have been made to increase capacity utilization, that the existing facility is following all applicable laws and regulations, and that the existing facility is not included in another CDM project activity. The special efforts shall be identified and described.	ANCE validated and verified that during the project period (01/04/2018 to 31/03/2028) there has not been an expansion in the operational limits of the Project, it was validated that the Project activity complies with the environmental regulations of the State /XVII/, /XVIII/.
7.	This methodology is also applicable to co-composting of wastewater and biomass solid waste, where the wastewater would otherwise have been treated in an anaerobic wastewater treatment system without biogas recovery. The wastewater in the project scenario is used as a source of moisture and/or nutrients for the biological treatment process, e.g., empty fruit bunch composting (EFB), a residue from palm oil production, with the addition of palm oil mill effluent (POME), which is the wastewater co-produced from palm oil production.	ANCE validated that during the site visit that the scope of the project does not contemplate wastewater treatment.

No.	Applicability	Evaluation by ANCE
8.	In case of co-composting, if it cannot be demonstrated that the organic matter would have been left to decompose anaerobically otherwise, the baseline emissions related to such organic matter will be counted as zero, while the project emissions will be calculated according to the procedures presented in this methodology for all co-composted substrates.	ANCE validated during the site visit that the scope of the project does not contemplate co-composting, being non-hazardous waste the only input to the process and these are subject to evaluation prior to incorporation into the composting process /XIX/ and /XXII/.
9.	The location and characteristics of the disposal site of biomass, animal manure and co-composting wastewater in the baseline condition shall be known so that their methane emissions can be estimated, using the provisions of AMS-III.G, AMS-III.E (relating to stockpiles), AMS-III.D "Methane recovery in animal manure management systems" or AMS-III.H, respectively.	ANCE validated during the site visit that the scope of the project does not contemplate co-composting.
10.	In the project scenario, blending materials may be added to increase the efficiency of the composting process (e.g., to achieve a desirable C/N ratio or free air space value); however, only the controlled amount of solid waste or manure or wastewater diverted from the reference treatment system is used for the emission reduction calculation. Project activities for animal manure composting shall also comply with the requirements of paragraphs 3 and 4/c/ of the latest version of AMS-III.D.	ANCE validated and verified that only the amount of non-hazardous solid waste registered in the manifests and shipments that are submitted to composting /VIII/, /IX/, /X/, /XI/, /XII/, /XIII/ is used to calculate the estimated reductions.
11.	In the case of solid waste removed from a solid waste landfill, the following requirement shall be verified ex ante at the beginning of each crediting period:	ANCE validated that the solid waste entering the composting plant is not extracted from a landfill but the plant serves as a final destination for the processed waste.
a.	Establish that the identified landfill(s) can be expected to accommodate the wastes to be used for the project activity during the crediting period; or	This scenario is not common for this type of waste (non-hazardous), and maintaining the waste under these conditions involves high costs for the companies.
b.	Establish that it is common practice in the region to dispose of waste in solid waste landfill(s).	ANCE validated this scenario considering that all waste shipments come from an agro-industrial company and not from a waste management and/or storage company, hich is the common practice.
12.	Project participants shall clearly define the geographical boundary of the region referred to in paragraph 11(b) and document it in the DPDD-MDL. When defining the geographical boundary of the region, the project participants shall consider the origin of the waste, i.e. if the waste is transported up to 50 km, the region may cover a 50 km radius around the project activity. In addition, it should also consider the distance to which the final product will be transported after composting. In any case, the region must cover a reasonable radius around the project activity that can be justified with reference to the circumstances of the project, but in no case shall it exceed 200 km. Once defined, the region must not change during the crediting period(s).	The owner of the Project chose to limit the geographical area to the provinces of Santa Fe, Entre Ríos and Buenos Aires, which includes the "Greater Rosario agroindustrial pole" area, which according to the Rosario Stock Exchange is considered the area with the largest number of port terminals with the capacity to load grains, oils and/or byproducts (such as biodiesel). Therefore, the owner's assertion that the main agroindustrial waste generating companies are located in these areas is correct and is confirmed by the addresses of the shipments reviewed during the on-site verification. ANCE validated that in no case does the activity exceed the range of 200 km in the transportation of waste to the composting plant and in the transportation of the product, a measurement was made using Google earth of the main waste generators that send waste to

No.	Applicability	Evaluation by ANCE
		WORMS based on shipments and manifests, resulting in a distance of ±51km. However, the owner decided to set a project limit of 200 km to maintain a conservative approach.
13.	In case the compost produced is handled aerobically and subjected to land application, appropriate conditions and procedures (not leading to methane emissions) must be ensured.	ANCE validated that during the site visit that the non-hazardous waste is subjected to a proper composting process /XIX/ such that the project owner has complied with the State's environmental regulations /XVII/ and /XVIII/.
14.	In case the compost produced is handled aerobically and subjected to land application, appropriate conditions and procedures (not leading to methane emissions) must be ensured.	ANCE validated that, during the on-site inspection, the process does not contemplate thermal or mechanical treatment.
15	In case the produced compost is stored under anaerobic conditions and/or delivered to a landfill, emissions from residual organic content shall be considered and calculated according to the latest version of the methodological tool "Emissions from solid waste landfills".	During the site visit, ANCE validated and verified that the compost is not stored in anaerobic conditions nor is it delivered to a landfill, but that the compost is marketed to farmers surrounding WORMS /VIII/.

In conclusion, ANCE agrees with the application of the methodology AMS.III.F, Avoid methane emissions through composting, Version 12.0 /a/, considering that the applicability criteria were correctly addressed by the project holder.

5.5.2.3 Methodology deviations (if applicable)

The Treatment of non-hazardous industrial waste to obtain Biocompost project is in accordance with the /a/ methodology, so this section does not apply.

5.5.3 Project boundary, sources and GHGs

Considering what is mentioned in the methodology /a/ referring to the project limits, ANCE validated, according to the document Technical Report of the product registration "Compost WORMS" to comply with the regulation Joint Resolution of the Government of the Environment and Sustainable Development and SENASA Environment and Sustainable Development and SENASA Nº 19/2019) /XXXII/:

1. The project is located in the city Arroyo Seco, Santa Fe, Argentina. This was validated on site and whit the official documets tha support the property and activity "GRANTING THE AUTHORIZATION TO DEVELOP THE ACTIVITY OF TREATMENT OF LIQUID AND SOLID NON-HAZARDOUS ORGANIC WASTE ON BEHALF OF WORMS ARGENTIN'A SOCIEDAD ANONIMA, Resolution N° 024/18" /XXXIV/.
2. The project activity replaces the disposal of waste in sanitary landfills and open dumps where direct methane emissions could be generated.

3. During the site inspection it was validated that the project does not consider wastewater co-composting in its scope.
4. There is a composting and berm-composting process capable of receiving a maximum of 137.25 tons of non-hazardous waste per day, Data averaged from the accounting of solid waste logbooks /IX to XIII/.
5. It was validated that there is a yard where waste is received and a specific area where compost is prepared for sale.
6. Due to the nature of the project and according to the methodology /a/ the project emits the following GHGs:

Table 17. GHG evaluated

Source	GHG	Included (Yes/No)	Assessment by ANCE
Baseline scenario- landfill site	CO_2	No	During organic matter decomposition reactions in landfills, CO_2 emissions are considered zero, ANCE validates this confirmation.
	CH_4	Yes	Methane is the main GHG produced in the decomposition of organic matter in a landfill, ANCE validates this confirmation. For the estimation, the amount of treated waste /IX/ to /XIII/ was used.
	N_2O	No	During organic matter decomposition reactions in landfills, N_2O emissions are considered to be zero, ANCE validates this confirmation.
Project scenario – - Composting site - Luminarias - (indirect emissions) - Pumping equipment (indirect emissions) - Pumping equipment (mobile sources)	CO_2	Yes	Indirect emissions from electricity consumption in lighting and pumping equipment (reported in tCO_2e), total energy was counted; however, there are other activities on the owner's property that are outside the scope of this project's activity /XXIII/. Direct emissions from combustion in mobile sources. total diesel fuel was accounted for, however, on the owner's property there are other activities outside the scope of this project's activity /XXIV/.
	CH_4	Yes	Product derived from the composting process. The amount of waste treated from /IX/ to /XIII/ was used for the estimation. Direct emissions from combustion in mobile sources. The total amount of diesel fuel was counted; however, on the owner's property there are other activities outside the scope of this project /XXIV/.
	N_2O	Yes	Product derived from the composting process. The quantity of treated waste /IX/ to /XIII/ was used for the estimation. Direct emissions from combustion in mobile sources. the total amount of diesel fuel was counted; however, on the owner's property there are other activities outside the scope of the activity of this project /XXIV/.

ANCE validated the limits of the project according to the activity and established in the methodology /a/, during the on-site visit the sources described in this section were observed.

5.5.3.1 *Eligible areas in the GHG project boundaries (for AFOLU projects)*

Not applicable.

5.5.4 *Baseline or reference scenario*

The project activity involves the operation of composting for the treatment of non-hazardous solid waste, therefore, the methodology applied /a/, "the baseline scenario is in the absence of the project activity, biomass and other organic matter (including manure, if applicable) are allowed to decompose within the project boundary and methane is emitted to the atmosphere. Baseline emissions are the amount of methane emitted from the decomposition of degradable organic carbon from biomass solid waste or manure."

The Owner of the project indentfy correctly the baseline scenario and the development of the variables and parameters used is noted in the calculation tool /II/.

Step 1. The evaluation of the baseline scenario was considered as described in the methodology AMS.III.F, Avoid methane emissions through composting, Version 12.0, where the calculation of estimated emissions from waste treatment was based on the Methodological Tool Emissions from solid waste disposal sites (Version 08.1) /b/ and the following parameters were evaluated:

Table 18. Baseline parameters

Parameter	Assessment
φ_y	Default value
OX	Default value
F	Default value
DOC_f	Default value
MCF_y	Default value
k_y	Default value
W_j	Measure
DOC_j	Default value

ANCE validated that the parameters and measurements were properly applied according to the methodology /a//b)/IX to XIII. It was observed that the data obtained, such as emission factors, heating rates and other constants (see Table 18), were obtained from the AMS.III.F methodology, Avoid methane emissions through composting, Version 12.0, and by means of ANCE recalculation, the application was validated.

Step 2. ANCE validated that the baseline equation parameters were obtained from the methodology /a/, /b/, the project proponent evaluated a low uncertainty (see section 5.5.6). During the review of the input activity data (Wj) for the baseline calculation, it was

detected that the measurement equipment did not have all the annual calibrations, so the project owner applied a 2% uncertainty percentage in order to make the information consistent. The other values (table 8) were obtained from the methodology so it was unnecessary to apply he percentages defined for the discount factor provided in the guidelines for managing uncertainty.

Step 3. ANCE validated that the Project activity complies with the due diligence regarding composting described byState:

Table 19. Legal assessed

Legal Requremnet	Resume
7-Otorgamiento uso conforme de suelo A. Seco 29-06-2017	The Municipality of Arroyo Seco authorizes the use of land for the activities of Worms Argentina S.A., among them the treatment of solid organic waste, it is conditioned to not carry out any activity that affects the environment and that is inherent to the authorized activities, signed on June 29, 2017.
34-Habilitación Munic. Planta A. Seco - Resol.Nº 024-18 - 16.03.2018	The Municipality of Arroyo Seco grants the permit for wors to carry out its productive activities, including the treatment of solid organic waste, it is required to comply with municipal regulations, signed on March 16, 2018.
27-Resol. Nº 523 WORMS ARG. S.A. EIA	The Ministry of the Environment approves the Environmental Impact Study for the construction of the Worms infrastructure, which is used for the mitigation project activity, Resolved Dicember 12, 2017.
55-Disp. 287-19 Renov. Reg. RT 0029	A renewal of the Worms activities was presented, but the project activity is maintained.
Permiso vuelco de efluentes 21-06-19 WORMS	An extraordinary situation arises for a modification, it does not affect the Project.
2-WORMS Renovacion directorio 2021	The current President of Worms is Gustavo Néstor Calamari.

Step 4. ANCE validated that the baseline and quality scenario identification procedures are in accordance with the methodology /a/, /b/, /c/.

Step 5. The procedures of quality were reviewed under the requirements of ISO 14064- 2, the owner of the project shown and explain the process that use for the management data /XIX/. The project owner has environmental management and operational management procedures. The environmental management procedure establishes the methods for environmental risk assessment and measures to control environmental issues. The operating procedure addresses the standardization of the operation, the assignment of responsibilities and the storage of information. The quality control procedure for the calculation of the project's emission reduction estimate (according to IPCC methodologies) was also reviewed /LIV/. It is worth mentioning that this document

provides for the control of project activity data, thus reducing the uncertainty related to the quantification of emission reductions, which is associated with ISO 14064 part 2 2019.

5.5.5 *Additionality*

ANCE reviewed the materiality analysis applied by the project owner, validated and verified the application of the guidelines for the demonstration of additionality methodologies and tools that the owner has applied:

/a/ TOOL01 Methodological tool: Tool for the demonstration and assessment of additionality, Version 07.0.0;

/b/ TOOL23 Methodological tool: Additionality of first-of-its-kind project activities, Version 03.0

It is worth mentioning that during the validation of additionality, the Argentinean legislation on financing of environmental programs was reviewed, in order to rule out that the Project has not arisen from a financing of this nature. The website of the Ministry of Economy of Argentina[1] was reviewed and a list of environmental and social projects was found in which the participation or registration of Worms Argentina S.A. was ruled out. The legislation on composting was reviewed, which only specifies the operation and quality of the compost[2], and the Constitution /XXXVI/ was reviewed and ruled out any public governmental investment. In this way, it was validated that the Project's reductions are not attributable to the implementation of legal requirements.

The project owner evaluated additionality in accordance with the BCR guidelines, BASELINE AND ADDITIONALITY, Version 1.3, section 8 Other sectors, the owner used the tool provided by CDM-UNFCCC am-tool-01-v7.0.0.0 evaluating STEP 0: First-of-list-kind Project activities, however, to punctuate the analysis of STEP 0 the project owner used the methodological tool, 23 Additionality of first-of-its-kind project activities Version 03.0.

ANCE validated the following points of the methodology:

Applicable geographical area: the methodology states “must be the entire host country. If project participants choose to limit the applicable geographical area to a specific geographical area (such as a province, region, etc.) within the host country, they must justify the essential distinction between the specific geographical area identified and the rest of the host country.” The owner of the Project chose to limit the geographical area to

[1] Financiamiento sostenible. (2023, 7 diciembre). Argentina.gob.ar. https://www.argentina.gob.ar/economia/bonossostenibles

[2] Argentina.gob.ar. (2019, 10 enero). Argentina.gob.ar. https://www.argentina.gob.ar/normativa/nacional/resoluci%C3%B3n-1-2019-318692/texto

the provinces of Santa Fe, Entre Ríos and Buenos Aires in which the area "polo agroindustrial del Gran Rosario" is covered, which according to the Rosario Stock Exchange[3] is considered the area with the largest number of port terminals that are capable of loading grains, oils and/or by-products (such as biodiesel). Therefore, the owner's statement that the main companies that generate agro-industrial waste are located in these areas is correct and is confirmed by the addresses of the shipments reviewed during the on-site verification. Therefore, the geographic area limit of the provinces of Santa Fe, Entre Ríos and Buenos Aires is also validated, instead of considering the entire area of the host country. This condition shall not be changed during the remaining accreditation periods.

The owner presented three companies in the PDD that generate compost from non-hazardous waste management:

Table 20. Other composting companies located in the area

Bioferty	Hi-soil	Compost Plant Bella vista
Conventional composting, without vermicomposting process	Conventional composting, without vermicomposting process	Conventional composting, without vermicomposting process
Raw material: Mixture of household waste, vegetable waste, leaves and agro-industrial waste.	Manure and organic waste	Solid household waste generated by the population of Rosario.
in its web page published: As processors, we provide all the necessary conditions for the composting process to take place and we control it (according to monitoring parameters), adapting the production to the demand of our clients, obtaining compost in the established time and form. The production system begins with the choice of raw materials (from different parts of the country, such as Buenos Aires, Entre Rios, Corrientes, Cordoba, Santa Fe and Chubut, among others), the right	In its website it published: Our first steps were in the composting of horse bedding waste and green waste; today we have one of the largest composting plants in the region in the area of Exaltación de la Cruz (Buenos Aires), where we are producing about 5000 m3 of compost and substrates. The materials used for the production of compost come from the collection of animal bedding, from the chipping of branches together with the collection of green waste, and from some industries, such as coffee.	In its website it published: The treatment process makes it possible to use the organic matter contained in the waste to obtain compost, and to recover selected fractions: glass, plastic, ferrous metals and aluminum, which can be recycled into numerous products. The plant currently processes between 90 and 100 tons of waste per day. The waste comes from household collection, carried out by the service concession companies.

[3] The agroindustrial pole of Greater Rosario has the capacity to ship 166 M tons of grains per year (2021, July 10). Rosario Stock Exchange. https://www.bcr.com.ar/es/mercados/investigacion-y-desarrollo/informativo-semanal/noticias-informativo-semanal/el-polo

Bioferty	Hi-soil	Compost Plant Bella vista
choice ensures the quality of the final product.		
Sustratos y enmiendas orgánicas - Biofertyl SRL	Hi Soil	Planta de compostaje Bella Vista

Based on what the Project Owner has stated, the vermicomposting process is an additional process among the other companies located in the area (see Table 20), in addition, the waste received by Worms Argentina S.A. is specific to the activities of the port areas (Agroindustrial), it complies with the feedstock switch (a), Switch of technology without change of energy source improving energy efficiency (b) and different technology.

Finally, the Project Owner has declared that the accreditation period of the Project is 10 years with no option for renewal, which must be maintained in the following accreditation processes.

According to what is mentioned in the Project Document and the analysis performed, ANCE confirms that the Project complies with the requirements of the methodological tool Tool 01: Tool for the demonstration and assessment of additionality Version 07.0.0, point 4.1 and Tool 23: Additionality of first-of-its-kind project activities version 03.0, paragraph 12 (a), (b) and (c).

5.5.6 Conservative approach and uncertainty management

During the validation and verification of the Project, the lead evaluator confirmed the information section for the baseline and scenario calculation of the Project, which was extracted from official sources and/or elaborated by the designated entities for each activity, which contributed to the reduction of uncertainty, although several adjustments have been made during the validation and verification process, the Project managed to provide the necessary justification for the changes made and the methodological tools have been used following the steps described in these.

In the Monitoring Report /XXV/ the uncertainty of the mitigation results was considered and evaluated by reviewing the calibration of the scale serial number P340, authorized by the National Institute of Industrial Technology (I.N.T.I.) /XXXVII/ for the years 2019, 2021, 2022, due to the fact that the Project owner did not submit the calibration for the other years in the baseline estimation calculation, the conservative principle of reducing by 2% the amount of solid waste (Wj,x) was applied with the motive of occurring an underestimation that in an overestimation of GHG emission reductions (principle of ISO-1406464-2:2019). The ANCE team verified the data of the waste shipments generated at the entrance to the composting plant at the truck scale, interviewed the process managers and reviewed the internal operating procedures, in order to ensure the accuracy of the procedure. Also, official data issued by the country are considered for the electric power emission factor /XV/ and the diesel combustion emission factor /XVI/, and the owner of the project reviewed the data from the latest versions of the CDM and IPCC methodologies. This validates the correct application of uncertainty in the project.

5.5.7 *Leakage and non- permanence*

ANCE reviewed the Leakage and non-permanence analysis applied by the owner of the project and validated the application of the guidelines demanded by the BCR tool "PERMANENCE AND RISK MANAGEMENT" Version and the BCR Standard section 12.3.

The Project owner took into account those described in the Methodological Tool AMS-III-F Vesion 12.0 in its section 5.5 Leakage, para.27 "If the project technology is the equipment transferred from another activity or if the existing one is transferred to another activity, leakage effects (LEy) should be taken into account" (analogous to what is described in the Methodological Tool "Project and leakage emissions from composting" Version 01.0.0, point III. LEAKAGE EMISSIONS PROCEDURE) for the determination of leakage risk in the project. ANCE validated that this condition is not present in the operation of the Project, during the site visit it was observed that the composting operation is fixed, located in Industrial Sector 3 Prof. Nucci St. S/N between Buenos Aires highway and San Martin street, Arroyo Seco, Santa Fe, Argentina, WORMS Argentina S.A. has its own equipment for the operation and there is no transfer of equipment from another activity, the owner adheres to the activities of which it has declared in its operating license /XXXV/ and that any deviation would be subject to a fine or suspension.

Regarding para. 28 In case compost is stored under anaerobic conditions or disposed in a SWDS, leakage will be calculated to account for methane emissions from anaerobic decomposition of compost. The relevant procedures in the leakage part of the methodological tool "Compost Leakage Project and Emissions from Composting" shall be followed. This condition is also not applicable because during the site visit it was observed that the solid waste is located in an open composting area, the composting field is assembled, it is subjected to a maturation process and it is decided whether the waste will be treated by composting or vermicomposting, after this it is subjected to a maturation process and tests are made to check the quality of the compost: "This period is considered to be fulfilled when the periodic temperature controls indicate that the values recorded

for a pile have stabilized. At that point the supervisor decides to remove the pile to form a pile that occupies a smaller area and reaches a height of up to 4 meters. At that point the composting period begins. At this point the compost maturation period begins. The maturation of a pile can lasts between 1 and 2 months, a period in which the biological equilibrium of the mass takes place, where a gradual decrease in the temperature of the material should be observed. During this time, the temperature of the material should continue to be monitored, and any increases in temperature that indicate that the fermentation process has not been fully completed should be reported. In these cases, the pile should be removed to favor ventilation and avoid undesired temperature increases[4]. This rule out storage under anaerobic conditions, and the compost obtained by this procedure is stored in big-bags and marketed as a soil improver, so it is not discharged into a SWDS.

5.6 Monitoring plan

The monitoring plan provided by Worms Argentina S.A. meets several of the specified criteria required by the BCR Standard, particularly in the areas of GHG reduction monitoring, quality control, and sustainable development objectives. Here's an analysis of how the provided text aligns with each criterion:

a) Procedures for Management of GHG Reductions or Removals and Related Quality Control: The monitoring plan outlines detailed procedures for managing GHG reductions, including tracking fossil fuel and electricity consumption, and monitoring compost pile temperature and moisture levels. Quality control is assured through periodic laboratory testing, double verification of field data, and annual audits /XIX/. This aligns with quality assurance and GHG management requirements by ensuring accurate data collection, quality of the compost, and tracking potential GHG emissions from machinery and trucks.

b) Description of Methods for Periodic Calculation of GHG Reductions or Removals and Leakage: The monitoring plan describes methods to calculate emissions from fuel and electricity use, as well as emissions reductions from composting versus landfill methane emissions /II/. Leakage is considered negligible, as the composting facility is located next to the landfill, thus avoiding transportation emissions. Additionally, the AMS-III.F Version 12.0 methodology is referenced to ensure correct GHG quantification without leakage effects.

[4] Environmental compliance report, Annex A of IAC Form V.2.10 SD. Report issued by an environmental expert for compliance with the environmental regulations of the Province of Santa Fe "Once the Categorization is received by the Ministry of Environment and when required by the same - Category 2 or 3 - the proponent must submit an Environmental Compliance Report (IAC). This procedure allows obtaining the Environmental Aptitude Certificate, which exclusively certifies compliance with the environmental regulations of the Province".

c) Assignment of Roles and Responsibilities for Monitoring and Reporting: The plan indicates that monitoring responsibilities are distributed among operators, area managers, and laboratory personnel. Supervisors are responsible for final checks on compost quality, while lab personnel handle double-verification of data, ensuring accuracy in monitoring and reporting.

d) Procedures for Assessing Project Contribution to Sustainable Development Goals (SDGs): During the on-site verification, compliance with the Sustainable Development Goals (SDGs) was assessed through interviews and document reviews /XXVII/. The Project Holder demonstrated alignment with SDGs 9, 11, 12, and 13:

- SDG 9 (Industry, Innovation, and Infrastructure): The Project Holder reported a 40% increase in employees during the monitoring period, verified through the payroll document /XLIX/, with a projected 63% increase in local hires by 2028.
- SDG 11 (Sustainable Cities and Communities): The project focuses on agro-industrial waste treatment, which represents a significant proportion of the local economy. Waste entry logs used for emission reduction calculations were reviewed to validate this contribution.
- SDG 12 (Responsible Consumption and Production): The composting activity adheres to the principles of reuse and recycling. While Worms does not control waste generation, it plays a key role in transforming the region's most significant agro-industrial residues as outlined in the project scope.
- SDG 13 (Climate Action): The project contributes to combating climate change by avoiding large methane emissions. Baseline reduction variables and waste quantities for the accreditation period were reviewed, confirming that the indicators registered by the Project Holder are accurate.

This demonstrates that the project has implemented procedures to assess its contributions to the identified SDGs effectively.

e) Criteria and Indicators for Sustainable Development Objectives: The criteria related to compost quality, environmental protection (via controlled dust and flood mitigation), and operational efficiency support sustainable development. The document further mentions efforts to comply with national composting standards, inclusive, the owner shall declare the characteristics of the compost in order to obtain a Product Suitability Certificate, according to Law N° 20466 /XVIII/, aligning with indicators for improved environmental and agricultural practices.

f) Community Participation in Project Design and Implementation: does not apply since the project has been operating since 2018. Currently the project is not located near urban areas, so the main stakeholders are workers, government, clintes and suppliers.

g) Detailed Information for Monitoring Activities, Assessing Mitigation Results, and Quality Control: Detailed parameters for monitoring (e.g., fuel consumption, temperature and moisture control in compost, and lab verification) are provided, ensuring thorough assessment of mitigation outcomes. Additionally, the project owner has a general QA/QC procedures /LIV/ for project ghg emission reductions, which strengthens the accuracy of the estimate considering the uncertainty and review of calculation variables.

h) Monitoring of Co-Benefits of the Special Category, if Applicable: Not Applicable/No Evidence Provided.

i) Necessary Data and Information to Estimate GHG Reductions or Removals: The plan includes detailed data collection on fossil fuel and energy consumption, compost pile monitoring, and product quality, providing the necessary information to estimate GHG reductions during the quantification period.

j) Baseline or Reference Scenario Data and Supplementary Information: The baseline scenario, as inferred from the composting activity replacing landfill disposal, is described. The baseline is effectively addressed through referenced methodology.

k) Specification of Potential Emissions Occurring Outside the Project Boundaries (Leakage): The plan identifies that compost transport emissions are excluded, as the facility is adjacent to the landfill. The AMS methodology also clarifies that leakage is not applicable due to the technology used.

l) Assessment of Environmental and Social Effects: Environmental effects, such as dust control and flood prevention, are monitored, and quality control ensures environmental standards are met. Social effects are not directly mentioned, though the project indirectly benefits the community by reducing waste and improving soil health.

The monitoring plan for Worms Argentina S.A. aligns well with criteria, ensuring comprehensive GHG reduction monitoring, quality control, and sustainable development contributions. Minor improvements could enhance compliance, such as explicitly addressing community involvement and linking project activities to specific SDGs.

Project monitoring was evaluated as follows:

Step 1.- during the site visit, the main energy sources that generate greenhouse gases were validated. For this Project it was the diesel consumed by the mobile equipment and the electrical energy of the luminaire.

Step 2.- All the calculation variables involved in the estimation of emissions from composting were identified. They are shown in the following table.

Step 3.- The scenario in which the composting project did not exist was validated, which would have been the deposit of the waste in an open dump.

Step 4.- The calibration of the scale that receives the waste, which is subject to annual monitoring, was requested. The mitigation results was considered and evaluated by reviewing the calibration of the scale serial number P340, authorized by the National Institute of Industrial Technology (I.N.T.I.) /XXXVII/ for the years 2019, 2021, 2022, due to the fact that the Project owner did not submit the calibration for the other years (2018, 2020 an 2023) in the baseline estimation calculation, the conservative principle of reducing by 2% the amount of solid waste (Wj,x) was applied with the motive of occurring an underestimation that in an overestimation of GHG emission reductions (principle of ISO-1406464-2:2019).

Step 5.- the quality procedures related to the measurement and control of waste and composting were reviewed. The information necessary for the estimation of emissions a) according to the methodology /a/, /c/ used for the project activity is the measurement of non-hazardous waste, this data is directly involved in the equations for the estimation of emissions of the baseline scenario and the project scenario.

For the project emissions, the estimation of fuel consumption (diesel) and electricity consumption used in the project activity are also considered important data.

a) During the validation and verification carried out by ANCE, it was observed that, through the shipments and manifests /IX/, /X/, /XI/, /XII/, XIII) there is a continuous monitoring of the weight reported in the documents, ANCE carried out a sample review of physical documents, reaching a sample of 922 documents. The project holder submitted the calibration of the scale Act of sealing and verification (OTN° 307-15719) - 2019 /III/.

   For electricity and diesel consumption, the project owner made an estimate based on the equipment specifications Actual fuel used.xlsx /XXVI/, ANCE validated the application of the estimate in the Project's emissions calculation.

b) The baseline estimate calculation was validated using as monitored data the amount of waste that would be destined to a site, the consideration applied is that the amount of waste treated by the project activity is the amount that would be destined to a disposal site.

   The monitoring for the estimation of emissions is carried out according to the verification periods stipulated by the project and under the guidelines of methodologies /a/, /b/, /c/. In each verification period the activity data must be monitored. The emission factors to be considered correspond to those validated and presented in this section of the report.

c) To estimate the reductions, the values to be monitored are as follows:

Table 21. Values to be monitored

Data	Concept	Monitoring	Data source	Responsible
$W_{j,x}$	Amount of solid waste (wet basis) of type j disposed of or whose disposal has been avoided in the SWRS in year x (t).	Monitoring in the project / Annual	Shipments and manifests	Andres Beltramo Commercial Manager
$EC_{PJ,j,}{}_y$	Amount of electricity that would be consumed by baseline k in year y	Estimate / Annual	Calibration of INGAPSA receiving platform, model TTH21, serial number P340. /III/, /IX/ to /XIII/.	Andres Beltramo Commercial Manager
$FCi_{i,j,y}$	Amount of fuel type i burned in process j during year y	Estimate / Annual	Diesel and electric energy consumption file "Actual fuel used.xlsx" /XXVI/.	Andres Beltramo Commercial Manager
$DOC_{f,y}$	Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions given in the SWDS for year y (fraction by weight).	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
φ_y	Model correction factor to account for model uncertainties for year y.	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
OX	Oxidation factor (reflects the amount of methane from SWDS that is oxidized in soil or other material covering the waste).	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
MCF_y	Methane correction factor for year y.	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
DOC_j	Fraction of degradable organic carbon in waste type j (fraction by weight)	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
k_j	Decomposition rate of waste type j (1/year)	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant
j	Type of waste or types of waste in MSW	Not monitorable	Methodology /c/	Marcos Méndez environmental consultant

d) ANCE's verification team reviewed the information regarding the environmental effects that could be caused by the project's activities. A documentary review of the

monitoring plan was conducted, and it was observed that the environmental aspects evaluated by the owner were impacts to soil, aquifers, atmospheric emissions, and wastewater discharges.

As a follow-up action, interviews were conducted on the day of the site visit to find out how these impacts were managed and to ensure that the project did not have a negative impact on the environment. The project manager (Andrés Beltramo) mentioned that WORMS was committed to caring for the environment and had an environmental manual /XXXVIII/ and an environmental management system /XXXIX/ establishing environmental commitments and monitoring environmental indicators in order to track and measure environmental impact. During the verification, compliance with the control of environmental indicators was evaluated based on the results of the environmental studies presented: air monitoring and water monitoring (both with parameters within the permissible limits established by regulations). In addition, the latest renewal of WORMS Argentina S.A.'s operation, by provision No. 0287/19 DGDZS /XL/, requires WORMS to have an environmental insurance policy (in compliance with General Environmental Law No. 25,675). In conclusion, the environmental effects inherent to the Project activity are controlled by the Project owner.

Table 22. Enviromental aspect's evaluation

Environmental aspect	Evaluation	Monitoring
SOIL RESOURCE PROTECTION PROGRAM	The project owner implements a subprogram to detect hazardous waste and prevent spills; Performs the necessary operations to prevent overflows or flooding.	Yearly
WATER RESOURCE PROTECTION PROGRAM	The project owner carries out the evaluation of water quality parameters in the extraction well.	Yearly
AIR QUALITY REPORT	The project owner performs the air quality assessment, including ppm (parts per million) and hydrogen sulfide, and subcontracts an authorized third party to carry out this operation.	Yearly
WATER QUALITY ANALYSIS	The project owner carries out the evaluation of wastewater discharge parameters, subcontracts an authorized third party to carry out this operation.	Yearly

e) ANCE validated that the project owner has operational procedures /XIX/ to /XXII/ for the management of solid waste entering the composting plant, which ensure the quality of the compost and the amount of waste treated used for the calculation of estimated GHG reductions. These procedures describe the activities that the project activity personnel must carry out from the arrival of the trucks, registration on the scales, taking quality parameters at reception, waste storage and formation of compost beds (compost and vermicompost) and completion of the process until packaging.

ANCE reviewed that the owner of the project applied the procedures for managing the calculation of GHG reductions /XIV/. The owner uses a spreadsheet to compile information on the weight of non-hazardous waste entering the composting process for each accreditation period, segregating by baseline scenario, project emissions, leakage and reductions obtained. Subsequently, the owner identifies the variables and calculation factors that apply to each period and performs the calculation of estimated emissions for the project and baseline scenario.

f) The project owner has defined that the calculation of the reduction estimate will be every 3 years, as established in the monitoring report, based on the reduction estimate spreadsheet for Project /XIV/, and that the document review validated that the calculation variables and factors are in accordance with the AMS-III.F. version 12.0 methodology based on the recalculation validation activity in accordance with the BCR's VVM.

g) During the validation of the project, the assignment of roles and responsibilities for following up on the project activities was reviewed by means of an interview; Table 21 shows those responsible for monitoring follow-up.

h) The project Treatment of non-hazardous industrial waste to obtain Biocompost correctly applied the "Tool for the determination of contributions to the Sustainable Development Goals (SDGs) of Greenhouse Gas (GHG) mitigation projects" /XXVII/, in accordance with the provisions of the standard.

i) The Monitoring Plan established by the project establishes a clear mechanism to identify each SDG, associated activities, requirements, responsible party, indicators and monitoring frequency, among others. This is considered by ANCE as adequate in terms of the procedure established for the evaluation of each monitoring.

j) According to the SDG Tool, it was identified that some SDGs were indicated by default, which implies that they are mandatory. Consequently, the project identified those indicators and targets applicable by SDG, as follows.

Table 23. SDG Evaluation

SDG	Indicator	Goal
SDG 9. Industry, Innovation and Infrastructure.	9.2.2 Manufacturing employment as a proportion of total employment	Proportion of local people employed in total number of employees.
SDG 11. Sustainable Cities and Communities	11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities.	Final discharge out of total urban solid waste generated.
SDG 12. Responsible consumption and production	12.5.1 National recycling rate, tons of material recycled	Biocompost production

SDG	Indicator	Goal
SDG 13 - Climate action	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production.	Emissions Reductions of the Project activity.

After the documentary review and the site visit, ANCE considers that the information expressed in the Document Proyect, the Monitoring Plan and the BCR monitoring tools are correct.

5.7 Compliance with applicable legislation

The owner of the Project complies with the legislation that involves the project activity, being the compliance reference the Joint Resolution No. 1/2019 of the NATIONAL AGRICULTURAL HEALTH AND FOOD QUALITY SERVICE (SENASA), for compliance with the described, it was validated that the owner of the project has the procedure PE-8.2 Compost quality control /XIX/.

In addition, the necessary procedures for compliance with the Argentia legislation of the Province of Santa Fe and the Municipality of Arroyo Seco were evaluated (see table 24).

Table 24. Applicable legislation

Authority	Government level	Law	Analysis	Compliance
H. Municipal Council of Arroyo Seco	Municipal	Ordinance 2862/20	During the document review as part of the project validation, the Project Holder presented Decree 0492/17, which grants land use compliance to Worms Argentina S.A. 7-Otorgamiento uso conforme de suelo A. Seco 29-06-2017.pdf	Yes.
H. Municipal Council of Arroyo Seco	Municipal	Ordenance 2862/20	During the document review as part of the project validation, the Project Holder presented Resolution 024/18, which authorizes the activity of treating non-hazardous liquid and solid organic waste under the name of Worms Argentina S.A. The resolution conditions the holder to only carry out registered activities, in this case, the treatment of solid waste (cereals, oilseeds, and cork wood residues). 34-Habilitación Munic. Planta A. Seco - Resol.Nº 024-18 - 16.03.2018.pdf	Yes.

Authority	Government level	Law	Analysis	Compliance
Province of Santa Fe Ministry of the Environment	State	REGULATORY DECREE OF LAW N° 11.717 Decree N° 0101	Worms Argentina S.A. is declared a non-hazardous waste treatment company and identified with Registration RT 0029, with permission to treat the following waste: - Cereals and oilseeds - Cork and wood residues The specified methodology/technology involves the production of compost and vermicompost to be marketed as soil improvers.27- Resol. Nº 523 WORMS ARG. S.A. EIA.pdf	Yes.
Province of Santa Fe Ministry of the Environment	State	DECRETO REGLAMENTARIO DE LA LEY N° 11.717 DECRETO N° 0101	During the document review as part of the project validation, the Restricted Environmental Certificate was presented through Resolution 406. This mandatory procedure establishes the requirements for submission and processes for Environmental Impact Studies (EIA). The Project Holder submitted the approved EIA through Ministerial Resolution N° 0536/17. WORMS RES. 406.pdf	Yes.

5.8 Carbon ownership and rights

Through interviews during the site visit, ANCE validated that the ownership of the carbon credits belongs to WORMS ARGENTINA S.A.

The contractual agreement /XXX/ between POLARIS NETWORK ESPAÑA SL and Worms to validate the ownership of the carbon credits was reviewed, in the third section it is specified that Worms contracts with Polaris for the purpose of consulting on carbon footprint issues, in the fourth section the Project for solid waste processing is specified and in the the seventh section the payment agreement is specified.

During the validation, it was checked that the project activity is not registered to other emissions trading programs (CDM, Gold Standard, VCS, CERCARBONO, CSA GHG Clean and Climate Action Reserve project registry) or other forms of environmental crediting and is not part of any compliance scheme (binding caps). ANCE reviewed the websites of each of the GHG programs. This project is considered to be a first-time application to any GHG scheme. Below is the analysis that was carried out to validate that the project is the first of its kind, in some schemes there are waste projects but none worked with the CDM - AMS-III.F._Avoidance methodology of methane emissions through composting.

Table 25. Assessment and cross-checking of registries projects.

Registry	Website	No.	Waste's Projects	Methodology used
BCR	https://globalcarbontrace.io/projects?project_id=&project_name=&holder=&sector=3&projectType=&objective=&status=&country=	1	PROCESS OF NON-HAZARDOUS AGROINDUSTRIAL LIQUID ORGANIC WASTE	CDM - AM0057
Cercarbono	https://www.ecoregistry.io/projects-list/cercarbono-co2	0	NA	NA
CDM	https://cdm.unfccc.int/Projects/projsearch.html	9	Granja Tres Arroyos Methane Avoidance in Slaughterhouse Effluents Project	AMS-III.I. ver. 4
			Salta Landfill Gas Capture Project	AMS-I.D. ver. 13 AMS-III.G. ver. 5
			Methane capture and destruction on Las Heras landfill in Mendoza, Argentina	AMS-III.G. ver. 6 AMS-I.D. ver. 13
			Biogas recovery and Thermal Power production at CITRUSVIL Citric Plant in Tucumán, Argentina	AMS-III.H. ver. 10 AMS-I.C. ver. 13
			Methane Gas Capture and Fuel Switching at Compañía Argentina de Levaduras S.A.I.C. Plant Project	AMS-III.H. ver. 16 AMS-I.C. ver. 18
			Pindó Biomass Energy Generation from Forest Biomass	AMS-III.E. ver. 16 AMS-I.C. ver. 16
			Methane recovery in wastewater treatment in Famailla fruit processing plant, Tucuman, Argentina	AMS-III.H. ver. 16
			Las Camelias Biogas Energy Project from Wastewater Treatment.	AMS-III.H. ver. 16 AMS-I.C. ver. 19
			Anaerobic Digestion and Energy Generation at Semino Starch Plant Project	AMS-III.H. ver. 16
VERRA	https://registry.verra.org/app/search/VCS	0	NA	NA
Gold Standard	https://marketplace.goldstandard.org/collections/projects/renewable-energy	0	NA	NA
CSA	https://www.csaregistries.ca/GHG_VR_Listing/CleanProjectProjects	0	NA	NA

5.9 *Risk management*

The project has taken several actions to ensure its maintenance over time, primarily through a combination of stakeholder engagement, operational stability, and contingency planning. Here's an outline of the actions taken:

Ex-Post Status and Established Operations: The project has been operational since 2018, demonstrating sustained activity over multiple years. This ex-post status indicates a well-established project that surrounding companies rely on, which reduces the likelihood of premature closure or discontinuation. The continuity of operations is further supported by the established relationships and contracts with local stakeholders, which indicate a long-term commitment.

Stakeholder Contracts and Commitments: The project involves existing contracts with stakeholders, which secures long-term engagement and commitment from the involved parties.

Risk Management and Contingency Planning: A comprehensive risk management plan has been developed, identifying potential environmental, financial, and social risks. Although all risks were rated as low, the project has outlined mitigation measures for each, including emergency response protocols and financial diversification strategies. This plan includes provisions to escalate and monitor risks if they increase in impact, which ensures that the project can adapt to challenges over time.

Expansion and Growth Strategy: The project holder has outlined an expansion plan to increase suppliers and clients, which is expected to strengthen the project's financial foundation. By diversifying income sources and expanding its operations, the project aims to maintain a steady cash flow, reducing financial vulnerability and enhancing its capacity to endure over the long term.

Commitment to Self-Sufficiency: One of the social risk mitigation strategies includes ensuring that the project can operate independently of governmental support, emphasizing self-sufficiency. This approach reduces dependency on external funding or policies that might change over time, which contributes to the project's longevity.

Provisions for Future Risk Mitigation: Although all current risks are rated as low, the project includes measures that can be activated if any risk increases in future monitoring periods. This flexibility within the risk management framework helps ensure the project's resilience over time.

The project holder conducted a thorough identification of risks across environmental, financial, and social dimensions, using the BCR Tool Permanence and Risk Management Version 1.1. This tool provided a structured framework to assess potential risks and assign scores based on their likelihood and potential impact. Here's how each dimension was addressed:

1. Environmental Risks: The project holder identified potential environmental risks related to natural phenomena and operational hazards. Each environmental risk was scored as low, with specific mitigation measures outlined:

   Flooding: Scored as low, with mitigation measures including road and water reservoir maintenance, as well as the suspension of operations in case of flood risk.

Drought: Scored as low, with measures to diversify suppliers, ensuring continuity in production if local suppliers are affected by drought.

Thunderstorms: Scored as low, with mitigation through the installation of lightning rods to reduce the risk of damage from lightning.

Fire Risks: Potential risks from forest or grass fires and composting processes were scored as low, with an emergency response plan and preventive protocol in place.

Transportation and Personnel Safety: Scored as low, with measures such as road maintenance, signage, and first aid training to reduce the risk of accidents.

These measures show that the project holder has considered both natural and operational risks in its environmental planning, with protocols in place to respond to these events.

2. Financial Risks: The project holder assessed potential financial risks that could affect the project's cash flow and cost structure. Each risk was identified as low, with preventive measures in place:

   Increase in Costs and Expenses: Scored as low, with a diversification strategy in which the company has multiple revenue-generating activities. This allows profits from one activity to support another if necessary, providing financial flexibility.

   Low Cash Flow: Scored as low, with a plan to expand the number of suppliers and clients, thus increasing business volume and cash flow to mitigate cash flow risks.

   These financial risk mitigation strategies focus on creating a stable revenue stream and flexibility in operations, helping to safeguard the project's financial health.

3. Social Risks: Social risks were evaluated in terms of community engagement and alignment with local government priorities. Each social risk was scored as low, with actions to maintain positive relationships and manage stakeholder expectations:

   Changes in Government Priorities: Scored as low, with measures to ensure the project's independence from government assistance and to maintain operational autonomy. The project holder also engages closely with local governments to align on policy matters.

   Communication with Stakeholders: Scored as low, with a communication and consultation plan implemented to ensure alignment with stakeholders and address any concerns proactively. By addressing potential shifts in governmental priorities and ensuring effective stakeholder communication, the project holder demonstrates an awareness of social dynamics and a proactive approach to managing community relationships.

All risks were scored as low, meaning less than a 5% impact on the project's carbon benefits, with mitigation strategies outlined for each category.

These actions collectively demonstrate that the project holder is taking significant steps to ensure the permanence of GHG reduction activities. The project's operational stability, financial resilience, risk management, and stakeholder engagement all contribute to maintaining the benefits over time, in compliance with the terms and conditions of the BCR.

Compliance with mitigation measurements of assessed risks.

a) The assessment of environmental risck shown in the next table:

Table 26. Environmental risk.

N°	Mitigation measurements	Assessment by ANCE
1	Road and water reservoir maintenance. Suspension of operations in case of risk of flooding.	During the on-site verification, it was observed that a water truck was spraying water on the roads to prevent dust particles from spreading. The water reservoir was also observed, where treated water from a process independent of the Project is stored. The risk of flooding is actually low, as the Paraná River is located 5 km from the project site. A review of flood reports showed that the affected areas are primarily residential zones along the riverbanks. Regarding rainfall, the project holder mentioned in an interview that part of the facility preservation activities includes maintaining the internal protection channels and external storm drainage channels, ensuring they are kept clear of blockages and vegetation.
	Diversification of suppliers to find those not affected by the drought to maintain the levels of production stable.	The project holder explained that this measure relies on another activity by Worms Argentina S.A., which handles liquid waste treatment, producing treated water as a byproduct. Since it is agro-industrial waste, and as mentioned in the Additionality analysis, the area is prolific, being one of the largest generators of agricultural products. Therefore, ANCE agrees that water scarcity due to drought is a low risk.
3	Lightning rod installation	Based on the Risk Study and as observed during the on-site visit, the project is equipped with lightning rods.

N°	Mitigation measurements	Assessment by ANCE
4	24 hours security with perimeter fencing, cameras and access control.	During the on-site verification, access was gained through a security module where registration as a visitor was required. Additionally, it was observed that a security guard inspected waste transporters, which is also documented in procedure PE-8.2-02 /XXI/.
5	Emergency Response Plan. Alarm and start of preventive protocol to avoid damage to combustible materials in storage.	The project holder presented the Emergency Plan, and the risk is low because the stacked waste and compost maintain the humidity parameter (40%-80%).
6	Demarcation, signaling and maintenance of internal streets and access. Accident prevention and first aid courses.	During the site visit, signage for vehicle traffic was observed, as well as road maintenance through watering.

b) The assessment of finacial riscк shown in the table 27.

Table 27. Financial risk

N°	Mitigation measurements	Assessment by ANCE
1	Diversified activities in order to developed 3 activities simultaneously with in the company allowing to redirect profits from one of them in other if necessary.	During the site visit, it was observed that Worms Argentina has two additional activities: liquid waste treatment and tire waste treatment, in accordance with Resolution No. 024/18.
2	Continuation of the expansion plan to increase the number of suppliers and clients increasing the business volume and cash flow.	The project holder explained that the high-quality service provided by Worms Argentina S.A. is a way to attract new clients. Consequently, the verification team reviewed the Customer Satisfaction Procedure and the applied survey /LIII/.

c) The assessment of finacial social shown in the table 28.

Table 28. Social risk

N°	Mitigation measurements	Assessment by ANCE

1	Implementation of the communication and consultation plan to aligned the different stakeholders' priorities.	The interaction between the Project's stakeholders was reviewed, and it was noted that there is a declaration from the Municipality of Arroyo Seco stating that Worms Argentina S.A. has no complaints or reports against it /XLI/.

5.10 Environmental aspects

The ANCE validation team evaluated, based on the NNH tool of the BCR Standard, the requirement that the project holder must carry out an environmental assessment to analyze the effects on biodiversity and ecosystems and, in case adverse effects are identified, define corrective measures to prevent or mitigate the environmental impacts of greenhouse gas (GHG) project activities.

During the information review, the Project Holder presented programs for environmental protection:

Soil Resource Protection Program:

Hazardous Waste Management Subprogram: This subprogram focuses on the segregation of hazardous waste at the point of generation and the proper storage of unforeseen hazardous waste. This helps to minimize soil contamination risks and aligns with waste management principles that BCR would likely consider favorable for reducing ecosystem impacts.

Drainage and Flood Control Subprogram: This subprogram ensures that the natural water flow is not altered, which is relevant for soil biodiversity and the preservation of local ecosystems. This type of management respects the natural environment and helps prevent the alteration of local habitats.

Water Resource Protection Program:

Groundwater Monitoring Subprogram: Groundwater sampling is conducted to ensure that extraction activities do not alter the hydrogeological profile of the resource. This program not only monitors water quality but also assesses the long-term impact on aquifers, which is a proactive measure to prevent negative impacts. This approach aligns with BCR requirements, as it allows the identification and mitigation of potential impacts on water resources, a key ecosystem component.

Air Quality Report:

Worms Argentina has implemented monitoring of particulate matter (PM10) and hydrogen sulfide (H_2S) in the air. The levels obtained are within the permitted limits, indicating that plant activities do not contribute to air pollution at harmful levels for the

environment. Although the BCR does not specifically mention air quality, monitoring airborne pollutants reduces indirect impacts on biodiversity and supports a healthy environment.

Water Quality Analysis:

The water monitoring conducted ensures there is no negative impact on groundwater quality, and the parameters comply with legislated limits. This analysis is essential to verify that there are no adverse effects on natural resources or local biodiversity, which fulfills the BCR's evaluation requirement regarding the effects of activities on ecosystems.

The ANCE team validated the programs presented by the Project Holder, which must be evaluated during accreditation periods in accordance with the monitoring plan.

5.11 Socioeconomic aspects

To assess how the project holder (Worms S.A.) applied the BCR No Net Harm tool criterion for analyzing the significant socioeconomic effects of the project, several aspects can be highlighted as meeting the standard:

1.- Compliance with Socioeconomic Analysis: As a certified B Corporation (BCorp)[5], Worms S.A. demonstrates a commitment to social and environmental impact. This certification involves an ongoing assessment of social and environmental responsibility that goes beyond mere economic profitability, aligning well with the BCR criterion aimed at analyzing significant socioeconomic effects.

2.-Description of the Local Context: ANCE team observed how Worms S.A. evaluated the local demographics and labor conditions, including an analysis of the population and economy in Arroyo Seco[6]. They identified that the local economy relies on agriculture and livestock and that the economic crisis has affected purchasing power and increased unemployment. This context provides a clear understanding of the socioeconomic environment, which is essential for anticipating and contextualizing the project's effects.

3.- Evaluation of Proximity and Neighboring Conditions: ANCE verified that the facilities are located more than 2 kilometers (By Googleearth) from any populated center, thus avoiding direct impacts on nearby homes. They also analyzed the property boundary conditions, concluding that its neighbors are agricultural lands and other similar facilities (e.g., a pig farm) and that access roads may cause dust.

[5] Worms - Certified B Corporation - B Lab Global
[6] Arroyo Seco en la provincia de Santa Fe - Municipio y gobierno municipal de Argentina

This indicates that the project's effects on the immediate community are limited due to the location and neighboring conditions.

4.- Evaluation of Indigenous Communities or Traditional Territories: Worms S.A. confirmed the absence of indigenous communities or traditional territories[7] near the project through the National Institute of Indigenous Affairs (INAI), complying with the BCR criterion to ensure that the project does not affect culturally sensitive or protected areas.

5.- Identification of Socioeconomic Effects: Worms S.A. concludes that the project has positive effects, such as environmental improvement, an increase in local employment, and the reuse of waste generated by neighboring companies. They declare that there are no significant negative effects, so no corrective actions have been established.

These conditions should be evaluated in the upcoming accreditation periods according to the Monitoring Plan; in the event of a negative impact, a corrective action protocol must be implemented.

6 *Verification findings*

The verification process executed by ANCE, through its Validation/Verification Body for GHG Emission Declarations and Projects was performed under the approach defined by ISO 14064-3:2019. Specification with guidance for the validation and verification of GHG declarations. The above, to provide a reasonable level of assurance that the GHG reductions reported in tons of CO_2 equivalent and the information integrating the Project Treatment of non-hazardous industrial waste to obtain Biocompost, were prepared taking into consideration the requirements of the Biocarbon Registry Standard version 3. 2, the GHG Project Validation and Verification Manual version 2.3 and the corresponding 14064-2:2019 Specification with guidance, at the project level, for the quantification, monitoring and reporting of emission reductions or enhancement of greenhouse gas removals.

In order to ratify the information analyzed during the documentary review, on December 5 and 6, 2023, the on-site inspection of the sources indicated in the sampling plan related to the calculation of estimated emission reductions was carried out, verifying the evidence supporting the information and data documented by the project proponent.

The following processes were considered for the activities associated with this phase:

[7] https://www.argentina.gob.ar/derechoshumanos/inai/mapa

- Evaluation of the identification of reportable GHGs associated with project activities.
- Applications of AMS-III.F., Small-scale methodology: Avoidance of methane emissions through composting. Version 12.0 /a/ and its references /b/, /c/, /d/, /e/.
- Evaluation of the processes of emission source identification, emission reductions, request, collection, consolidation, transformation and reporting of consumption and production data used for the quantification and reporting of the GHG emission reductions project.
- Evaluation of the evidence supporting the consumption and production data associated with the project activity.
- Evaluation of the controls associated with the information systems used by the project owner.
- Evaluation of the routines for the control of input, transformation and output errors of the data and information used for the project.
- Evaluation of the review processes carried out by the personnel responsible for the project.
- Evaluation of the methods to ensure that the equipment associated with the monitoring and measurement of project data is calibrated and properly maintained, as well as the methodologies implemented for the calculation of estimated values at the facility.

As a complement to the aforementioned activities, ANCE conducted interviews with people directly and indirectly related to the project activity considering the associated process/activity or fuel/inputs.:

Table 29. Interviews

Name	Position and/or area	Process/activity or associated input	Interview in
Marcos Méndez	Environmental consultant	Project Description Tour of the project facilities Methodologies Monitoring plan Sustainable development Environmental impact and Baseline and monitoring	Remote
Andres Beltramo	Commercial Manager	Collection and safekeeping of non-hazardous waste manifests and shipments Consultation with local stakeholders Argentine regulatory framework	On-site

Name	Position and/or area	Process/activity or associated input	Interview in
Berlits López Camargo	Technical laboratory manager	Parameters and quality control of the composting process	On-site
Víctor Lepera	Commercial Manager	Strategic Process Management	On-site
Fernando Molinari	RRII	Carbon market advisor	On-site

Derived from the verification activities carried out by the lead verifier, the following findings were established (the analysis is shown in Annex 2):

Table 30. Verification findings

No.	Reference to noncompliance	Description of finding	Type of nonconformity: (CAR, CL, FAR)
1	Paragraph 6.3.2.2. of Tool 04. Tool 04, Emissions from solid waste disposal sites, V. 08.0	During the validation and verification carried out in documents and on site, it was found that the quantities of non-hazardous organic waste used for the calculation of estimated reductions differed from those found in the manifests and shipments received by the organization (solid waste records folder), causing a material difference.	CAR
2	6.7 Quantification of GHG emissions and/or GHG removals, Standard 14064 part 2, 2019.	During the validation and verification of the project, it was found that there are emission factors for electricity consumption published by the Secretary of Energy of Argentina, which are more accurate values for the calculation of emissions estimates.	CAR
3	6.6 Selection of GHG SSRs for monitoring or estimation of GHG emissions and removals, Standard 14064 part 2, 2019.	During the validation and verification of the Project, it was found that diesel and gasoline consumption reported in the invoices (PLANILLA COMBUSTIBLE.xlsx) and energy consumption are overestimated and not adjusted to the project limit, so it is necessary to record energy consumption based on the declaration of the project limit and scope.	CL
4	2.2 Objective	Correct the wording of the Project Objective according to the BCR Standard: "It is important to note that the project objectives should be consistent with the proposed activities and the expected GHG mitigation results", so it is necessary that the focus is directed to the Project and not to the organization.	CAR
5	3.1.1 Conditions for the applicability of the methodology	Clarify the applicability of the methodologies used for the Project's emissions reduction. In the PDD there is a replication of the paragraphs of the methodology without reflecting the application of each one.	CL
6	3.2.3 Timelines and periods of analysis 3.3.2.3.3.1.	Clarify the specific period covered by the Project considering that it will last 10 years.	CL

No.	Reference to noncompliance	Description of finding	Type of nonconformity: (CAR, CL, FAR)
7	3.5 Uncertainty Uncertainty	Qualify the uncertainty analysis for the direct measurements of solid waste.	CL
8	3.7 Mitigation Mitigation	Clarify how the mitigation results were achieved as a consequence of the execution of the project activities (application of the methodology).	CL

6.1 Project and monitoring plan implementation

6.1.1 Project activities implementation

The verification of the project Treatment of non-hazardous industrial waste to obtain Biocompost corresponds to the monitoring period 01/04/2018 to 31/03/2023.

ANCE evaluated the implementation of the project activities according to those described in the PDD /I/ as described in the Monitoring Plan /XXV/. The project holder has a specific area of 70,000 square meters to carry out the composting activities. The first project activity related to monitoring is the entry control process /XXI/, in which the scale operator reviews the consignment or manifest to ensure that the waste does not have any hazardous characteristics and weighs the truck (entry and exit) and records the weight /IX/ to /XIII/ to compare it with the amount declared on the consignment. During the on-site inspection, it was validated that the laboratory manager performs a visual inspection of the unloaded waste and measures the temperature (unloading of the waste is discarded if it exceeds 55°C) /XXII/. The weighing scale was subject to calibrations for the years 2019, 2021 and 2022 /III/.

The project proponent also included in the monitoring the consumption of diesel and electricity used in the project, however, these values were obtained by estimation /XXVI/.

ANCE was able to verify the progress in meeting the objectives with the documents presented in the monitoring matrix of the project activities and its reference documents.

The main activities that support compliance with the emission reduction targets for the period 01/04/2018-31/03/2023 in the project Treatment of non-hazardous industrial waste to obtain Biocompost were demonstrated with different supporting documents (4.2), there were some deviations in the measurement of the amount of waste, however, in the calculation of the estimated reductions of the project the project proponent applied conservative measures in order not to overestimate the declared reductions.

6.1.2 Monitoring plan implementation and monitoring report

ANCE reviewed and was able to confirm that the PDD monitoring report was performed in consistency with the Monitoring Plan submitted by the project proponent. The

monitoring plan is intended to facilitate the monitoring, recording, reporting and verification activities necessary to evaluate the project performance and determine the emission reductions with the applied methodology /a/.

The verification team has verified all parameters presented in the monitoring plan with the requirements of methodologies /a/, /b/, /c/. In this regard, the Monitoring Plan contains all required parameters, with appropriate descriptions regarding: Data source, measurement procedures, monitoring frequency and procedures to be applied.

6.1.2.1 Data and parameters

The values monitored annually and verified during the site visit are as follows:

Table 31. Monitored data parameters

Responsible for monitoring		Andres Beltramo			
$W_{,y}$ / Q_y		Amount of solid waste (wet basis) of type j disposed of or prevented in the SDRS in year x			
Measurement units:		Tons (wet basis)			
Quality procedures:		PE-8.2; PE-8.2-01; PE-8.2-02; PE-8.2-04			
Measuring equipment		Model: 768 N°7-1716			
		Calibration frecuence: annual			
		Registrer of calibration: 2019, 2021, 2022			
		Compliance with the verification requirements requested by the National Institute of Industrial Technology			
Year	*2018-2019*	*2019-2020*	*2020-2021*	*2021-2022*	*2022-2023*
$W_{,y}$ (t)	12,046.71	16,520.30	13,893.60	16,800.88	16,182.50
Calibration	It was not done.	Minutes of sealing OT N°307-15719	It was not done.	Minutes of sealing OT N°307-15719 – 62325	Minutes of sealing OT N°307-15719 – 68603
Responsible for monitoring		Andres Beltramo			
***FC*$_{,i,y}$**		Fossil fuel consumption in the project			
Measurement units:		Litters			
Quality procedures:		Diesel and electric power consumption file "Actual fuel used.xlsx" /XXVI/			
Measuring equipment		The conservative principle of 2% reduction was applied on the grounds of underestimation rather than overestimation of GHG emission reductions (principle of ISO-14064-2:2019).			
Year	*2018-2019*	*2019-2020*	*2020-2021*	*2021-2022*	*2022-2023*
L	12,174.80	20,528.73	17,923.14	19,959.50	34,699.79
Calibration	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Responsible for monitoring		Andres Beltramo			
$EC_{PJ,j,y}$		Amount of electrical energy in the project			
Measurement units:		MWh/yr			
Quality procedures:		Diesel and electric power consumption file "Actual fuel used.xlsx" /XXVI/			
Measuring equipment		The conservative principle of 2% reduction was applied on the grounds of underestimation rather than overestimation of GHG emission reductions (principle of ISO-14064-2:2019).			
Year	*2018-2019*	*2019-2020*	*2020-2021*	*2021-2022*	*2022-2023*
MWh/yr	16.75	19.5	21.25	22.5	20
Calibration	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Responsible for monitoring		Andres Beltramo			
SDG9		Make cities and human settlements inclusive, safe, resilient and sustainable			
Monitored:		Annual.			
		The Project Holder has reported an increase in the number of employees, which has been verified through the payroll document /XLIX/ of Worms Argentina S.A., representing a 40% increase for the monitoring period.			
Quality procedures:		15 Monitoring system, Monitoring report version 3			
Responsible for monitoring		Andres Beltramo			
SDG11		Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation			
Monitoring:		Annual			
		It is inherent to the project's activity, as it focuses on the treatment of agro-industrial waste, which represents a high proportion in the locality. For the indicator review, waste entry logs were examined /IX/ to /XIII/, which were used to calculate the estimated emission reductions.			
Quality procedures:		15 Monitoring system, Monitoring report version 3			
Responsible for monitoring		Andres Beltramo			
SDG12		Ensure sustainable consumption and production patterns.			
Monitoring:		Annual			
		The owner of the project explained that the composting activity falls within the principles of reuse and recycling, although the reduction of waste generation does not depend on Worms, Worms represents an important actor for the transformation of the most representative waste of the Agroindustrial zone described in the scope of the Project. For the indicator review, waste entry logs were examined /IX/ to /XIII/, which were used to calculate the estimated emission reductions.			

Quality procedures:	15 Monitoring system, Monitoring report version 3
Responsible for monitoring	Andres Beltramo
SDG13	Take urgent action to combat climate change and its impacts
monitoring:	Annual
	ANCE agrees that the Project contributes to combating climate change by preventing large amounts of methane emissions. The calculation variables used for baseline reduction were reviewed /II/, and the waste quantities for the accreditation period were verified, confirming that the indicators recorded by the Project Holder in the tool are correct.
Quality procedures:	15 Monitoring system, Monitoring report version 3

The monitoring plan includes the monitoring of project implementation, the description of the monitoring plan in the PDD includes the following for each of these monitoring tasks:

- Data and parameters used for emission reduction estimation;
- Technical description of monitoring activities;
- Description of data collection;
- Data quality control;
- Data storage; and
- Responsibilities

During monitoring, data will be collected related to the variables/parameters listed in the PDD and Monitoring Report.

The ANCE validation and verification team performed a review of all input data, parameters, formulas, calculations, conversions, resulting uncertainties and output data to ensure consistency with the criteria set out in the calculation methodologies /a/, /b/, /c/ used and the Monitoring Report.

The verification team reproduced the calculations to ensure the accuracy of the results. Where appropriate, references to analysis methods or default values were verified with the corresponding source.

6.1.2.2 Environmental and social effects of the project activities

The project holder, Worms Argentina S.A., has implemented specific environmental protection programs focused on the management of air, soil, and water. During the on-site verification, the environmental management system manual was reviewed, which describes the identification of environmental aspects, risk categorization, and impact mitigation measures. Additionally, compliance with current environmental legislation was verified, primarily with the requirements of the Municipality of Arroyo Seco (Resolution

No. 523), which grants the permit for activity authorization (Resolution No. 024/18). This data indicates adequate monitoring of the project's environmental effects (Reference: Resolution No. 523 and No. 024/18). However, the report does not specifically detail monitoring of social effects, possibly due to the absence of nearby affected communities. Environmental effects monitoring is adequately documented, although it could be complemented with an analysis of social effects.

The review included cross-verification of documents, such as the environmental management manual, legislative compliance evaluations, and studies of contaminants in soil, air, and water. It was confirmed that contaminant levels remain within the permissible limits established by legislation (Reference: General Environmental Law No. 25,675 and Decree No. 1879/13). This demonstrates a comprehensive verification of the project's environmental effects.

The project holder has taken measures to mitigate environmental risks, as required by local legislation. Worms S.A. has an approved environmental risk assessment and an environmental insurance policy in accordance with General Environmental Law No. 25,675. Additionally, the project does not generate significant social impacts, as there are no nearby populations, verified through geographic coordinates and on-site visits (Reference: Environmental Risk Assessment, Resolution No. 523). Environmental risks have been mitigated, and no social risks have been identified due to the project's isolated location; however, the evaluation of potential social risks should be included in subsequent monitoring reports for the accreditation periods.

The verification team reviewed the mitigation actions taken by the project holder and verified compliance with local regulations. This includes adherence to the maximum permissible limits for contaminants in soil, air, and water, according to municipal standards. The approval of the environmental risk assessment and the authorization permit reflect the effectiveness of the mitigation actions and regulatory compliance (Reference: Resolution No. 024/18).

The project has generated a positive impact on local employment, with a 40% increase in the number of employees during the monitoring period, verified through the payroll document /XLIX/ of Worms Argentina S.A. (Reference: Payroll Document /XLIX/). A 63% increase in local hires is projected by 2028, contributing to the socioeconomic development of the community. Since the project is located far from populated areas, there is no direct interaction with local communities; however, local employment is a relevant socioeconomic benefit.

6.1.2.3 Procedures for the management of GHG reductions or removals and related quality control for monitoring activities

ANCE confirms that all values involved in the Project emission reductions, measurement results and estimates have been incorporated into the monitoring plan, the frequency, responsibility and authority for recording, tracking, measuring and reporting of project

activities have been clearly developed with procedures and ongoing communication between the licensee and the Project proponent.

6.1.2.4 Description of the methods defined for the periodic calculation of GHG reductions or removals, and leakage

ANCE confirms that the methods applied for the calculation of GHG emission reductions of the Project Treatment of non-hazardous industrial waste to obtain Biocompost are in accordance with the /a/, /b/, /c/ methodology in its Monitoring methodology and the evaluation required by the BCR Standard.

6.1.2.5 Assignment of roles and responsibilities for monitoring and reporting the variables relevant to the calculation of reductions or removals

Section 15.2 of the monitoring report shows the workstations responsible for monitoring the variables and parameters for the calculation of the GHG reduction station. During the site visit the ANCE verification team met with the personnel in charge.

6.1.2.6 Procedures related whit the assessment of the project contribution whit the Sustainable Development Goals (SDGs)

The proponent of the project has evaluated compliance with the Sustainable Development Goals for the monitoring period 01/04/2018 to 31/03/2023, following up with the methodological tool of the BCR program, SDG Tool /XXVII/.

For SDG 9 the project aims to achieve target 9.2.2 "Manufacturing employment as a proportion of total employment", ANCE confirms, through interviews and review of the /XXVII/ tool, that the number of jobs held by local people has increased from 40% to 59%.

Regarding SDGs 11 and 12, for target 11.6.1 "Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities" and 12.5.1 "National recycling rate, tons of material recycled", respectively, the project holder is mainly dedicated to the treatment of non-hazardous waste, its processes contribute to the circular economy where the waste becomes a raw material in another process, This process has been validated and verified by ANCE.

Sustainable Development Goal 13 focuses on achieving a specific indicator that seeks to reduce total greenhouse gas emissions per year. From the monitoring of GHG emissions carried out for the period of analysis, a value of 15,195 tCO2e (on average) released into the atmosphere each year was recorded; of which 100% were the result of the transformation of solid waste into compost.

6.1.2.7 Procedures associated with the monitoring of co-benefits of the special category, as applicable

No applicable.

Considering that for the year 2018 and 2021 the Project holder did not submit the calibrations of the weighing scale, according to the calibration frequency established in the monitoring plan /XXV/, the project holder has decided to apply to the emission reduction estimation equation a conservative uncertainty percentage (2%) considering the error that could be generated by the absence of this certification.

The monitoring of variables described in the monitoring report has been carried out in accordance with the monitoring plan contained in the PDD/I/ in a correct and sufficient manner. ANCE has verified the monitored data for the required parameters and has considered them complete, reliable and consistent.

For the remaining accreditation period, the project owner intends to strengthen the measurements of all project variables.

6.2 Quantification of GHG emission reductions and removals

ANCE has evaluated the emission reductions reported for the project Treatment of non-hazardous industrial waste to obtain Biocompost according to the methodology AMS.III.F, Avoid methane emissions through composting, Version 12.0 and the criteria of the BCR Validation and Verification Manual, the application was verified for the crediting period established in the monitoring report (01/04/2018 to 31/03/2023), in addition, of all the variables involved in said methodology /a/ and the applicable references /b/, /c/, /d/ and /e/.

6.2.1 Methodology deviations (if applicable)

No deviations were found for the application of the methodology /a/.

6.2.2 Baseline or reference scenario

The calculation procedure used by the Project proponent to quantify the GHG reductions in the baseline scenario as a result of the implementation of the project activity during the monitoring period is summarized below and its results are summarized below.

According to the formulas presented in Section 5.5 of this report, the Project proponent calculated the baseline as follows:

The methodological tool Emissions from solid waste disposal sites Version 08.1 /b/, describes the steps required for the calculation of the baseline for the project activity, the project proponent carried out the quantification of the records of solid waste entering the composting process for the monitored crediting period (01/04/2018 to 31/03/2023), this project does not consider flaring or energy use of waste gases, parameters established in the methodology /b/ and cited by the IPCC were used.

The audit team verified all calculations of greenhouse gases emitted during the monitoring period for baseline emissions. No errors were found that materially affected the emissions

reported by the project during the monitoring period. The spreadsheet formulas (WORMS solid V2.xls), conversions, estimates and consistent use of data and parameters have been carefully reviewed by the ANCE audit team.

6.2.3 Mitigation results

ANCE verified the calculation of emission reductions of the Treatment of non-hazardous industrial waste to obtain Biocompost Project, for the project period established in the monitoring report (01/04/2018 to 31/03/2023), the audit team performed the analysis according to the methodology AMS.III.F, Avoid methane emissions through composting, Version 12.0, the BCR Standard and the MVV, for the evaluation a reasonable assurance level and a materiality percentage of 5% were contemplated. The verification team performed a comparison of the parameters and calculation variables mentioned in the PDD monitoring plan and the monitoring report.

During the documentary review, the audit team reviewed the calculation tool prepared by the project proponent /II/; during the on-site inspection visit, the quantities of waste stated in the shipments and manifests were reviewed; the audit team reviewed a sample of 922 shipments without finding any errors during the review; the operation of the compost plant was validated and verified. The emissions of the baseline scenario and the preceding emissions of the project and the estimated emissions reduction of the project were calculated, in each calculation the verification team calculated the materiality, obtaining as a result 0.00%.

ANCE concludes that the project presented by WORMS ARGENTINA S.A. as project owner is correct and complies with the methodology /a/.

6.2.3.1 GHG emissions reduction/removal in the baseline scenario

The ANCE verification team reviewed the Project baseline calculation for the accreditation period according to the following steps:

Step 1. Identification of baseline variables

For the determination of the baseline, the project proponent used the equation described in the AMS.III.F methodology, Avoid methane emissions through composting, Version 12.0.:

$$BE_y = BE_{CH_4,SWDS,y} + BE_{ww,y} + BE_{CH_4,manure,y} - MD_{y,reg} \times GWP_{CH_4}$$

In the following table descrive all variables:

Table 32. Baseline variables for the acreditaon period

Variable	Concept	Assessment
BE_y	Baseline emissions in year y (tCO2e)	The period of the project is of 1/April/2018 to 31/march/2023.

		The owner of the project shown all waste manifest from the start of operations /IX to XIII, XXXI/.
$BE_{CH_4,SWDS,y}$	Annual potential methane generation from solid waste composted by the project activity during years x from the start of the project activity (x=1) to year y (tCO_2e).	The project owner applied the stipulations of the methodological tool "Emissions from solid waste landfills".
$BE_{ww,y}$	If applicable, baseline emissions of the co-composted wastewater, calculated according to AMS-III.H procedures. (tCO2e)	ANCE verify that the project scope does not contemplate wastewater treatment.
$BE_{CH_4,manure,y}$	If applicable, baseline emissions of composted manure from project activities, according to AMS-III.D procedures. (tCO2e).	ANCE verify that the project scope does not include manure treatment.
$MD_{y,reg}$	Amount of methane that would have to be captured and flared in the year and to comply with current regulations (ton).	ANCE verify that the project scope does not consider methane flaring.
GWP_{CH_4}	Global warming potential of methane	28

Step 2. Determination of the annual methane generation potential.

The project proponent calculated the annual methane generation potential according to the Methodological Tool, Emissions from solid waste disposal sites V. 8.1 /b/, considering the following constants for the determination of the baseline emissions:

$$BE_{CH4,SWDS,y} = \varphi_y * (1 - f_y) * GWP_{CH4} * (1 - OX) * \frac{16}{12} * F * DOC_{f,y} * MCF_y$$
$$* \sum_{x=1}^{y} \sum_{y} (W_{j,x} * DOC_j * e^{-kj*(y-x)} * (1 - e^{-kj})$$

Table 33. Variables of baseline emissions for the acreditaon period

Variable	Concept	Assessment
Qy, Wx	Quantity of waste composted in year y (wet basis)	During the site visit, ANCE verified that the solid waste entering the process must have acceptance criteria, according to internal procedure PE-8.2-04 /XXII/, including moisture, which must be greater than or equal to 85% /XXII/. This meets the condition of the parameters of methodologies /b/ and /c/.
x	Years of the time period in which waste is disposed at SWDS, from the first year of the time period (x = 1) to year y (x = y).	ANCE verified the accretion period is from 1/April/2018 to 31/march/2023 acording to monitoring plan and the estimation file of reduction GHG emissions.
y	Year of the crediting period for which methane missions are calculated (y is a consecutive 12-month period).	

Variable	Concept	Assessment
$DOC_{f,y}$	Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions given in the SWDS for year y (fraction by weight).	To obtain the Determination of the fraction of DOC that breaks down in the SWDS, the project proponent used Application B (0.5) non-monitorable value, ANCE agrees with the value.
φ_y	Model correction factor to account for model uncertainties for year y.	The project proponent used option 1 of the calculation options for the Model Correction Factor Determination (0.85), it is considered as a non-monitorable value. ANCE agrees with the value.
OX	Oxidation factor (reflects the amount of methane in SWDS that is oxidized in soil or other material covering the waste).	The project proponent used the default value of the tool (0.1). ANCE agrees with the value.
$f_{,y}$	Fraction of methane captured in SWDS and flared, flared, or otherwise used in a manner that avoids methane emissions to the atmosphere in year y.	ANCE verified that the Project does not include flaring or any energy use of methane in the scope.
F	Fraction of methane in SWDS gas.	
MCF_y	Methane correction factor for year y	The project proponent used the default value for anaerobically managed solid waste landfills (1), a non-monitorable value. ANCE agrees with the value.
DOC_j	Fraction of degradable organic carbon in waste type j (fraction by weight)	ANCE verified the use of the default value (15%) of DOCj considering that the waste treated is similar to Food, food, beverage and tobacco waste (other than sludge).
k_j	Decomposition rate of waste type j (1/year)	ANCE verified the use of the default value (0.185), the site is in a mostly temperate location.
j	Type of waste or waste types in MSW	The treatment of one type of waste is verified.
GWP_{CH_4}	Global warming potential of methane	28

Step 3. Quantification of solid waste

The project owner keeps track of the amount of non-hazardous solid waste (wet basis) entering the process through manifests and shipments, this activity is part of the Argentine regulation (https://www.argentina.gob.ar/normativa/nacional/ley-25612-76349), so these documents have official validity. The project holder files these documents and the quantities are placed in electronic files on a monthly basis with the following name XX - Control Camiones Month 20XX.xlsx (considering that the verified accreditation of the project of is 01/04/2018 to 31/03/2028). The project owner uses the monthly summation of the amount of non-hazardous waste from manifests and shipments. This data is subject to constant monitoring.

Table 34. Quantification on base line emissions for the acredition period.

Period	Baseline (ton CO2e)	
	ANCE	WORMS
1/april/2018-31/march/2019	10,873	10,873
1/april/2019-31/march/2020	14,911	14,911
1/april/2020-31/march/2021	12,540	12,540
1/april/2021-31/march/2022	15,148	15,164
1/april/2022-31/march/2023	14,606	14,606
Total	68,079.00	68,095.00
%Materiality	0.02	

6.2.3.2 GHG emissions reduction/removal in the project scenario

Considering what is described in sections 6.2.3 of this report, the GHG emissions for the project is:

Table 35. GHG emissions in the project

	Emission (tCO2e)	
Year	ANCE	WOMRS
1/April/2018-31/march/2019	1,348	1,348
1/April/2019-31/march/2020	1,859	1,859
1/April/2020-31/march/2021	1,567	1,566
1/April/2021-31/march/2022	1,887	1,889
1/April/2022-31/march/2023	1,858	1,858
Total	**8,519**	**8,520**
%Materiality	0.01	

Finally, the reduction GHG emissions was calculated by the projet owner (table 33), according to equation 2 of the AMS. III.F, Avoid methane emissions through composting, Version 12.0 and the assessment is described in the next points:

Step 1. Quantification of the project's emissions from electricity consumption

The owner of the Project does not have direct measurements of electricity consumption; therefore, to determine the Project's emissions, an estimate was made based on the equipment and lighting fixtures that use electricity. To carry out the quantification, the Tool to calculate baseline, project and/or leakage emissions from electricity consumption /d/ was applied.

To calculate emissions from electricity consumption, the project owner used the emission factors published by the Wholesale Electricity Market (Emission Factor | CAMMESA) /XV/.

Step 2. Quantification of project emissions from fossil fuel consumption

The owner of the Project does not have direct measurements of diesel consumption, so to determine the Project's emissions, an estimate was made according to the equipment and mobile sources that consume the fuel. To carry out the quantification of emissions, the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /e/ was applied.

Regarding the use of the emission factor, the emission factor published in the document Emissions of CO_2 calculated based on retail sales of liquid fuels in EESS - year 2018 was used. Government Secretary of Energy, Argentina: 2.61 kgCO2/l.

Step 3. Quantification of the project's emissions from composting

The project proponent applied the tool "TOOL04 Methodological tool Emissions from solid waste disposal sites, Version 08.1 /b/ for the estimation of project emissions, considering the variable factors described in step 2, with the variable to be monitored being the amount of non-hazardous waste entering the composting plant.

Step 4. Calculation of GHG emissions reductions

Considering the equation for calculating emission reductions described in methodology /a/:

$$ERy = BEy - (PEy + LEy)$$

The project holder calculated the baseline according to the methodology /a/, where:

$$BEy = BE_{CH4,SWDS,y}$$

The calculation was performed for the years covered by the project accreditation 01/04/2018 to 31/03/2023.

ANCE validated that the Project has not been transferred from another activity nor is the existing equipment being transferred to another activity, furthermore, the compost is not being subjected to anaerobic storage or disposed of in a SWDR. Therefore, for this project there is no leakage.

$$LEy = 0$$

Table 36. GHG emissions reductions of the Project Treatment of non-hazardous industrial waste to obtain Biocompost.

Period	BE	PE	LE	ER
	tCO2e			
1/April/2018-31/march/2019	10,873	1,348	0	9,525

1/April/2019-31/march/2020	14,911	1,859	0	13,052
1/April/2020-31/march/2021	12,540	1,566	0	10,974
1/April/2021-31/march/2022	15,164	1,889	0	13,275
1/April/2022-31/march/2023	14,606	1,858	0	12,748
Total	**68,094**	**8,520**	**0**	**59,574**

6.3 Environmental and social effects of the project activities and no net harm

The following is an analysis of the application of the above criteria to the actions and measures adopted by Worms Argentina S.A. in its project, based on the description of its environmental management programs and socioeconomic aspects:

Clear description of the environmental and social impact assessment: Worms Argentina S.A. describes in detail its efforts to ensure that project activities generate no net harm to the community or the environment. Periodic soil, water, and air monitoring, in addition to hazardous waste management follow-up, demonstrate a commitment to monitoring potential negative environmental effects. Soil, groundwater, and air quality monitoring reports comply with concentration limits established by local regulations /L/,/LI/, demonstrating adherence to safe levels and environmental regulations.

Environmental and social management plan evaluation and verification process: Worms Argentina S.A. implements a quality management system /XXXIX/ that incorporates subprograms for the protection of natural resources, such as hazardous waste management and flood control. Verification of the quality of water extracted from aquifers and analysis of air samples at various points in the plant demonstrate a systematic evaluation and monitoring process, in accordance with the standards of Resolution 201/04 of the Province of Santa Fe and Law 11,220, ensuring compliance with regulations.

Environmental and social impact assessment:

Impact on biodiversity and ecosystems: The soil resource monitoring program and waste management contribute to ecosystem protection by reducing the risk of contamination and properly managing waste that could have negative effects on flora and fauna.

Socioeconomic Effects: The initial analysis of the socioeconomic situation of the surrounding area (Arroyo Seco) includes demographic and economic factors, such as the flow of labor to Rosario and the agricultural situation of the area. This initial assessment allows Worms Argentina S.A. to better understand the social and economic context in which it operates, ensuring that the project generates positive effects on employment (SDG 9 Indicator) and the immediate environment.

Actions and corrective measures to prevent and reduce negative effects: Worms Argentina S.A. states that no significant negative effects on the local communities were identified, highlighting that no housing areas were identified around the project area. According to the socioeconomic analysis, the project does not generate adverse impacts to the

population or the environment; therefore, no specific corrective measures have been established. This analysis is supported by compliance with local legislation (Province of Santa Fe Ministry of the Environment), such as the Environmental Suitability Certificate (Resolution No. 406/19) and the notification from the Municipality of Arrollo Seco /XLI/ that there have been no complaints or denunciations from the community, indicating compliance with the BCR's No Net Harm tool standards, which confirms that the project activities do not cause net harm.

During the visit on site, questioned if there were ethnics communities near of the project, the owner project answered that there weren't even though in INAI (National Institute of Indigenous Affairs) weren't identified, the map was reviewed (https://www.argentina.gob.ar/derechoshumanos/inai/mapa).

Conclusion and use of BCR's No Net Harm tool: After reviewing the environmental monitoring and management programs and socioeconomic aspects, Worms Argentina S.A. concludes that the project causes no net harm to the environment or local communities, according to BCR's No Net Harm tool. This is based on the evidence of regulatory compliance and the absence of relevant negative impacts on the natural and social environment, supported by an efficient implementation of monitoring plans and continuous improvement programs.

This analysis shows that the project is following the evaluation criteria and with the required "No Net Harm" approach, in addition to sustaining a strategy of positive impact on the environment and on the social development of the local community.

6.4 Sustainable Development Goals (SDGs)

During the on-site verification, information regarding compliance with Sustainable Development Goals /XXVII/ was evaluated through interviews and document review, the Project Owner was identified for compliance with SDGs 9, 11, 12 and 13.

Industry, Innovation and Infrastructure the Project Owner has presented an increase in the number of employees, which has been verified through the payroll document /XLIX/ of Worms Argentina S.A., which represented 40% for the monitoring period. The Owner expects a projected 63% increase in the number of local people hired by 2028.

The project owner explained during the verification that compliance with SDG 11 is inherent to the project's activity since it focuses on the treatment of agro-industrial waste, which in the locality represents a high proportion (as explained in section 5.5.5 Additionality), for the review of the indicator, the waste intake logs used for the calculation of estimated emission reductions were reviewed.

For compliance with SDG 12, the project owner has explained that the composting activity falls within the principles of reuse and recycle, although the reduction of waste generation

does not depend on Worms, Worms represents an important actor for the transformation of the most representative waste of the Agroindustrial zone described in the project scope.

Finally, ANCE agrees that the Project contributes to the fight against climate change, avoiding large amounts of methane emissions. The calculation variables used for the baseline reduction were reviewed and the amounts of waste from the accreditation period were verified, so the indicators that the Owner records in the tool are correct.

6.5 Climate change adaptation

ANCE assessed climate change adaptation according to the BCR Standard section 11.8 Climate change adaptation with respect to criteria and indicators to demonstrate contribution to climate change:

a) Consideration of strategic lines in national climate change policies: Worms Argentina S.A. is aligned with Argentina's National Climate Change Adaptation and Mitigation Plan 2030 /XLVIII/, specifically in its "Productive Transition" strategic line[8]. This approach seeks to reduce greenhouse gas emissions and improve the resilience of the country's productive system, objectives that Worms Argentina S.A. supports through a circular economy model and sustainable production processes that help mitigate the environmental impact of industrial waste. As the most significant indicator /VIII/, worms keeps track of the waste treated by means of composting and vermicomposting according to the accreditation periods.

b) Creation of sustainable and low-carbon productive landscapes: Worms Argentina S.A. applies circular economy practices by transforming waste into reusable raw material, which reduces GHG generation compared to conventional waste processes. Its focus on the efficient use of resources and waste reduction makes it a project that supports sustainable, low-carbon productive landscapes.

c) Ecosystem-based adaptation strategies: The waste management that Worms Argentina S.A. has implemented conforms to an adaptive approach that reduces the risks associated with water and soil contamination. In addition, its rainwater harvesting system and energy efficiency policy minimize the extraction of natural resources, thus helping to protect local ecosystems.

[8] This strategic line involves structural changes in the modes of consumption and production in a context of national and global economic recovery. In this sense, it aims to integrate the macroeconomic, social and environmental components, implementing policies and improvements in the competitiveness of national productive development that are focused on sustainable production, accompanied by active financing policies and oriented to industry 4.0 (interconnectivity, automation and availability of data in real time). All of this is aim ed at promoting production chains that are resilient to climate variations and changes in market conditions. Ministry of Environment and Sustainable Development of Argentina (2022). National Climate Change Adaptation and Mitigation Plan. Pag. 52

d) Strengthening local capacities for decision-making in the face of climate change effects: Worms Argentina S.A., with its BCorp certification[9] and its environmental management systems /XXXIX/, fosters a corporate commitment that can inspire other institutions and communities in the region. This environmental management system and the manuals implemented to conserve resources also act as educational tools that encourage informed decisions to minimize environmental impact.

In conclusion, Worms Argentina S.A. manages to incorporate multiple sustainability and climate change mitigation strategies in its operations, aligning itself with several of the aforementioned points and actively contributing to the reduction of GHG emissions and the preservation of the natural environment in its areas of operation. This reinforces its consideration as an additional and valid project under the BCR criteria.

6.6 Co-benefits (if applicable)

This point is not applicable to the project.

6.7 REDD+ safeguards (if applicable)

This point is not applicable to the project.

6.8 Double counting avoidance

According to the BCR Standard, the Avoid Double Counting tool is defined as accounting for GHG mitigation results in tCO_2e, in the following scenarios.:

a) A ton CO2e is counted more than once to demonstrate compliance with the same GHG mitigation goal.

b) One-ton CO2e is counted to demonstrate compliance with the GHG mitigation goals.

c) A ton CO2e is counted more than once to obtain remuneration, benefits or incentives.

d) A ton CO2e is verified, certified or credited and assigned more than one serial for a single mitigation outcome.

To avoid double counting, the project holder submitted the following evidence in compliance with numeral No 8.1 of the double counting avoidance tool:

[9] https://www.bcorporation.net/en-us/find-a-b-corp/company/worms/

- Project and project holder information, this information is clear in the PDD.
- GHG registration authorization - Evidence is presented on the page with the project registration at the following Link: htthttps://globalcarbontrace.io/projects/58.
- Project Description Document (PDD), version 2.0 of the PDD is presented.
- Monitoring Report (MR) - the MR version 2.0 is presented.
- Additional information is the result of the validation and verification process of the project.

The audit team verified 100% of the legal information provided by the project proponent, confirming that the sources of information used were the official ones. Therefore, it considers that the information provided allows concluding that the project complies with the legal requirements.

6.9 Stakeholders' Consultation

During the validation and verification of the Project, ANCE reviewed the information regarding the stakeholder consultation analysis in accordance with the BCR Standard, section 16.1. However, it is important to note that this project is not implemented in an area where a local population is established nor does it have an environmental, social or economic impact on local populations or society in general; it is not mandatory to conduct a public consultation with stakeholders. This could be verified with the geographic coordinates of the Project, observing that in the georeferencing the nearest town (Arroyo Seco) is 2 kilometers to the southeast, to the north the next town (Gral. Lagos) is 4 kilometers away, and in the other directions no residential areas are observed, during the site visit this condition was also observed.

However, the owner of the Project, in order to comply with an international corporate certification (Worms - Certified B Corporation - B Lab Global) has mapped as interaction with its stakeholders: local communities, local authorities, regional and national authorities, workers, suppliers and clients, with whom regular meetings are held in order to improve relations and development.

In order to verify the application of what is described in BCR Standard section 16.1, ANCE reviewed the evidence /XLI to XLV/ submitted by the Project owner to demonstrate the invitations and responses from stakeholders, which will be summarized in the following section.

It is worth mentioning that Worms Argentina S.A. has a physical mailbox for complaints and suggestions at its facilities, however, there has been no physical notification, ANCE also validated that WORMS uses social networks and its website for the purpose of disseminating information and addressing complaints or suggestions.

6.9.1 Public Consultation

a) Local communities. - A book of Suggestions and Complaints /XLIII/ that is in physical form in the owner's facilities was reviewed, from May 4, 2019 to November 25, 2021 there are no complaints or suggestions. Minutes of meetings /XLII/ were presented with neighbors (individuals and SMEs) that have been taking place since December 2018 on an annual basis until 2023, in these minutes it has been agreed that WORMS is committed to constantly water the roads in order to mitigate the dust generated by the trucks that unload in the owner's yard.

b) Authorities. - It was observed that during the operation of the Project several authorities have attended the facilities of Worms Argentina S.A. with the purpose of knowing and recognizing the operation of the Project. As a municipal visit, in June 2020, the then Deputy of Santa Fe, Maximiliano Pullaro attended the facilities, giving an acknowledgement through the social network X. In the same way the then Minister Matias Kulfas (October 2021) and Daniel Schteingart, as owner of the Center of Studies for Production (CEP XXI) recognize the work of Worms Argentina S.A. as an innovative and pro-development company.
The owner of the project presented a document issued by the Environmental Secretary of the Municipality of Arrollo Seco /XLI/ stating that Worms Argentina S.A. has no complaints or denunciations of any kind, this registration was processed in 2024, so the environmental entity confirms that throughout the owner's operation there have been no external impacts on the population.

c) Workers. - During the on-site visit it was observed that the administrative office has a complaints box, however, it was empty, the complaint history books /XLVI/ were observed, but there was no record of complaints or suggestions. During the on-site interview it was explained that this is not due to the Project's activity, but to social factors that the company tries to mitigate through its internal processes (employee manual) /XLVII/.

d) Suppliers. - During the on-site verification, the Project owner showed environmental responsibility letters /XLIV/ signed by the clients, giving responsibility to Worms Argentina S.A. for the treatment of the waste used for the Project.

e) Clients. - We reviewed the complaints and claims books /XLV/ that Worms Argentina S.A. makes available to customers at its facilities and through its website. In 2019 there were 2 complaints regarding the loading time and the weighing process, for the other years there were no complaints or suggestions. The complaints were not related to the compost or social or environmental impacts, so it is not relevant for the project.

The project has gained recognition from the principal stakeholders for its success in minimizing environmental impact. In operation since 2018, it has exhibited no production of unpleasant odors, noise, waste, or air and water emissions. As confirmed by ANCE during their visit to the site, the project unquestionably brings benefits to society and environment.

7 Internal quality control

ANCE reviewed the monitoring documentation, described in the PDD, considered that they conform to the procedures described in the validated monitoring plan and monitoring report and checked for differences that could cause an increase in GHG emission reduction estimates in the actual monitoring periods.

ANCE has confirmed that there are no significant material discrepancies between the actual monitoring system and the monitoring plan established in the PDD and the applied methodologies /a/, so there is no overestimation of the requested reductions. The project owner monitors the parameters required to determine the project reductions in accordance with the monitoring plan and the applicable methodology. It is worth mentioning that the project proponent applied an uncertainty percentage (2%) to the treated waste due to the lack of accuracy of the measured data.

The reported parameters, including their source, monitoring frequency and review criteria, indicated in the PDD, were verified to be correct. The required management system procedures /LIV/, including responsibility and authority for monitoring activities, were verified to be consistent with the monitoring report. The knowledge of the personnel associated with the project activities was considered satisfactory by the ANCE verification team.

Finally, in ANCE's quality management process, there is an independent internal review of the validation and verification process, which ensures the scope, program standards and how the validation and verification report manages to gather this evidence and its proper management to present the final statement.

8 Validation and verification opinion

As the ANCE Conformity Assessment Body, contracted by WORMS ARGENTINA S.A., we have reviewed and verified the design of mitigation measures for the project "Treatment of non-hazardous industrial waste to obtain Biocompost." We confirm that it fully complies with the BCR Standard, addressing various aspects:

- The project meets all criteria of the BioCarbon Registry standard version 3.2, September 23, 2023;
- The project is in accordance with AMS.III.F, Avoid methane emissions through composting, Version 12.0;
- The Monitoring Plan is transparent and adequate;
- The additionality of the project is justified in the PDD;
- Verification has reached a reasonable level of assurance: 95%;

- The project has been evaluated with a Materiality of less than 5%;
- Based on the processes and procedures performed, the GHG statement is materially correct and a true representation of the GHG data and information and is prepared per the applicable standard;
- The project was assessed on the basis of its contribution to the Sustainable Development Goals (SDG9, SDG11, SDG12 and SDG13).

Based on the risk-based validation approach and the evidence obtained as a result of the activities associated with the validation process and the attention to findings, the OVV GEI ANCE has reached the following conclusion:

The Greenhouse Gas Emissions reductions of the Treatment of non-hazardous industrial waste to obtain Biocompost prepared by WORMS ARGENTINA S.A. for the crediting period 01/04/2018 to 31/03/2028, and the monitoring period 01/04/2018 to 31/03/2023 are substantially correct and the validated and verified emissions reductions are a faithful representation of the information and emissions data referenced below:

Estimated total and average annual GHG emission reduction amount: **123,314 t CO2e**

Total of GHG reduction or removals in this monitoring period: **59,574 tCO_2e**

This Validation and Verification Report is issued, based on the stipulated in the BCR Standard Version 3.2. September 23, 2023, the Validation and Verification Manual and based on the criteria of ISO 14064-3:2019, with a reasonable level of assurance, the above is guaranteed at a materiality level of less than 5%, specifically, 0.00%, between the net emission reductions reported by the Project and the net reductions validated and verified by the OVV-GEI-ANCE.

In conclusion, the OVV-GEI-ANCE issues a positive opinion because there is sufficient or appropriate evidence to support a claim; considering that there are no material misstatements, there is sufficient and appropriate evidence to support the emissions and the necessary controls are in place for data management for emission reduction reporting.

9 Validation statement

The validation statement is attached to this document.

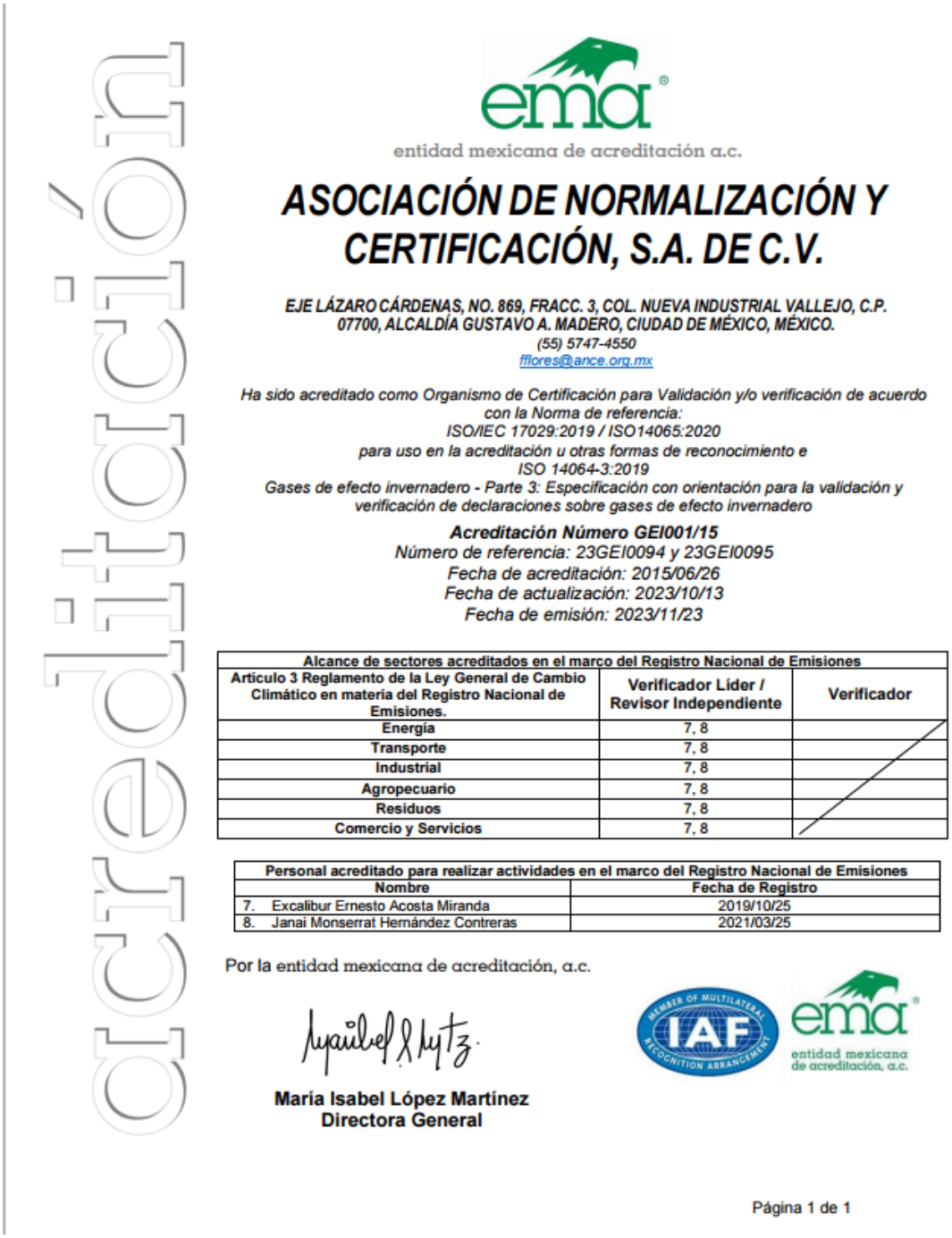
10 Verification statement

Attached to this document is the verification statement.

11 Annexes

Annex 1. Competence of team members and technical reviewers

The accreditation of the V/V team is presented in the following figure:



acreditación

entidad mexicana de acreditación a.c.

ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, S.A. DE C.V.

EJE LÁZARO CÁRDENAS, NO. 869, FRACC. 3, COL. NUEVA INDUSTRIAL VALLEJO, C.P. 07700, ALCALDÍA GUSTAVO A. MADERO, CIUDAD DE MÉXICO, MÉXICO.
(55) 5747-4550
fflores@ance.org.mx

Ha sido acreditado como Organismo de Certificación para Validación y/o verificación de acuerdo con la Norma de referencia:
ISO/IEC 17029:2019 / ISO14065:2020
para uso en la acreditación u otras formas de reconocimiento e
ISO 14064-3:2019
Gases de efecto invernadero - Parte 3: Especificación con orientación para la validación y verificación de declaraciones sobre gases de efecto invernadero

Acreditación Número GEI001/15
Número de referencia: 23GEI0094 y 23GEI0095
Fecha de acreditación: 2015/06/26
Fecha de actualización: 2023/10/13
Fecha de emisión: 2023/11/23

Alcance de sectores acreditados en el marco del Registro Nacional de Emisiones		
Artículo 3 Reglamento de la Ley General de Cambio Climático en materia del Registro Nacional de Emisiones.	Verificador Líder / Revisor Independiente	Verificador
Energía	7, 8	
Transporte	7, 8	
Industrial	7, 8	
Agropecuario	7, 8	
Residuos	7, 8	
Comercio y Servicios	7, 8	

Personal acreditado para realizar actividades en el marco del Registro Nacional de Emisiones	
Nombre	Fecha de Registro
7. Excalibur Ernesto Acosta Miranda	2019/10/25
8. Janai Monserrat Hernández Contreras	2021/03/25

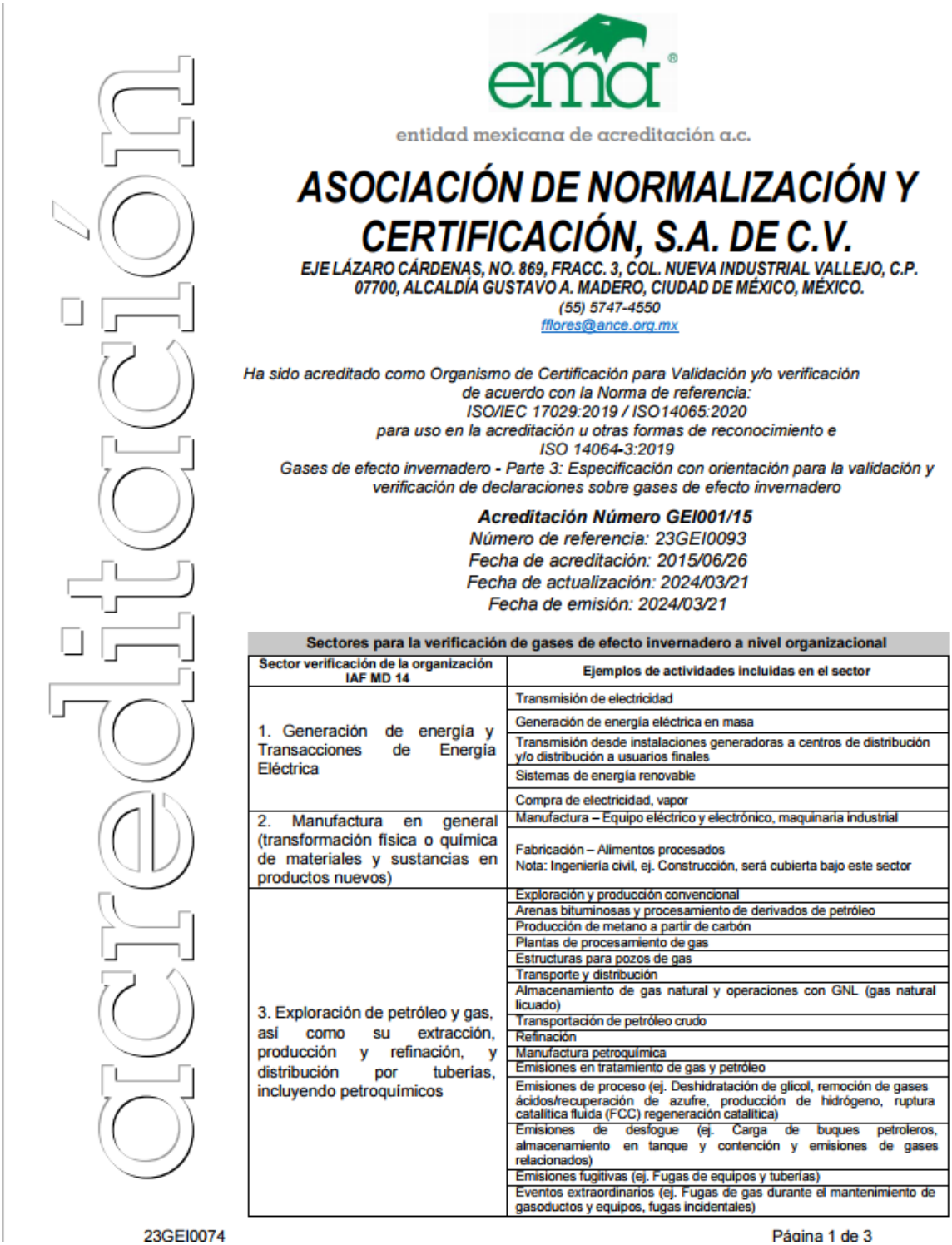
Por la entidad mexicana de acreditación, a.c.

María Isabel López Martínez
Directora General

entidad mexicana de acreditación, a.c.

Página 1 de 1

The accreditation of the CAB is presented in figure below:



acreditación

entidad mexicana de acreditación a.c.

ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, S.A. DE C.V.

EJE LÁZARO CÁRDENAS, NO. 869, FRACC. 3, COL. NUEVA INDUSTRIAL VALLEJO, C.P. 07700, ALCALDÍA GUSTAVO A. MADERO, CIUDAD DE MÉXICO, MÉXICO.
(55) 5747-4550
fflores@ance.org.mx

Ha sido acreditado como Organismo de Certificación para Validación y/o verificación de acuerdo con la Norma de referencia:
ISO/IEC 17029:2019 / ISO14065:2020
para uso en la acreditación u otras formas de reconocimiento e
ISO 14064-3:2019
Gases de efecto invernadero - Parte 3: Especificación con orientación para la validación y verificación de declaraciones sobre gases de efecto invernadero

Acreditación Número GEI001/15
Número de referencia: 23GEI0093
Fecha de acreditación: 2015/06/26
Fecha de actualización: 2024/03/21
Fecha de emisión: 2024/03/21

Sectores para la verificación de gases de efecto invernadero a nivel organizacional

Sector verificación de la organización IAF MD 14	Ejemplos de actividades incluidas en el sector
1. Generación de energía y Transacciones de Energía Eléctrica	Transmisión de electricidad
	Generación de energía eléctrica en masa
	Transmisión desde instalaciones generadoras a centros de distribución y/o distribución a usuarios finales
	Sistemas de energía renovable
	Compra de electricidad, vapor
2. Manufactura en general (transformación física o química de materiales y sustancias en productos nuevos)	Manufactura – Equipo eléctrico y electrónico, maquinaria industrial
	Fabricación – Alimentos procesados Nota: Ingeniería civil, ej. Construcción, será cubierta bajo este sector
3. Exploración de petróleo y gas, así como su extracción, producción y refinación, y distribución por tuberías, incluyendo petroquímicos	Exploración y producción convencional
	Arenas bituminosas y procesamiento de derivados de petróleo
	Producción de metano a partir de carbón
	Plantas de procesamiento de gas
	Estructuras para pozos de gas
	Transporte y distribución
	Almacenamiento de gas natural y operaciones con GNL (gas natural licuado)
	Transportación de petróleo crudo
	Refinación
	Manufactura petroquímica
	Emisiones en tratamiento de gas y petróleo
	Emisiones de proceso (ej. Deshidratación de glicol, remoción de gases ácidos/recuperación de azufre, producción de hidrógeno, ruptura catalítica fluida (FCC) regeneración catalítica)
	Emisiones de desfogue (ej. Carga de buques petroleros, almacenamiento en tanque y contención y emisiones de gases relacionados)
	Emisiones fugitivas (ej. Fugas de equipos y tuberías)
	Eventos extraordinarios (ej. Fugas de gas durante el mantenimiento de gasoductos y equipos, fugas incidentales)

23GEI0074 Página 1 de 3

entidad mexicana de acreditación a.c.

Sectores para la verificación de gases de efecto invernadero a nivel organizacional	
Sector verificación de la organización IAF MD 14	**Ejemplos de actividades incluidas en el sector**
4. Producción de metales	Producción y procesamiento de metales ferrosos
	Producción de aluminio secundario
	Procesamiento de metales no ferrosos, incluyendo producción de aleaciones
	Producción de coque
	Calcinación o sinterización de metales, incluyendo peletización.
	Producción de arrabio o de acero, incluyendo colada continua
6. Minería y producción mineral	Producción de clinckers de cemento y producción de cal o calcinados de dolomita o magnetita
	Vidrio y cerámica, fibra mineral
7. Pulpa, papel e impresiones	
8. Producción química	Producción de negro de carbón
	Producción de amoníaco
	Fabricación de productos químicos orgánicos en bruto mediante craqueo, reformado, oxidación parcial o completa o por procesos similares
	Producción de hidrógeno y síntesis de gas por reformado u oxidación parcial
	Producción de carbonato sódico y bicarbonato sódico
	Producción de ácido nítrico
	Producción de ácido adípico
	Producción de glioxal y ácido glioxílico
9. Captura y almacenamiento de carbono	Captura y transporte de gases de efecto invernadero por medio de tuberías para almacenaje geológico
	Almacenamiento geológico de gases de efecto invernadero en un sitio de almacenamiento con ese fin
10. Transporte	Aviación
	Otros transportes
11. Agricultura, silvicultura y otros usos de tierra (AFOLU/ASOUT)	
12. General	Edificio de servicios/Manejo de instalaciones
	Educación
	Hospitales
	Otros
13. Manejo y disposición de residuos	Agua y tratamiento de aguas residuales
	Vertederos y plantas de composteo

acreditación

Sectores para la validación / verificación de gases de efecto invernadero a nivel proyecto

Sector validación y verificación de proyectos IAF MD 14	Ejemplos de actividades incluidas en el sector
1. Industrias energéticas (recursos renovables/no renovables)	Generación de energía térmica a partir de combustibles fósiles y biomasa incluyendo energía solar
	Generación de energía a partir de recursos energéticos renovables
4. Manejo y disposición de residuos	Manejo y disposición de residuos
	Manejo de residuos animales

Por la entidad mexicana de acreditación, a.c.

María Isabel López Martínez
Directora General

Competence of V/V lider – Excalibur Acosta

FORMATO DC-3
CONSTANCIA DE COMPETENCIAS O DE HABILIDADES LABORALES

SOLUCIONES GLOBALES DISPONIBLES LOCALMENTE

DATOS DEL TRABAJADOR

Nombre (Anotar apellido paterno, apellido materno y nombre (s)
ACOSTA MIRANDA EXCALIBUR ERNESTO

Clave Única de Registro de Población: AOME910102HDFCRX12

Ocupación específica (Catálogo Nacional de Ocupaciones): **8.2 Administración**

Puesto*: **EJECUTIVO DE EVALUACIÓN DE LA CONFORMIDAD OVV**

DATOS DE LA EMPRESA

Nombre o razón social (En caso de persona física, anotar apellido paterno, apellido materno y nombre(s))
ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, A.C.

Registro Federal de Contribuyentes con homoclave (SHCP): ANC-921211-IT8

DATOS DEL PROGRAMA DE CAPACITACIÓN, ADIESTRAMIENTO Y PRODUCTIVIDAD

NOMBRE DEL CURSO: Desarrollo de Capacidades para la Cuantificación de Emisiones de GEI a nivel sectorial, Sector Residuos.

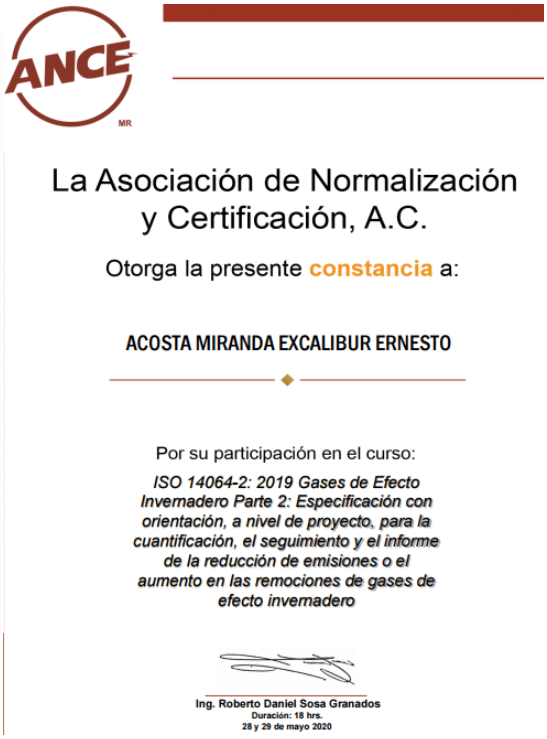
Duración en horas	Periodo de ejecución:	De (Año / Mes / Día)	a (Año / Mes / Día)
16		2019 / 04 / 29	2019 / 04 / 30

Área temática del curso 2/: **1000 Producción General**

Nombre del agente capacitador o STPS: **Alianza Sustentable**

Los datos se asientan en esta constancia bajo protesta de decir verdad, apercibidos de la responsabilidad en que incurre todo aquél que no se conduce con verdad.

Instructor o tutor	Patrón o representante legal	Representante de los trabajadores
Luz María González Osorio	Pamela del Carmen Rivera Ribera	Luis Alberto Rafael Bárcenas
Nombre y Firma	Nombre y firma	Nombre y firma



La Asociación de Normalización y Certificación, A.C.

Otorga la presente **constancia** a:

ACOSTA MIRANDA EXCALIBUR ERNESTO

Por su participación en el curso:

ISO 14064-2: 2019 Gases de Efecto Invernadero Parte 2: Especificación con orientación, a nivel de proyecto, para la cuantificación, el seguimiento y el informe de la reducción de emisiones o el aumento en las remociones de gases de efecto invernadero

Ing. Roberto Daniel Sosa Granados
Duración: 18 hrs.
28 y 29 de mayo 2020

ANCE MR

La Asociación de Normalización y Certificación, A.C.

Otorga la presente **constancia** a:

ACOSTA MIRANDA EXCALIBUR ERNESTO

Por su participación en el curso:

ISO 14064-3:2019 Gases de Efecto Invernadero parte 3: Especificación con orientación para la validación y verificación de declaraciones sobre gases de efecto invernadero

Ing. Roberto Daniel Sosa Granados
Duración: 27 hrs.
13 al 15 de mayo 2020

GOBERNACIÓN | MEDIO AMBIENTE | INAFED | INECC

LA SECRETARÍA DE GOBERNACIÓN, A TRAVÉS DEL INSTITUTO NACIONAL PARA EL FEDERALISMO Y EL DESARROLLO MUNICIPAL, Y LA SECRETARÍA DE MEDIO AMBIENTE Y RECURSOS NATURALES, A TRAVÉS DEL INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO

OTORGAN EL PRESENTE

DIPLOMA

A

Excalibur Ernesto Acosta Miranda

POR HABER ACREDITADO EL CURSO VIRTUAL

ACCIONES DE MITIGACIÓN DE EMISIONES DE GASES DE EFECTO INVERNADERO

CON UNA DURACIÓN DE 12.5 HORAS, IMPARTIDO DEL 22 DE FEBRERO AL 7 DE ABRIL DE 2021.

PROMEDIO FINAL : 9.00

DRA. MARÍA AMPARO MARTÍNEZ ARROYO
DIRECTORA GENERAL DEL INSTITUTO NACIONAL DE ECOLOGÍA Y CAMBIO CLIMÁTICO

MTRO. RAFAEL CORTÉS GÓMEZ
COORDINADOR DEL INSTITUTO NACIONAL PARA EL FEDERALISMO Y EL DESARROLLO MUNICIPAL

México 2021

Excalibur Ernesto Acosta Miranda

EdoMex. C.P. 55237
5548720698
acostam.ee@gmail.com
excaliburacosta01

Aptitudes

- Manejo de ingles intermedio
- Empatía
- Adaptativo
- Resiliente
- Presuntivo
- Creativo

Experiencia

ACTUAL

Especialista del OVV / Asociación de Normalización y Certificación

Mi principal actividad es la ejecución de validaciones y/o verificaciones de gases de efecto invernadero, además, atiendo auditorías a nuestro sistema de gestión, trato con clientes (actuales y nuevos), revisión de cotizaciones, entrenamiento a nuevos integrantes del equipo del OVV.

2016 – 2018

Analista Sr EHS / Mexicana MRO

Me encargaba de la gestión de tramites ambientales como lo son la Cedula de Operación Anual, Licencias ambientales, Permisos de Residuos peligrosos, atendía auditorías, tenía a cargo un equipo de 3 personas para el buen manejo y disposición de los residuos peligrosos.

2015 – 2016

Consultor ambiental / VIDESA

Elaboré COAs y Licencias Ambientales para la industria farmacéutica, metalmecánica, galvanoplastia y alimentos. Me en cargaba del trato directo con los clientes y el análisis de producción y actividades de las empresas.

2014 – 2015

Consultor ambiental / VIDESA

Participe en la aplicación de Auditorías Ambientales de la CDMX y en la elaboración del PROAIRE y Programa de Acción Climática de la CDMX.

Educación

2014

Ingeniería ambiental / IPN, Unidad Profesional Interdisciplinaria de Biotecnología

Ingeniero ambiental titulado, durante mi estadía en la Unidad mi mayor logro, aparte de aprobar todas las materia de matemáticas, fue participar en la organización del Foro ambiental.

Actividades

Mi puesto actual es de Especialista del Organismo de Validación y Verificación, mi trabajo principal es la ejecución de las verificaciones de Gases de Efecto Invernadero para los siguientes esquemas:

- Registro Nacional de Emsiones
- Sistema de Comercio de Emisiones
- Corsia
- Norma 14064 parte 1

Actualmente estoy acreditado ante la ema y aprobado por PROFEPA para los sectores de energía, industrial, transporte, residuos, agropecuario y comercios y servicios. He trabajado en empresas como PEMEX, CFE, Holcim, CEMEX, Grupo Modelo, Vitro, entre muchas más.

En los últimos dos años me he involucrado con la validación y verificación de Proyectos de mitigación de GEI, en los sectores de energía y residuos y de acuerdo a las metodologías del CDM, esto para los siguientes Programas:

- BioCarbon Registry
- Cercarbono

En mi trayectoria he realizado 110 verificaciones a diversas empresas, mayormente del sector Industrial y Energía; 4 validaciones y verificaciones de proyectos de mitigación GEI, 2 en sector energía y 2 en el sector residuos.

Como adicional, cuento con la competencia de las normas 14065, 17029 y 14066, manejo trato con clientes y autoridades del sector, coordino con el área comercial estrategias de nuevos clientes y retención de los actuales, impartición de webinars y capsulas informativas.

2

Competence of V/V – Nancy Adriana Barrara

SOLUCIONES GLOBALES DISPONIBLES LOCALMENTE

FORMATO DC-3
CONSTANCIA DE COMPETENCIAS O DE HABILIDADES LABORALES

DATOS DEL TRABAJADOR	
Nombre (Anotar apellido paterno, apellido materno y nombre (s) BARRERA GOMEZ NANCY ADRIANA	
Clave Única de Registro de Población B A G N 9 6 0 9 2 2 M M C R M N 0 1	Ocupación específica (Catálogo Nacional de Ocupaciones) 1/ 8.2 Administración
Puesto* ESPECIALISTA	

DATOS DE LA EMPRESA
Nombre o razón social (En caso de persona física, anotar apellido paterno, apellido materno y nombre(s) ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN
Registro Federal de Contribuyentes con homoclave (SHCP) A N C - 9 2 1 2 1 1 - I T 8

DATOS DEL PROGRAMA DE CAPACITACIÓN, ADIESTRAMIENTO Y PRODUCTIVIDAD	
NOMBRE DEL CURSO: **ISO 14064-2:2019 Gases de efecto invernadero Parte 2: Especificación con orientación, a nivel de proyecto, para la cuantificación, el seguimiento y el informe de la reducción de emisiones o el aumento en las remociones de gases de efecto invernadero.**	
Duración en horas 8	Periodo de ejecución: De Año 2 0 2 3 Mes 1 0 Día 3 1 a Año 2 0 2 3 Mes 1 0 Día 3 1
Área temática del curso 2/ 1000 Producción General	
Nombre del agente capacitador o STPS 3/ ASOCIACION DE NORMALIZACION Y CERTIFICACION	

Los datos se asientan en esta constancia bajo protesta de decir verdad, apercibidos de la responsabilidad en que incurre todo aquel que no se conduce con verdad.

Instructor o tutor	Patrón o representante legal 4/	Representante de los trabajadores 5/
EXCALIBUR ERNESTO ACOSTA Nombre y Firma	PAMELA DEL CARMEN RIVERA CABRERA Nombre y firma	JUDITH GONZALEZ ESCALERA Nombre y firma

INSTRUCCIONES

5/ Solo para empresas con más de 50 trabajadores.
* Dato no obligatorio.

DC-3 ANVERSO

FOROVV-P02.03.09

Presione 'ESC' pantalla

ANCE MR

La Asociación de Normalización y Certificación S.A. de C.V

otorga la presente

CONSTANCIA

Como

Verificador/Validador líder del Organismo de Verificación/Validación

Nancy Adriana Barrera Gómez

Por haber cumplido con los requisitos establecidos en el Procedimiento de Formación y Calificación (PROOVV-02) del Organismo de Verificación/Validación de GEI

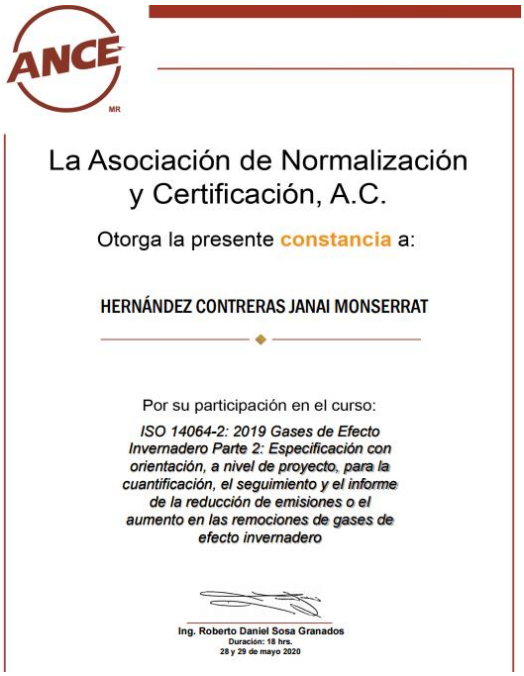
Válido del 01 de enero de 2024 al 31 de diciembre de 2024

Janai Monserrat Hernández Contreras
Especialista Sr. del OVV

www.ance.org.mx

SOLUCIONES GLOBALES DISPONIBLES LOCALMENTE

Competence of Independetreviwer – Janai Monserrat Hernánez



La Asociación de Normalización y Certificación, A.C.

Otorga la presente **constancia** a:

HERNÁNDEZ CONTRERAS JANAI MONSERRAT

Por su participación en el curso:

ISO 14064-2: 2019 Gases de Efecto Invernadero Parte 2: Especificación con orientación, a nivel de proyecto, para la cuantificación, el seguimiento y el informe de la reducción de emisiones o el aumento en las remociones de gases de efecto invernadero

Ing. Roberto Daniel Sosa Granados
Duración: 18 hrs.
28 y 29 de mayo 2020

La Asociación de Normalización y Certificación, A.C.

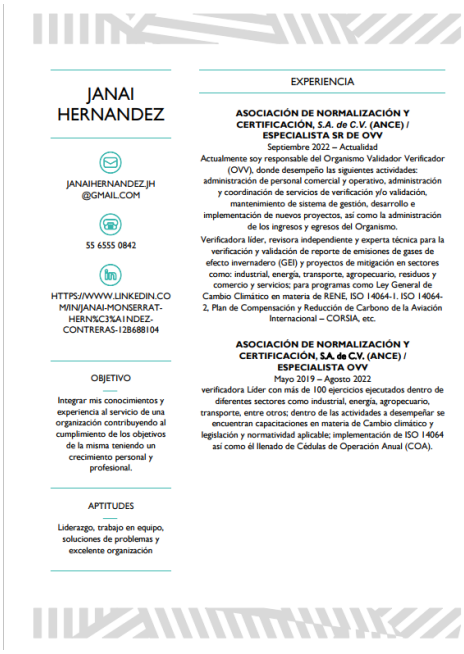
Otorga la presente **constancia** a:

HERNÁNDEZ CONTRERAS JANAI MONSERRAT

Por su participación en el curso:

ISO 14064-3:2019 Gases de Efecto Invernadero parte 3: Especificación con orientación para la validación y verificación de declaraciones sobre gases de efecto invernadero

Ing. Roberto Daniel Sosa Granados
Duración: 27 hrs.
13 al 15 de mayo 2020



JANAI HERNANDEZ

JANAIHERNANDEZ.JH@GMAIL.COM

55 6555 0842

HTTPS://WWW.LINKEDIN.COM/IN/JANAI-MONSERRAT-HERN%C3%A1NDEZ-CONTRERAS-12B688104

OBJETIVO

Integrar mis conocimientos y experiencia al servicio de una organización contribuyendo al cumplimiento de los objetivos de la misma teniendo un crecimiento personal y profesional.

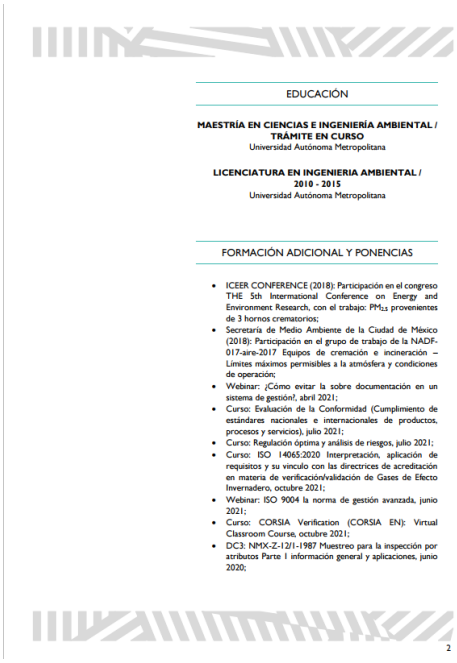
APTITUDES

Liderazgo, trabajo en equipo, soluciones de problemas y excelente organización

EXPERIENCIA

ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, *S.A. de C.V.* (ANCE) / ESPECIALISTA SR DE OVV
Septiembre 2022 – Actualidad
Actualmente soy responsable del Organismo Validador Verificador (OVV), donde desempeño las siguientes actividades: administración de personal comercial y operativo, administración y coordinación de servicios de verificación y/o validación, mantenimiento de sistema de gestión, desarrollo e implementación de nuevos proyectos, así como la administración de los ingresos y egresos del Organismo.
Verificadora líder, revisora independiente y experta técnica para la verificación y validación de reporte de emisiones de gases de efecto invernadero (GEI) y proyectos de mitigación en sectores como: industrial, energía, transporte, agropecuario, residuos y comercio y servicios; para programas como Ley General de Cambio Climático en materia de RENE, ISO 14064-1, ISO 14064-2, Plan de Compensación y Reducción de Carbono de la Aviación Internacional – CORSIA, etc.

ASOCIACIÓN DE NORMALIZACIÓN Y CERTIFICACIÓN, S.A. de C.V. (ANCE) / ESPECIALISTA OVV
Mayo 2019 – Agosto 2022
verificadora Líder con más de 100 ejercicios ejecutados dentro de diferentes sectores como industrial, energía, agropecuario, transporte, entre otros; dentro de las actividades a desempeñar se encuentran capacitaciones en materia de Cambio climático y legislación y normatividad aplicable; implementación de ISO 14064 así como el llenado de Cédulas de Operación Anual (COA).



EDUCACIÓN

MAESTRÍA EN CIENCIAS E INGENIERÍA AMBIENTAL / TRÁMITE EN CURSO
Universidad Autónoma Metropolitana

LICENCIATURA EN INGENIERIA AMBIENTAL / 2010 - 2015
Universidad Autónoma Metropolitana

FORMACIÓN ADICIONAL Y PONENCIAS

- ICEER CONFERENCE (2018): Participación en el congreso THE 5th International Conference on Energy and Environment Research, con el trabajo: $PM_{2.5}$ provenientes de 3 hornos crematorios;
- Secretaría de Medio Ambiente de la Ciudad de México (2018): Participación en el grupo de trabajo de la NADF-017-aire-2017 Equipos de cremación e incineración – Límites máximos permisibles a la atmósfera y condiciones de operación;
- Webinar: ¿Cómo evitar la sobre documentación en un sistema de gestión?, abril 2021;
- Curso: Evaluación de la Conformidad (Cumplimiento de estándares nacionales e internacionales de productos, procesos y servicios), julio 2021;
- Curso: Regulación óptima y análisis de riesgos, julio 2021;
- Curso: ISO 14065:2020 Interpretación, aplicación de requisitos y su vinculo con las directrices de acreditación en materia de verificación/validación de Gases de Efecto Invernadero, octubre 2021;
- Webinar: ISO 9004 la norma de gestión avanzada, junio 2021;
- Curso: CORSIA Verification (CORSIA EN): Virtual Classroom Course, octubre 2021;
- DC3: NMX-Z-12/1-1987 Muestreo para la inspección por atributos Parte 1 información general y aplicaciones, junio 2020;

2

Competence of Approver – Joel Miguel Ramirez

CURRÍCULUM VITAE

Joel MIGUEL RAMÍREZ
Ingeniero electricista

I. EXPERIENCIA PROFESIONAL

2023 a la fecha — **Asociación de normalización y certificación, S.A. de C.V.**
- Gerente del organismo de certificación de sistemas y del organismo validador verificador

Principales responsabilidades

Administración de las unidades de negocio Alimentos, Sustentabilidad y Certificación de sistemas.

Inspector acreditado y aprobado en normas de información comercial

Gerente técnico de la unidad de inspección para las normas NOM-034-STPS-2016 y NOM-035-STPS-2018.

Auditor líder en las normas
a) NMX-CC-9001-IMNC-2015 / ISO 90001:2015
b) NMX-J-SAA-50001-IMNC-2019 / ISO 50001:2018

Supervisor de las operaciones del Organismo Validador Verificador de inventarios y proyectos GEI.

2020-2022 — **Asociación de normalización y certificación, A.C.**
- Gerente de áreas en desarrollo

(Certificación de sistemas e inspección)

Principales responsabilidades:

Administración de la unidad de negocio "información comercial", que presta servicios de inspección del cumplimiento con normas de información comercial.

Inspector acreditado y aprobado en normas de información comercial

Representación de ANCE en órganos colegiados de normalización y de la Entidad Mexicana de Acreditación.

La unidad de inspección de información comercial cuenta con 19 normas acreditadas y aprobadas.

2019 — **Asociación de normalización y certificación, A.C.**
- Gerente de áreas en desarrollo

(Certificación de sistemas e inspección)

Principales responsabilidades:

Administración de las áreas en desarrollo de la organización, comprendidas por:
a) Organismo certificador de sistemas de gestión
b) Unidad de inspección
c) Unidad de verificación de información comercial
d) Ciber seguridad y tecnologías de la información

Coordinación de la prestación del servicio de las áreas mencionadas en los procesos de evaluación, toma de decisión, testificaciones y formación de personal, de acuerdo a la competencia adquirida.

2018 — **Asociación de normalización y certificación, A.C.**
- Responsable de certificación e inspección

Principales responsabilidades:

Administración de las unidades de negocio para las áreas de certificación de producto, certificación de sistemas de gestión, unidad de verificación, organismo de inspección y alimentos.

Apoyo en la operación de las actividades de evaluación de la conformidad de las áreas mencionadas, en los procesos de evaluación, toma de decisión, testificaciones, etc. de acuerdo a la competencia desarrollada.

2016 - 2017 — **Asociación de normalización y certificación, A.C.**
- Gerente de certificación de sistemas y organismo validador verificador

Principales logros:
- Auditor líder para las normas:
  ISO 50001:2011
  ISO/IEC 17020, ISO/IEC 17021-1, ISO/IEC 17025, ISO/IEC 17065, ISO 14065.
- Auditor para las normas NMX-R-025-SCFI, NMX-R-026-SCFI, NMX-R-051-SCFI
- Implantación de otras normas de sistemas de gestión como BSI 10500 (Gestión anti soborno), ISO 55001 (Gestión de activos), ISO 31000 (Gestión de riesgos)
- Instructor en diversos temas relacionados con la seguridad, sistemas de gestión, productividad, trabajo ene quipo, responsabilidad social, etc.
- Participante del comité nacional de normalización CTNN-9, responsable de los trabajos a nivel nacional de revisión y actualización de la norma ISO 9001:2015
- Revisor técnico de dictámenes de verificación de reportes de inventarios de gases de efecto invernadero, en el organismo validador verificador de ANCE.

2013 - 2016 — **Asociación de normalización y certificación, A.C.**
- Gerente de infraestructura y seguridad

Principales logros:
- Responsable de la seguridad patrimonial, seguridad e higiene, mantenimiento de la infraestructura, programa ambiental y servicios de apoyo en el centro de trabajo.
- Implantación del sistema de seguridad patrimonial en el centro de trabajo.
- Inclusión del centro de trabajo en el programa de autogestión en seguridad y salud del trabajo (PASST) de la Secretaría de trabajo y previsión social.
- Participación del centro de trabajo en el programa de "Auditoría ambiental" de la Secretaría de medio ambiente de la Ciudad de México.
- Inicio de la implantación del sistema de gestión de la energía en el centro de trabajo. Coordinación de los diagnósticos energéticos y de los inventarios GEI realizados.

- Inicio de la implantación del sistema de gestión anti soborno en el centro de trabajo.

2004 - 2013 — **Asociación de normalización y certificación, A.C.**
- Gerente de sistemas de gestión

Principales logros:
- Coordinación del sistema de gestión integral del organismo, contemplando las directrices de acreditación ISO/IEC 17020, 17021, 17025, 17065, 14065.
- Certificación del sistema de gestión de la calidad de la organización bajo la norma ISO 9001
- Responsable de las transiciones de las certificaciones del SGC de ANCE en las versiones ISO 9001:2000, ISO 9001:2008 e ISO 9001:2015
- Se logró que el programa de responsabilidad social de la organización obtuviera el premio "Ética y valores en la industria de Concamin", en los años 2006, 2007, 2013 y 2014.
- Participación en el comité nacional de normalización CTNN-9 de sistemas de gestión.
- Responsable de seguridad e higiene en el centro de trabajo.
- Calificación como verificador en materia de seguridad e higiene, para las normas NOM-002-STPS-2010 y NOM-032-STPS-2008

1997 - 2003 — **Asociación de normalización y certificación, A.C.**
- Jefe de certificación de producto

Principales logros:
- Coordinación del departamento de certificación de enseres mayores, motores, sistemas de aire acondicionado, entre otros, en normas de seguridad al usuario y de eficiencia energética.

1996 - 1997 — **Fideicomiso para el ahorro de la energía (FIDE)**

Promoción y coordinación de proyectos demostrativos de ahorro de energía eléctrica en la rama de la industria, financiados por el FIDE. Realización de diagnósticos energéticos.

1994 - 1996 — **Asociación de Técnicos y Profesionistas en Aplicación Energética, A.C. (ATPAE)**

Coordinación de eventos y proyectos relacionados con la promoción del uso eficiente de la energía.

VI. ALGUNAS CAPACITACIONES EN MATERIA DE INFORMACIÓN COMERCIAL

25 de marzo de 2021	Marco regulatorio aplicable a comercio exterior MCM Foreign Trade, International Logistics & Customs, Cosulting Group
23 de abril de 2021	Metrología básica ANCE
30 de julio de 2021	Trazabilidad metrológica ANCE
03 de febrero de 2022	Actualización en la NOM-004-SE-2021 CANAINTEX

VII. ALGUNAS CAPACITACIONES EN MATERIA DE GASES EFECTO INVERNADERO

20- 21 de mayo de 2010	Inicios del conocimiento de principios básicos de los gases efecto invernadero. INLAC
26-27 de mayo de 2010	Gases de efecto Invernadero - Requisitos para los organismos que realizan la validación y la verificación de gases efecto invernadero, para uso en la acreditación u otras formas de reconocimiento y sus directrices de aplicación IAF. Entidad Mexicana de Acreditación
30 de enero de 2013	Taller de elaboración de inventarios de gases efecto invernadero en la industria. ANCE
29 – 30 de enero de 2014	Actualización en la norma ISO 14065:2013 Entidad Mexicana de Acreditación
28 de abril de 2017	Registro Nacional de Emisiones – RENE Secretaría de Medio Ambiente y Recursos Naturales
05-08 de junio de 2023	ISO/IEC 17029. Evaluación de la Conformidad: Principios y Requisitos generales para los Organismos de Validación y Verificación. ASOCEC

VIII. EXPERIENCIA EN AUDITORIAS DE SISTEMAS DE GESTIÓN

Auditor líder de sistemas de gestión de la calidad por más de 15 años, auditando organizaciones privadas y públicas, resaltando las siguientes:

a) Empresas de manufactura como: LG Electronics Monterrey, México, S.A. de C.V., Leiser, S.A. de C.V., Mabe México, S. de R.L. de C.V. en diferentes plantas de la república, Koblenz Eléctrica, S.A. de C.V., Carrier México, S.A. de C.V.
b) CFE distribución en varias zona de la república como Mexicali, Tizimin, Tijuana.
c) Fundición de precisión EUTETIC, S.A. de C.V.
d) Cámara Mexicana de la Industria de la Construcción, Instituto de Capacitación
e) Dependencias del gobierno federal como STPS, órgano interno de control de PEMEX, SECTUR, Comisión para el desarrollo de los pueblos indígenas.
f) Dependencias estatales como, Instituto Jaliciense de la Calidad, CEESAVEM, Registro público de la propiedad de Colima, H. Congreso de Colima
g) Dependencias municipales como, Municipio de Atlacomulco, Dirección de planeación urbana de Puerto Vallarta
h) Agencias aduanales como DICEX, S.A. de C.V., Condor Air, S.A. de C.V., G-Global
i) Jugos del Valle
j) Refinerías Lázaro Cárdenas y Miguel Hidalgo.
k) Vikingo Express, S.A. de C.V.
l) Fideicomiso para el ahorro de energía eléctrica
m) Safran Landing Systems de México, S.A. de C.V.
n) Entre otras

IX. REPRESENTACIONES EN ÓRGANOS COLEGIADOS

ISO/TC 301	Miembro de la delegación mexicana en: • Tercera reunión plenaria del ISO/TC 301 "Energy management and energy savings" y sus Grupos de Trabajo. Ixtapa, México, 25 al 29 de junio del 2018 • Reuniones de grupos de trabajo del ISO/TC 301, Londres, Inglaterra, 26 al 30 de noviembre del 2018.
IMNC/CTNN 9	Representante de ANCE en el CTNN-9, comité espejo del ISO/TC 176, de febrero del 2019 a julio del 2020.
GT de normalización de DGN	Representante de ANCE en los siguientes grupos de normalización de la dirección general de normas: a) Modificación de la NOM-051-SCFI/SSA1-2010 "Especificaciones generales de etiquetado para alimentos y bebidas no alcohólicas

pantal

CERTIFICADO DE APROBACIÓN

ASOCEC CERTIFICADO APROBACIÓN

OTORGADO A:

Joel Miguel Ramírez

MIRJ 720724FQ8

APROBÓ VIRTUALMENTE EL CURSO

NORMA ISO/IEC 17029
EVALUACIÓN DE LA CONFORMIDAD: PRINCIPIOS Y REQUISITOS GENERALES PARA LOS ORGANISMOS DE VALIDACIÓN Y VERIFICACIÓN
DESDE EL 05-06-23 HASTA 08-06-23
INTENSIDAD: 12 HORAS

FIRMADO A LOS 20 DÍAS DEL MES DE JUNIO DE 2023

Aparna Dhawan
Sr Counsellor and Head QS, CII-IQ

Ramón Madriñán
Presidente Ejecutivo
ASOCEC

Annex 2. Clarification requests, corrective action requests and forward action requests

Finding ID: 1	Type of finding: Corrective action	Date: 06/12/23
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 12 Quantification and monitoring of GHG emission reductions and/or GHG removals 12.1 Conservative approach and uncertainty management GHG Project holder should establish and apply mechanisms for managing uncertainty in the baseline quantification and mitigation results. GHG Project holder should establish and apply mechanisms for managing uncertainty in the baseline quantification and mitigation results.		
Description of finding		
During the validation and verification carried out in documentary mode and on site, it was found that the quantities of non-hazardous organic waste used for the calculation of estimated reductions differed from those found in the manifests and shipments received by the organization (solid waste records folder), causing a material difference.		
Project holder response: 31/01/2024		
Documentation provided by the project holder		
File containing the compilation of solid residues: WORMS solid V2.xlsx GENERAL QA/QC PROCEDURES Version 1, Worms.		
CAB assessment (06/02/2024)		
The project owner considered the verified quantities (based on waste shipments) for the emission reduction estimate calculation, due to the fact that the Project owner did not submit the calibration for the other years in the baseline estimation calculation, the conservative principle of reducing by 2% the amount of solid waste (Wj,x) was applied with the motive of occurring an underestimation that in an overestimation of GHG emission reductions (principle of ISO- 1406464-2:2019). In addition, it has implemented a procedure "General QA/QC procedures" to reduce uncertainty and improve the quality of the GHG reduction estimation calculation.		

Finding ID: 2	Type of finding: Corrective action	Date: 06/12/23
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 12 Quantification and monitoring of GHG emission reductions and/or GHG removals 12.1 Conservative approach and uncertainty management GHG Project holder should establish and apply mechanisms for managing uncertainty in the baseline quantification and mitigation results.		

If the data and parameters applied to estimate the reduction or removal of GHG emissions shall be consistent with the emission factors, activity data, projection of GHG emissions, and the other parameters used to construct the inventory national of GHG and the national reference scenario. If this is the case, then it is unnecessary to apply the percentages defined for the discount factor provided in the guidelines for managing uncertainty.
Description of finding
During the validation and verification of the Project, it was found that there are emission factors for electricity consumption published by the Secretary of Energy of Argentina, which are more accurate values for the calculation of emissions estimates.
Project holder response: 31/01/2024
Documentation provided by the project holder
file with corrections of the emissions calculation for electricity consumption: WORMS solid V2.xlsx Calculation of the CO_2 Emission Factor of the Argentine Power Grid, Dados Energies - Calculation of the CO_2 Emission Factor of the Argentine Power Grid (energia.gob.ar) GENERAL QA/QC PROCEDURES Version 1, Worms.
CAB assessment (06/02/2024)
The Project owner recalculates the GHG emission reductions using the emission factors for electricity consumption that the Ministry of Energy, through the Wholesale Electricity Market, officially.

Finding ID: 3	**Type of finding: Clarification**	**Date: 06/12/23**
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 12 Quantification and monitoring of GHG emission reductions and/or GHG removals 12.1 Conservative approach and uncertainty management GHG Project holder should establish and apply mechanisms for managing uncertainty in the baseline quantification and mitigation results. *If the data and parameters applied to estimate the reduction or removal of GHG emissions shall be consistent with the emission factors, activity data, projection of GHG emissions, and the other parameters used to construct the inventory national of GHG and the national reference scenario. If this is the case, then it is unnecessary to apply the percentages defined for the discount factor provided in the guidelines for managing uncertainty.*		
Description of finding		
During the validation and verification of the project, it was found that diesel and gasoline consumption reported in the invoices (PLANILLA COMBUSTIBLE.xlsx) and energy consumption are overestimated and not adjusted to the project limit, so it is necessary to record the energy consumption based on the declaration of the limit and scope of the project.		

Project holder response: 31/01/2024
Documentation provided by the project holder
The file contains the quantities of energy used in the project activity: WORMS solid V2.xlsx Combustible real usado.xlsx Consumo_Gasoil_COMPOST.xlsx GENERAL QA/QC PROCEDURES Version 1, Worms.
CAB assessment: 06/02/2024
The owner of the Project made a conservative estimate of the energy consumption (diesel and electricity) used in the Project, based on the operation and observation of the Project, it was determined that gasoline consumption in the Project is zero.

Finding ID: 4	**Type of finding: Corrective action**	**Date: 06/12/23**
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 11 General Requirements 11.1.5 Activities on waste handling and disposal Waste management and disposal projects eligible under BIOCARBON are GHG emission reduction projects that focus on the use of waste and the reduction of GHG emissions that would be generated during the treatment and final disposal of solid or liquid, industrial, household or mixed waste.		
Description of finding		
Correct the wording of the Project Objective in accordance with the BCR Standard: "It is important to note that the project objectives should be consistent with the proposed activities and expected GHG mitigation outcomes.", so the focus needs to be directed to the Project and not to the organization.		
Project holder response: 31/01/2024		
Documentation provided by the project holder		
The updated PDD was reviewed: PDD-Worms-Solid V2.doc		
CAB assessment: 06/02/2024		
The project objective was corrected by mentioning the proposed activities and the expected mitigation results of the project.		

Finding ID: 5	Type of finding: Clarification	Date: 06/12/23
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 10 Methodological Documents Projects holders shall apply methodologies eligible under this Standard. Methodologies shall be applied in full, including the full application of any tools or parameters/data referred to by a methodology.		
Description of finding		
Clarify the applicability of the methodologies used for the Project's emissions reduction. In the PDD there is a replication of the paragraphs of the methodology without reflecting the application of each one.		
Project holder response: 31/01/2024		
Documentation provided by the project holder		
The updated PDD was reviewed: PDD-Worms-Solid V2.doc WORMS solid V2.xlsx		
CAB assessment: 06/02/2024		
The project owner evaluated the points of the methodologies applicable to the project and included the analysis of each one in the PDD, which can be seen in point 5.5.2.2 Applicability of the report.		

Finding ID: 6	Type of finding: Clarification	Date: 06/12/23
Requirement / Criteria Standard BCR, version 3.2, September 23.2023; 11 General Requirements 11.5 Project length and quantification periods Project holder shall determine the start date of the GHG project and provide a description of how this start date has been determined. Based on, project holder shall define the project length of the GHG project. The project length of GHG projects is the following: (c) for projects in sectors other than AFOLU (ii) A maximum of 10 years with no option of renewal.		
Description of finding		
Clarify the specific period covered by the Project considering that it will last 10 years.		
Project holder response: 31/01/2024		

Documentation provided by the project holder
The updated PDD and calculation was reviewed: PDD-Worms-Solid V2.doc WORMS solid V2.xlsx
CAB assessment: 06/08/2024
The project owner clarified the estimated emission reductions for the project considering the duration of the project (10 years), and also included in the PDD the estimated reductions for the entire project period.

Finding ID: 7	**Type of finding: Clarification**	**Date: 06/12/23**
Requirement / Criteria Standard BCR, version 3.a2, September 23.2023; 12 Quantification and monitoring of GHG emission reductions and/or GHG removals 12.1 Conservative approach and uncertainty management GHG Project holder should establish and apply mechanisms for managing uncertainty in the baseline quantification and mitigation results. *If the data and parameters applied to estimate the reduction or removal of GHG emissions shall be consistent with the emission factors, activity data, projection of GHG emissions, and the other parameters used to construct the inventory national of GHG and the national reference scenario. If this is the case, then it is unnecessary to apply the percentages defined for the discount factor provided in the guidelines for managing uncertainty.*		
Description of finding		
Qualify the uncertainty analysis for direct solid waste measurements.		
Project holder response: 22/02/2024		
Documentation provided by the project holder		
The updated PDD and calculation was reviewed: PDD-Worms-Solid V2.doc WORMS solid V2.xlsx GENERAL QA/QC PROCEDURES Version 1, Worms		
CAB assessment: 26/02/2024		
The project owner considered the verified quantities (based on waste shipments) for the emission reduction estimate calculation, due to the fact that the Project owner did not submit the calibration for the other years in the baseline estimation calculation, the conservative principle of reducing by 2% the amount of solid waste (Wj,x) was applied with the motive of occurring an underestimation that in an overestimation of GHG emission reductions (principle of ISO- 1406464-2:2019). In addition, it has implemented a procedure "General QA/QC procedures" to reduce uncertainty and improve the quality of the GHG reduction estimation calculation.		

Finding ID: 8	Type of finding: Clarification	Date: 06/12/23
Requirement / Criteria Standard BCR, version 3.a2, September 23.2023; 16 Stakeholder engagement and consultation 17 Sustainable Development Goals (SDG) 21 Monitoring Plan		
Description of finding		
Clarify how the mitigation results were achieved as a consequence of the implementation of the project activities (application of the methodology). Ni la contribución del proyecto a los ODS, la consulta con las partes interesadas y el cumplimiento de la legislación nacional, ni el plan de monitoreo.		
Project holder response: 02/09/2024		
Documentation provided by the project holder		
The updated PDD was reviewed: PDD-Worms-Solid V2.doc WORMS solid V2.xlsx Municipalidad Arroyo Seco 20 Mayo 24.pdf (notification of complaints and denunciations) Minutes of meeting with neighbors (2018 to 2023) Neighbors complaints and claims book (2019 to 2021) Notification of environmental commitment to suppliers (Zofravilla S.A., Santa Fe Aceites, INAGRO) Customer complaints and claims book (2019 to 2023) Employee Grievance Book (2019 to 2023) Employee handbook, Worms Resolution N° 406/19 Municipalidad Arroyo Seco Mayo 24.pdf Resolution N° 024/18.pdf SDG Tool: SDG-Tool-2023-WORMS Solid (SDG-WORMS solid 201024.xlsx)		
CAB assessment: 26/10/2024		
The project demonstrates compliance with sustainable development goals by aligning with SDGs 9, 11, 12, and 13 through actions such as increasing local employment, promoting waste recycling and reuse, and reducing methane emissions via controlled composting. Stakeholder consultation is evident through regular meetings with local communities and authorities, as well as feedback mechanisms like suggestion books,		

with no significant complaints reported. National legislation compliance is ensured through updated permits and adherence to local and national environmental regulations. The monitoring plan is robust, covering project boundaries, activity execution, emission quantification, and quality control, with mechanisms for data recording and archiving.

Annex 3. Documentation review

Document Title / Version	Author	Organization	Document provider (if applicable)
Sealing and verification report (OTN° 307-15719 y 28315), 2019, 2021 y 2023	Tco. Pablo Daniel Cornet	INTI (Ministry of Productive Development Argentina)	Not apply
Fuel consumption billing records, 2020, 2021, 2022	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Electricity consumption invoices. 2018 to 2023	Not apply	Empresa Provincial de la Energía de Santa Fe	Empresa Provincial de la Energía de Santa Fe
Annual revenue control, 2018 to 2022	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Logbook of waste as raw material for composting, 2018 to 2023	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Calculation of the CO_2 Emission Factor of the Argentine Electric Power Grid, 2023	Secretary of Energy of Argentina,	Not apply	Secretary of Energy of Argentina, energia.gob.ar
Records of Emission Factors of the Wholesale Electricity Market of Argentina, Emission Factor, 2023	CAMMESA	CAMMESA	Not apply
CO_2 emissions calculated on the basis of retail sales of liquid fuels in EESS, 2018	Government Secretary of Energy, Argentina	Government Secretary of Energy, Argentina	Not apply
Joint Resolution 1/2019, RESFC-2019-1-APN-SECCYMA#SGP, 2019	Enviromental monitoring and Control Secretary	Enviromental monitoring and Control Secretary	Not apply

Document Title / Version	Author	Organization	Document provider (if applicable)
endment record - compost – solids, 2023	National Service of Agrifood Health and Quality (Servicio Nacional de Sanidad y Calidad Agroalimentaria)	Not apply	Not apply
Compost quality control, V1, 2021	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Effluent discharge procedure, V1, 2021	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
PE-8.2-02 Transport entry control instructions, V1, 2021	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
PE-8.2-04 Instructions for waste acceptance for composting, V1, 2021	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Billing of electric energy consumption, 2018 to 2023	Not apply	Not apply	EPE, Santa FE Energy (Energía de Santa FE)
Invoicing of diesel consumption, 2028 to 2023	Not apply	Not apply	LISLENCI S.R.L
Diesel and Electric Energy Consumption File, 2023	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
Decree (PEP) 2151/14. From 17/07/2014. B.O.: 05/08/2014. Non-Hazardous Waste	Provincial Executive Power	Not apply	Not apply
LAW ON MINIMUM BUDGETS FOR ADAPTATION AND MITIGATION TO GLOBAL CLIMATE, 2019 CHANGE, Law 27520	Argentina Framework Law	Not apply	Not apply
Municipalidad Arroyo Seco Mayo 24.pdf	Not apply	Arroyo Seco Locality, environmental Secretary	Not apply
Resolution N° 02418	Not apply	Arroyo Seco Locality,	Not apply
National Plan for Adaptation and Mitigation of Climate Change, version 2022.	Ministry of Environment and Development Sostenible de la República Argentina	Not apply	Argentina Goverment

Document Title / Version	Author	Organization	Document provider (if applicable)
ENVIRONMENTAL MONITORING, inform 9985, November 2021	Not apply	HSE INGENIERIA SRL	Not apply
ENVIRONMENTAL MONITORING, inform 9986, November 2021	Not apply	HSE INGENIERIA SRL	Not apply
Resolutio Number 406	Jacinto R Speranza	Province of Santa Fe Ministries of Environment	Not apply
Customer Satisfaction Procedure Version 01	Worms Argentina S.A.	Worms Argentina S.A.	Not apply
GENERAL QA/QC PROCEDURES Version 01	Worms Argentina S.A.	Worms Argentina S.A.	Not apply

Annex 4. Validation and Verificatión Plan

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Folio: N.A.

PLAN DE VERIFICACIÓN/VALIDACIÓN DEL PROYECTO

WORMS ARGENTINA S.A.

Fecha de actualización del plan:	04 de Marzo del 2024

OC VV GEI Asociación de Normalización y Certificación, S.A. de C.V.	
Acreditación ante la ema:	OVVGEI 001/15; entrada en vigor 26/06/2015, con fecha de actualización del **13/10/2023**. Sectores acreditados: **del 1 al 3** con base en el IAF MD 14.
Domicilio:	Eje Lázaro Cárdenas No. 869, Fracc. 3, Col. Nueva Industrial Vallejo, Delegación Gustavo A. Madero, C.P. 07700, México, D.F.
Teléfono:	+52 (55) 5747 4550 Ext. 4671,4666.
e-mail:	sustentabilidad@ance.org.mx

OBJETIVO GENERAL

Evaluar los controles asociados al sistema de información y los datos correspondientes a las reducciones de emisiones de GEI reportadas por **WORMS ARGENTINA S.A.,** tomando como referencia la información de entrada durante las actividades de validación/verificación documental y en sitio.

OBJETIVO ESPECÍFICO

Ratificar que la información sobre la declaración del proyecto de GEI y las FSR asociadas al mismo, se encuentran debidamente sustentados en evidencia suficiente o apropiada que demuestran de manera consistente, la veracidad de la información sobre las reducciones de emisiones de GEI reportadas por el proponente del proyecto.

ALCANCE DE LA *VERIFICACIÓN/VALIDACIÓN*

El alcance de la verificación/Validación de proyectos incluye los límites del proyecto *Treatment of non-hazardous industrial waste to obtain Biocompost*, la infraestructura física, actividades, tecnologías y procesos, FSR de GEI, tipos de GEI y el periodo reporte. Para las declaraciones de GEI que contienen reducciones de emisiones o aumentos de remociones incluye los efectos secundarios materiales, el escenario de línea base (validación) y los escenarios del proyecto (verificación).

I. INFORMACIÓN DE ENTRADA	
Alcance de la validación:	**Treatment of non-hazardous industrial waste to obtain Biocompost,** propuesto por POLARIS NETWORK ESPAÑA SL, con dirección en: Industrial Sector 3 Prof. Nucci St. S/N entre carretera Buenos Aires and calle San Martí, Arroyo Seco, Santa Fe, Argentina
Criterio de validación:	BioCarbon Registry
Nivel de aseguramiento:	Razonable (≥ 95 %)
Umbral de materialidad:	5%

II. EQUIPO DE VALIDACIÓN/VERIFICACIÓN	
Validador/verificador Líder	Excalibur Ernesto Acosta Miranda
Validador/verificador::	Nancy Adriana Barrera Gómez

Recusación del equipo de validación/verificación: En caso de identificar algún conflicto de intereses que amenace la imparcialidad del servicio en relación con el personal designado por ANCE, agradeceremos nos lo comunique a la brevedad (Ver análisis de Conflicto de Interés).

III. REVISOR INDEPENDIENTE	
Revisor independiente:	Janai Monserrat Hernández Contreras

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FOROVV-P01.26.19

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Recusación del revisor independiente: En caso de identificar algún conflicto de intereses que amenace la imparcialidad del servicio en relación con el personal designado por ANCE, agradeceremos nos lo comunique a la brevedad (Ver análisis de Conflicto de Interés).

RESPONSABILIDADES Y FUNCIONES DEL EQUIPO EN EL PROCESO DE VALIDACIÓN/VERIFICACIÓN

NOTA 1. *Validador/Verificador Líder: persona competente en materia de validación/verificación de emisiones de gases de efecto invernadero, responsable de conducir el proceso de validación/verificación, coordinar el equipo de validación/verificación y emitir la Declaración/Opinión de Validación/Verificación. Acreditado de acuerdo al estándar ISO 14065:2013.*
NOTA 2. *Validador/Verificador: persona competente en materia de validación/verificación de emisiones de gases de efecto invernadero que lleva a cabo las actividades de validación/verificación por el cual fue acreditado de acuerdo al estándar ISO 14065:2013.*
NOTA 3. *Revisor Independiente: verificador líder acreditado y aprobado que, como parte del Organismo de Validación/Verificación revisa el proceso de validación/verificación, así como la emisión de la declaración/opinión de validación/verificación de manera objetiva e imparcial, por lo cual deberá ser independiente al proceso de validación/verificación, es decir, que no actuará como un validador/verificador, su nivel de imparcialidad es relevante.*

IV. INFORMACIÓN SOBRE EL PROYECTO DE EMISIONES DE GEI DEL PROPONENTE

Objetivo del proyecto:	Worms Argentina S.A investiga y brinda soluciones viables y sustentables a problemáticas complejas como los residuos sólidos no peligrosos mediante el compostaje de estos residuos.
Sector al que pertenece el proyecto:	Manejo y eliminación de residuos

LÍMITE DEL PROYECTO

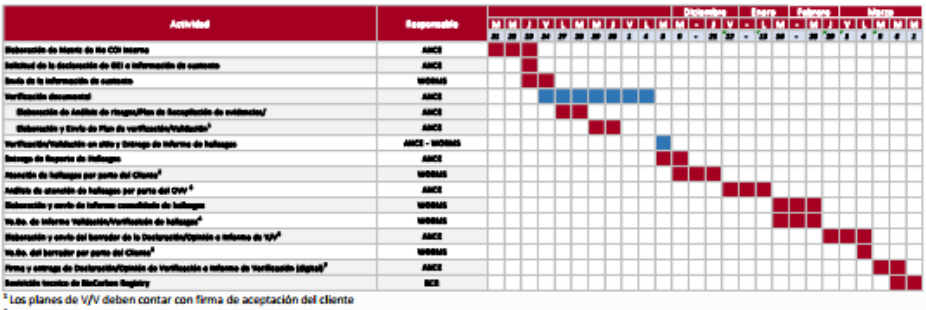
Fuente de Emisión, Sumidero y/o Reservorio de GEI (FSR) o tecnologías del proyecto	Reducción de emisión		Aumento de remoción	
	Directa (Categoría 1)	Indirecta (Categoría 2 al 6)	Directa (Categoría 1)	Indirecta (Categoría 2 al 6)
Vertedero	X		N.A.	N.A.
Sitio de composteo (CH4)	X		N.A.	N.A.
Sitio de composteo (N2O)	X		N.A.	N.A.
Maquinaria móvil	X		N.A.	N.A.
Varios por consumo de energía eléctrica		X	N.A.	N.A.

Tipos de GEI incluidos en la declaración de GEI:	CO_2	CH_4	N_2O	HFC	PFC	NF_3	SF_6

Procedencia de los datos para el escenario de línea base y la línea base del proyecto de GEI:
Datos históricos de un año (X)
Datos históricos de un promedio de varios años ( )

Nota: *Categoría 1: emisiones y remociones directas de GEI; Categoría 2: emisiones indirectas de GEI por energía importada; Categoría 3: emisiones indirectas de GEI por transporte; Categoría 4: emisiones indirectas de GEI por productos utilizados por la organización; Categoría 5: emisiones indirectas de GEI asociados con el uso de productos de la organización; Categoría 6: emisiones indirectas de GEI por otras fuentes.*

V. CRONOGRAMA DE TRABAJO



[1] Los planes de V/V deben contar con firma de aceptación del cliente
[2] Los días máximos para la atención de los hallazgos son 30 días hábiles, estos se contabilizan posterior al día de entrega del informe de hallazgos.

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[1] Para el análisis de la atención de los hallazgos, así como la elaboración y envío del Informe consolidado de hallazgos, el OVV cuenta con 10 días hábiles máximo.
[2] Al entregar el Informe consolidado de hallazgos, el cliente cuenta con 3 días hábiles máximo para otorgar el Vo.Bo. vía correo electrónico, en caso de no hacerlo, el OVV lo dará como aceptado y procederá a la siguiente etapa del proceso.
[3] El tiempo de elaboración del borrador de la Declaración e Informe de verificación por parte del OVV son 7 días hábiles, esto incluye el proceso de revisión independiente.
[4] Al entregar el borrador de la Declaración e Informe de verificación, el cliente cuenta con 7 días hábiles máximo para otorgar el Vo.Bo. vía correo electrónico, en caso de no hacerlo, el OVV lo dará como aceptado y procederá a la siguiente etapa del proceso.
[5] La Declaración e Informe de verificación en físico se enviarán al cliente posterior al envío de los documentos de manera digital y al concluir el proceso de facturación y pago.

VI. PLAN DE RECOPILACIÓN DE EVIDENCIAS

A. FSR de reducción de emisiones y su porcentaje de contribución al total de emisiones

Año	Fuente de emisión Escenario de línea base	Fuente de emisión Escenario del Proyecto	Combustible/Insumo consumido	Actividad que genera la emisión/reducción de GEI	Emisiones t CO_2e	%	Reducciones t CO_2e	%
2018	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**10,873**	7.71	9,522	8%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	675	0.48		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	688	0.45		
		Maquinaria móvil	Diésel	Combustión interna	94	0.03		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	4	0.00		
2019	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,991**	10.57	13,051	11%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	925	0.66		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	876	0.57		
		Maquinaria móvil	Diésel	Combustión interna	54	0.04		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	6	0.00		
2020	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**12,340**	8.89	10,672	9%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	778	0.55		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	736	0.51		
		Maquinaria móvil	Diésel	Combustión interna	47	0.03		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	7	0.00		
2021	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**15,540**	10.71	13,259	11%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	940	0.67		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	889	0.63		
		Maquinaria móvil	Diésel	Combustión interna	52	0.04		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	8	0.01		
2022	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,746	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	8	0.00		
2023	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,747	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	5	0.00		
2024	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,747	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	5	0.00		
2025	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,747	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	5	0.00		
2026	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,747	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	5	0.00		
2027	**Vertedero**		**N/A**	**Descomposición de residuos sólidos**	**14,000**	10.35	12,747	10%
		Sitio de compostaje (CH4)	n/a	Tratamiento de la biomasa mediante compostaje	900	0.64		
		Sitio de compostaje (N2O)	n/a	Tratamiento de la biomasa mediante compostaje	850	0.61		
		Maquinaria móvil	Diésel	Combustión interna	90	0.06		
		Varios por consumo de energía eléctrica	n/a	Consumo de energía eléctrica	5	0.00		

B. Análisis de riesgos

Los riesgos que se deben evaluar de forma cuantitativa y cualitativa son:

- Riesgos inherentes: riesgo de que se produzcan errores, extravíos o desviaciones atribuibles al manejo de información del establecimiento.
- Riesgos de control: riesgo de que el sistema de control interno del establecimiento no pueda prevenir, detectar y/o corregir errores.

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Riesgo de detección: riesgo de que los procedimientos del verificador no detecten errores.

Cuadro 1. Análisis de riesgos*.

FRS de emisión / Reducción	Actividad *	Descripción de los riesgos		RI	RC	RD	Riesgo de la Verificación/Validación	Clave de mitigación
		RI	RC					
Vertedero	Aplicación de la metodología de cálculo con base al programa de GEI	Aplicación de la metodología de cálculo con base al programa de GEI	Se aplica la metodología de cálculo de acuerdo al Programa GEI aplicable;	B	B	A	Bajo	a, c, g, k
Sitio de composteo (CH4)	Aplicación de la metodología de cálculo con base al programa de GEI	Aplicación de la metodología de cálculo con base al programa de GEI	Se aplica la metodología de cálculo de acuerdo al Programa GEI aplicable;	B	B	A	Bajo	a, c, g, k
Sitio de composteo (N2O)	Aplicación de la metodología de cálculo con base al programa de GEI	Aplicación de la metodología de cálculo con base al programa de GEI	Se aplica la metodología de cálculo de acuerdo al Programa GEI aplicable;	B	B	A	Bajo	a, c, g, k
Maquinaria móvil	Revisión de reportes de consumo del combustible en bitacoras/Facturas	Revisión de reportes de consumo del combustible en bitacoras/Facturas	La Fuente de emisión debe estar dentro de los límites operacionales / organizacionales de la Organización;	B	B	A	Bajo	a, c, g
Varios por consumo de energía eléctrica	Revisión de Facturas de la energía eléctrica consumida	Revisión de Facturas de la energía eléctrica consumida	Se detectaron errores en el procesamiento de datos en el cálculo de emisiones;	B	B	A	Bajo	a, c, g

Siglas: *RI: Riesgo inherente; RC: Riesgo de control; RD: Riesgo de detección. Ver anexo A para la descripción de medidas de mitigación.*

Evaluación del riesgo	
Riesgo de la verificación:	Bajo

*Con base en el ANEXO A.

C. Justificación del nivel de aseguramiento.

a) Para validaciones/verificaciones bajo criterios de la UNE EN ISO 14064 o algún otro programa de GEI que se base en ella: existen dos niveles de aseguramiento, el limitado (60%) y el razonable (80%). Con base en el numeral A.2 del "Anexo A Verificaciones de niveles de aseguramiento limitado" de la norma UNE EN ISO 14064-3:2019, en los casos de las verificaciones de nivel de aseguramiento limitado, no se debe cambiar dicho nivel una vez comenzado el compromiso. En caso de que se cambie, se debe documentar las razones del cambio, así como comenzar una nueva verificación a un nivel de aseguramiento diferente.

Validación/Verificación documental	
Número de FSR incluidas en la declaración de GEI:	01 Fuente
Número de FSR que serán verificadas a nivel documental:	01 Fuente
Periodo del escenario de línea base:	01/04/2018 al 31/03/2028
Periodo de proyecto:	01/04/2018 al 31/03/2023
Días requeridos para la validación/verificación documental:	07 días hábiles

Validación/Verificación en sitio	
Número de FSR que serán validados/verificados en sitio:	01 Fuente
Días validador/verificador para la validación/verificación en sitio:	01 días validador/verificador

Nota. *El tiempo máximo por día verificador es de 8 horas.*

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VII. ACTIVIDADES DE VALIDACIÓN/VERIFICACIÓN

Validación/Verificación documental.

Durante el proceso de la validación/verificación documental que se lleva a cabo del **23/11/2023** al **04/12/2023** se realizan las actividades que se mencionan a continuación, considerando la evidencia (documentos) presentada por **Worms Argentina S.A.,** listada en el cuadro 2.

La revisión documental conllevará la evaluación de:

a. El sistema de manejo de información de GEI y sus controles para determinar las fuentes de errores, omisiones o desviaciones potenciales conforme a:
   - la selección, gestión de los datos y la información relacionada a emisiones y/o remociones de GEI;
   - los procesos para recopilar, procesar, consolidar y reportar la información de GEI;
   - los procesos que aseguren la exactitud de los datos y la información del reporte de GEI;
   - los resultados de evaluaciones previas, en caso de haberse realizado;
b. Los datos y la información documental de las emisiones y/o remociones de GEI del proyecto;

Cuadro 2. Documentos evaluados en la revisión documental.

Nombre del documento
23.03.2023 Emission Reductions_AMS.III.F based_ Worms Argentina_AM (1).xlsx
PDD-Worms-BCR para enviar.doc
ANCE-20231122T1355142-001\ANCE\Registros ingresos solidos
FACTURAS 2021-20231122T1421562-001
FACTURAS 2022-20231122T1421552-001
ANCE-20231122T135514Z-001
Balanza-20231122T135441Z-001
Combustible-20231122T135024Z-001

Validación/verificación en sitio.

Una vez concluidas las actividades mencionadas para validación/verificación documental, se continuará con la revisión de las evidencias de la información que conforma el Documento del Diseño del Proyecto de GEI y el Plan de Monitoreo, dichas actividades destinadas a realizarse durante la visita en sitio se mencionan a continuación:

Para la validación y verificación de proyectos de GEI

La visita en sitio implica:

- La revisión exhaustiva en el sitio de acuerdo a los límites del proyecto.
- Entrevistar al personal involucrado en los diferentes procesos, en la generación y en el manejo de los datos y llevar un registro detallado tanto de las revisiones de los FSR como de las entrevistas llevadas a cabo.
- Confirmar si fueron consideradas todas los FSR de GEI.
- La revisión de los procesos para identificar, seleccionar y justificar el escenario de la línea base y la línea base.
- Verificar los procedimientos operacionales y de control que la parte responsable va a implementar para asegurarse de la calidad, integridad y seguridad de la información sobre los GEI;
- Verificar los procesos del sistema de gestión de la información sobre los GEI utilizados para reunir, unificar, transferir, procesar, analizar, corregir o ajustar, agregar (o desagregar) y almacenar la información sobre los GEI de la parte responsable;
- Verificar los procesos utilizados para reunir y revisar cualquier documentación que apoya la información proporcionada sobre los GEI;
- Verificar la evidencia de cualquier cambio introducido como resultado de recomendaciones de las validaciones o verificaciones previas;
- Verificar la aplicación de supuestos y consideraciones;
- Corroborar la disponibilidad de evidencia para la información y la declaración de GEI por la parte responsable;

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2023SV-OVV00003_Worms **Folio: N.A.**
Worms Argentina S.A.
OC-VV-GEI ANCE
Periodo de validación del proyecto de GEI: 01/04/2018 – 31/03/2028
Periodo de verificación del proyecto de GEI: 01/04/2018 – 31/03/2023

PLAN DE VERIFICACIÓN/VALIDACIÓN DEL PROYECTO

- Los informes que contienen declaraciones sobre emisiones, remociones, reducciones de emisiones o aumentos de remociones de GEI relacionados con la declaración de GEI de la parte responsable.

INFORMACIÓN SOBRE LA VERIFICACIÓN/VALIDACIÓN EN SITIO

INFORMACIÓN GENERAL SOBRE LA VALIDACIÓN/VERIFICACIÓN EN SITIO	
Fecha de validación/verificación en sitio:	05/12/2023
Horario de actividades:	09:00 – 18:00

ORDEN DEL DÍA

HORARIO	DESARROLLO DE LA VALIDACIÓN/VERIFICACIÓN	MIEMBRO DEL EQUIPO INVOLUCRADO
09:00 a 09:30 h	**Reunión de apertura.** • Dar una introducción del servicio de validación/verificación. • Hablar sobre la disposición de recursos necesarios para llevar a cabo la validación/verificación. • Dar lectura al plan de validación/verificación. • Informar al cliente los principios que rigen la actividad del OC VV-GEI ANCE. • Informar resultados de la validación/verificación documental.	**EEAM**
9:30 a 11:30 h	**Desarrollo de validación/verificación en sitio.** • Solicitar una introducción a los procesos y actividades involucradas en el proyecto. • Solicitar un recorrido por el sitio de ubicación geográfica del proyecto. o Verificación de las rutinas para el control de errores de entrada, transformación y salida de la información. • Evaluar los datos e información sobre los FSR de GEI. • Evaluar los controles del sistema de información sobre los FSR de GEI.	**EEAM**
11:30 a 13:00 h	• Verificación de la información asociada a las FSR y reducciones de emisiones y/o aumento de remociones de GEI reportadas. o Revisión del contenido del PDD o Revisión de supuestos para la elaboración de línea base o Revisión de datos para el escenario del Proyecto ▪ Tratamiento de la biomasa mediante compostaje (CH4 y N2O) ▪ Consumo de diésel ▪ Consumo de energía eléctrica	**EEAM**
13:00 a 14:00 h	**HORARIO PROPUESTO PARA COMIDA**	
14:00 a 17:00 h	• Continuación de la validación/verificación y ratificación de la información asociados a las FSR y reducciones de emisiones y/o aumento de remociones de GEI reportadas. ▪ Tratamiento de la biomasa mediante compostaje (CH4 y N2O) ▪ Consumo de diésel ▪ Consumo de energía eléctrica	**EEAM**
17:00 a 17:30 h	• Elaboración del informe de hallazgos.	**EEAM**
17:30 a 18:00 h	**Reunión de cierre.** • Comunicar las conclusiones de la visita en sitio. • Informar sobre los siguientes pasos para la conclusión del servicio.	**EEAM**

Siglas. *EEAM: Excalibur Ernesto Acosta Miranda;*
Nota. *La presente agenda está sujeta a modificaciones considerando el desarrollo de la validación/verificación, así mismo, los tiempos destinados para cada actividad, dependen de los diferentes riesgos identificados en el plan de muestreo, con base en el primer párrafo del numeral 6.1.3.3 de la norma UNE-ES ISO 14064-3:2019.*

Modificaciones al Plan de Verificación

- *Cambios en la Sección V, Cronograma de actividades;*
- *Cambios en sección VI, A por modificaciones la Plan de recopilación de evidencia (muestreo).*
- *Modificación en el periodo del proyecto*

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2023SV-OVV00003_Worms
Worms Argentina S.A.
OC-VV-GEI ANCE
Periodo de validación del proyecto de GEI: 01/04/2018 – 31/03/2028
Periodo de verificación del proyecto de GEI: 01/04/2018 – 31/03/2023

Folio: N.A.

PLAN DE VERIFICACIÓN/VALIDACIÓN DEL PROYECTO

ANEXO A

MATRIZ DE IDENTIFICACIÓN DE RIESGOS

a) / El equipo OC VV GEI debe verificar que la fuente de emisiones este relacionada directamente con la organización, solicitando facturas de consumo de combustibles, energía eléctrica, vapor, insumo, gases refrigerantes, documentos legales, acuerdos, etc.
c) / El equipo OC VV GEI debe verificar el total de información referente a la fuente de emisiones o en su caso hacer revisión de una muestra de datos representativa para buscar errores de transcripción.
g) / El equipo OC VV GEI debe guiarse estrictamente con la Matriz y Guía de Verificación.
k) / El equipo OC VV GEI se asegura que las fuentes de información verificadas estén adecuadamente documentadas y sustentadas.

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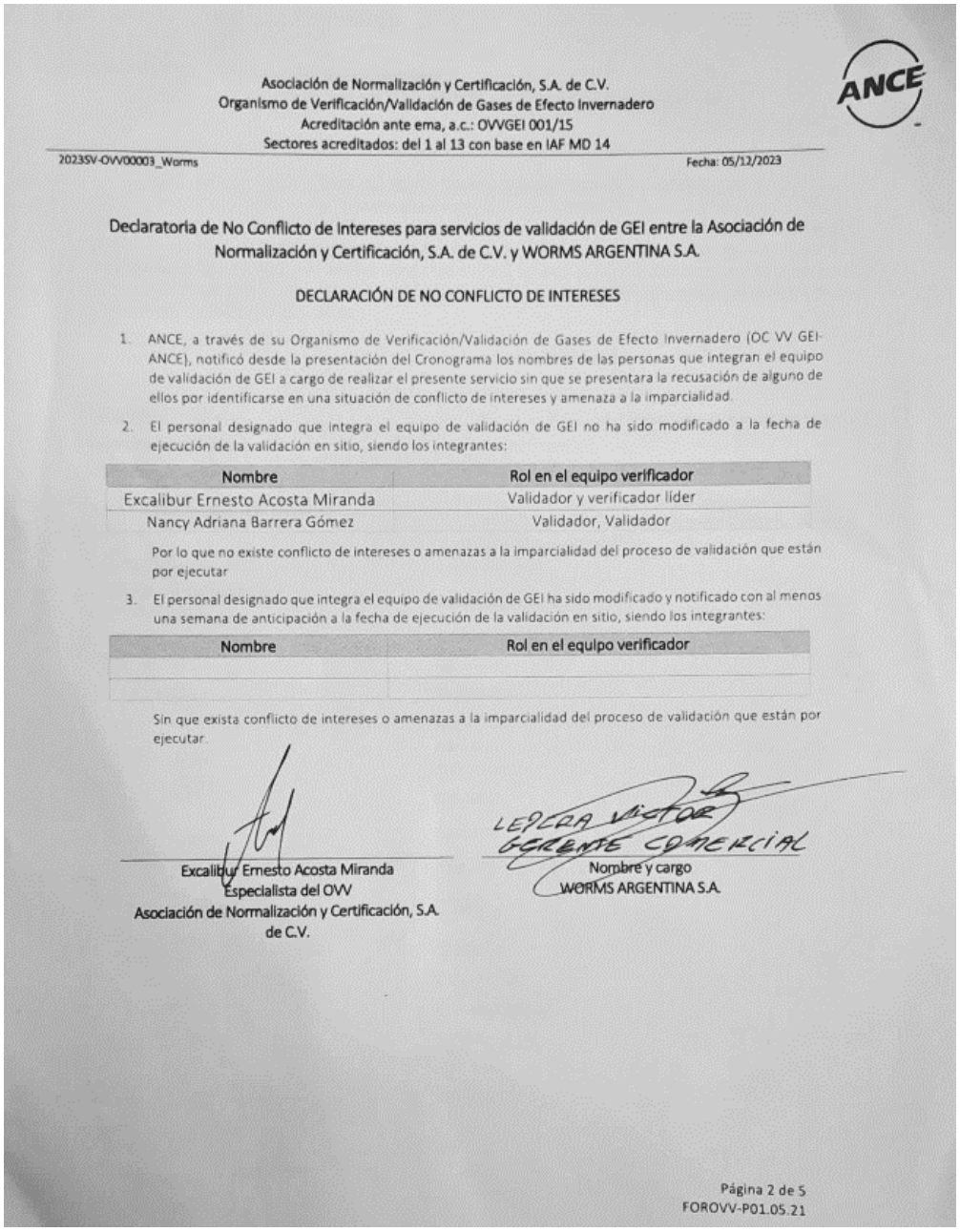
Annex 5. Conflicts of interest



Asociación de Normalización y Certificación, S.A. de C.V.
Organismo de Verificación/Validación de Gases de Efecto Invernadero
Acreditación ante ema, a.c.: OVVGEI 001/15
Sectores acreditados: del 1 al 13 con base en IAF MD 14

2023SV-OVV00003_Worms Fecha: 05/12/2023

Declaratoria de No Conflicto de Intereses para servicios de validación de GEI entre la Asociación de Normalización y Certificación, S.A. de C.V. y WORMS ARGENTINA S.A.

DECLARACIÓN DE NO CONFLICTO DE INTERESES

1. ANCE, a través de su Organismo de Verificación/Validación de Gases de Efecto Invernadero (OC VV GEI-ANCE), notificó desde la presentación del Cronograma los nombres de las personas que integran el equipo de validación de GEI a cargo de realizar el presente servicio sin que se presentara la recusación de alguno de ellos por identificarse en una situación de conflicto de intereses y amenaza a la imparcialidad.
2. El personal designado que integra el equipo de validación de GEI no ha sido modificado a la fecha de ejecución de la validación en sitio, siendo los integrantes:

Nombre	Rol en el equipo verificador
Excalibur Ernesto Acosta Miranda	Validador y verificador líder
Nancy Adriana Barrera Gómez	Validador, Validador

Por lo que no existe conflicto de intereses o amenazas a la imparcialidad del proceso de validación que están por ejecutar

3. El personal designado que integra el equipo de validación de GEI ha sido modificado y notificado con al menos una semana de anticipación a la fecha de ejecución de la validación en sitio, siendo los integrantes:

Nombre	Rol en el equipo verificador

Sin que exista conflicto de intereses o amenazas a la imparcialidad del proceso de validación que están por ejecutar.

Excalibur Ernesto Acosta Miranda
Especialista del OVV
Asociación de Normalización y Certificación, S.A. de C.V.

LEDESMA VICTOR
GERENTE COMERCIAL
Nombre y cargo
WORMS ARGENTINA S.A.

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Annex 5.1 COI ANALYSIS

RIESGO		IDENTIFICACIÓN			OC-VV/OVV-GEI/OV - ANCE - WORMS	Verificador/Validador líder: Excalibur Ernesto Acosta Miranda	Verificador/Validador 1: Verificador/Validador: Nancy Adriana Barrera Gómez	Aprobador Joel Miguel Ramirez	Revisor Independiente: Janal Monserrat Hernández Contreras	EVALUACIÓN	NIVEL DE RIESGO Con base en la escala de magnitud	SALVAGUARDA / MEDIDA DE MITIGACIÓN
		ANÁLISIS DE CONFLICTO DE INTERÉS / RIESGOS A LA IMPARCIALIDAD / SALVAGUARDAS / MITIGACION										
RELACION ENTRE PARTES INTERESADAS	*Riesgo que se presenta cuando se pretende validar/verificar una declaración de GEI, existiendo relación organismo - cliente potencial en otros servicios proporcionados al mismo cliente potencial. Así mismo cuando se encuentran involucrados interés ajenas al servicio entre las partes interesadas y usuarios finales (instituciones, dependencias de gobierno nacionales e internacionales, programas voluntarios, ONG, consejos empresariales).*	PROPIETARIO O GOBERNANZA COMÚN. ¿Comparten Directores el Organismo y el Cliente?			No	No	No	No	No		1	c, d, e, h, j
		Puntuación			1	1	1	1	1	1		
		PERSONAL PARA ACTIVIDADES DE VERIFICACION/VALIDACIÓN COMÚN. ¿Comparten personal (staff) el Organismo/órgano y el cliente?			No	No	No	No	No			
		En caso de respuesta afirmativa:	*a*	¿Han realizado funciones de supervisión al OC-VV-GEI/OV y al cliente potencial, los últimos 2 años?	No	No	No	No	No			
			b	¿El personal compartido ha determinado la asignación de fondos al OC-VV-GEI/OV, en los últimos 2 años?	No	No	No	No	No			
			c	¿El personal compartido ha influido en la toma de decisiones sobre el desempeño de los servicios de verificación/validación en los últimos 2 años?	No	No	No	No	No			
			d	¿El personal compartido ha realizado funciones de promoción, desarrollo, y/o financiamiento de servicios de verificación/validación, los últimos 2 años?	No	No	No	No	No			
			e	¿El personal compartido ha realizado cualquier actividad que influya en la toma de decisiones del servicio de verificación/validación al cliente potencial, en los últimos 2 años?	No	No	No	No	No			
			f	¿El organismo/órgano o el personal involucrado con el servicio proporciona o ha proporcionado servicios al cliente potencial a través de otras áreas de la asociación?	No	No	No	No	No			
			g	¿El cliente es miembro de la asociación a la que pertenece el organismo/órgano o cuenta con membresías o beneficios dentro de la misma?	No	No aplica	No aplica	No aplica	No aplica			
			h	¿El cliente y la asociación a la que pertenece el organismo/órgano colaboran conjuntamente en proyectos relacionados al sector al que pertenece el cliente potencial?	No	No	No	No	FOROVV-P04.01.14			
			i	¿El cliente proporciona algún tipo de servicio a la asociación a la que pertenece el organismo/órgano o ha los miembros del equipo validador/verificador designado?	No	No	No	No	No			
		Puntuación			1	1	1	1	1	1		
		RECURSOS MATERIALES COMPARTIDOS			No	No	No	No	No			
		Puntuación			1	1	1	1	1	1		
		FINANZAS COMPARTIDAS			No	No	No	No	No			
		Puntación			1	1	1	1	1	1		
		CONTRATOS COMPARTIDOS			No	No	No	No	No			
		Puntuación			1	1	1	1	1	1		
		MERCADOTECNIA COMUN			No	No	No	No	No			
		Puntuación			1	1	1	1	1	1		
		Algún miembro del equipo V/V designado ha brindado los siguientes servicios al cliente										
		Específico del servicio GEI	*f*	Verificación de inventario GEI	No	No	No	No	No			
			g	Validación de proyecto GEI	No	No	No	No	No			
			h	Verificación de proyecto GEI	No	No	No	No	No			
			i	Consultoría GEI	No	No	No	No	No			
			j	Capacitación GEI	No	No	No	No	No			
		Valor mayor de acuerdo a tabla			1	1	1	1	1	1		
		Análisis respecto a las actividades realizadas u ofrecidas	*k*	FINANCIAMIENTO	No	No	No	No	No			
			l	CONSULTORÍA	No	No	No	No	No			
			m	CAPACITACION NO PERMITIDA POR EL ESQUEMA DE V/V	No	No	No	No	No			
			n	MERCADOTECNIA	No	No	No	No	No			
		Valor mayor de acuerdo a tabla			1	1	1	1	1	1		
		Relación entre áreas de ANCE	*o*	El cliente ha desarrollado servicios en alguna área de ANCE ajena a la V/V de inventarios/proyectos de gases de efecto invernadero.	No	No	No	No	No			
			p	El servicio desarrollado/ejecutado con dicha área de ANCE comparte personal con el equipo designado para ejecución del servicio de V/V.	No	No	No	No	No			
			q	El cliente cuenta con un contrato vigente en algún área de ANCE que pueda afectar de manera directa las actividades dentro del servicio de verificación/validación del Inventario de emisiones de GEI.	No	No	No	No	No			
					1	1	1	1	1	1		
FUENTE DE INGRESOS	*Riesgo asociado al pago por servicios proporcionados por el verificado (cliente potencial).Existiendo la posibilidad de que un cliente potencial pague por la validación/verificación de la declaración sobre GEI*	*Análisis del riesgo*	*a*	¿Existe amenaza, insinuación para no contratar, condicionar la contratación o adquisición de otros servicios ofrecidos por el Organismo/órgano o darse de baja de la membresía con base en el resultado de la verificación/validación?	Los ingresos del cliente potencial equivalen al 0.78 % del total de ingresos anual del Organismo. El cliente potencial **no es** un miembro asociado del Organismo.	No	No	No	No		1	c, d, e, h, j
			b	¿Algún miembro del equipos o el OC VV GEI/OV tiene relación financiera contractual con el cliente y/o parte responsable?	No	No	No	No	No			
		Valor mayor de acuerdo a tabla			1	1	1	0	1	1		

INTERÉS PERSONAL	*Riesgos de que personal del Organismo actúe por interés propio (económico, por ejemplo).*	*Análisis del riesgo*	*c*	¿Se identifica alguna presión por parte de la Organización/ESR/explotador aéreo para obtener un resultado positivo o inmediato que ofrezca un beneficio económico al equipo verificador?	No	No	No	No	No		1	c, d, e, h, j
			d	¿El personal involucrado con el servicio es o ha estado subordinado laboralmente con la Organización/ESR/eplotador aéreo?	No	No	No	No	No			
			e	¿Existen beneficios de interés financiero por el servicio?	No	No	No	No	No			
			f	¿El organismo/órgano o una persona del equipo de verificación/validación, actúan en defensa legal del cliente frente a terceras partes?	No	No	No	No	No			
			g	¿Existe interés personal al poseer acciones del cliente a verificar/validar?	No	No	No	No	No			
				Valor mayor de acuerdo a tabla	1	1	1	1	1	**1**		
AUTOREVISIÓN	*Riesgos de que el personal del Organismo evalúe su propio trabajo.*	*Análisis del riesgo*	*h*	¿Se ha brindado asesoría, consultoría, auditoría, intermediación (corretaje), gestoría o capacitación a la organización/ESR/explotador aéreo en temas de GEI, en los 3 últimos años, a la fecha de ingreso de su solicitud?	No	No	No	No	No		1	c, d, e, h, j
			i	¿Existe involucramiento del organismo/órgano de certificación o del personal del equipo de verificación/validación en el desarrollo del reporte de emisiones de GEI?	No	No	No	No	No			
			j	¿Se han brindado servicios anteriores al mismo cliente?	No	No	No	No	No			
				Valor mayor de acuerdo a tabla	1	1	1	1	1	**1**		
FAMILIARIDAD	*Riesgos de que el Organismo o uno de los miembros del equipo esté familiarizado o haya desarrollado una relación de confianza con alguno de los empleados o representantes del ESR.*	*Análisis del riesgo*	*k*	¿Se emplea personal con parentesco, consanguineidad o relación personal con la organización/ESR/explotador aéreo?	No	No	No	No	No		1	c, d, e, h, j
			l	¿Alguna persona del equipo de verificación/validación tiene una relación cercana con una persona crítica en el desarrollo del inventario de emisiones de GEI?	No	No	No	No	No			
			m	El cliente y/o parte responsable tiene relación de algún tipo con otro cliente de alguna empresa del Grupo	No	No	No	No	No			
				Valor mayor de acuerdo a tabla	1	1	1	1	1	**1**		
INTIMIDACIÓN	*Riesgos de que el Organismo o uno de sus miembros tenga la percepción de ser coaccionado de forma abierta o secreta, como un riesgo de ser reemplazado o reportado a un supervisor.*	*Análisis del riesgo*	*n*	¿Existe riesgo de coacción, sanción o despido para alguno de los miembros del equipo de verificación/validación?	No	No	No	No	No		1	c, d, e, h, j
			ñ	¿Algún miembro del equipo de verificación/validación ha sido disuadido en actuar objetivamente por amenazas del director o empleados del cliente?	No	No	No	No	NA			
			o	¿Existen amenaza de ser reemplazado o cancelar la acreditación, por desacuerdo en la aplicación de metodologías de cuantificación de emisiones de GEI?	No	No	No	No	No			
			p	¿Los honorarios provenientes del cliente (organización/ESR/explotador aéreo) representan un gran porcentaje (más del 40%) de los ingresos totales del verificador?	No	No	No	No	No			
			q	¿Existe presión en reducir la extensión del trabajo con fin de reducir o limitar la tarifa?	No	No	No	No	No			
				Valor mayor de acuerdo a tabla	1	1	1	1	1	**1**		
SOBORNO	*Riesgo que se presenta cuando se extiende un ofrecimiento económico o en especie por el cliente para negociar el resultado de la validación/verificación*	*Análisis del riesgo*	*r*	¿El organismo/órgano se rige a través de códigos/políticas que aseguren la ética del equipo validador/verificador designado?	Sí	Sí	Sí	Sí	Sí		1	c, d, e, h, j
			s	¿El personal involucrado con el servicio cuenta con capacitación/concientización en materia de soborno, antisoborno y temas relacionados?	Sí	Sí	Sí	Sí	Sí			
			t	¿El organismo/órgano cuenta con políticas/criterios que prevengan la aceptación por parte del equipo validador/verificador designado?	Sí	Sí	Sí	Sí	Sí			
				Valor mayor de acuerdo a tabla	1	1	1	1	1	**1**		

DESARROLLO E IMPLEMENTACIÓN DE SERVICIOS RELACIONADOS	*En los últimos 3 años, el organismo o miembros del equipo V/V designado ha desempeñado los siguientes servicios con el cliente potencial:*	*a*	Desarrollo, diseño, implementación, mantenimiento de un inventario, gestión de datos o información vinculada con los datos de actividad de las emisiones de GEI del cliente potencial.	No	No	No	No	No	1	1	c, d, e, h, j
		b	Análisis de factores de emisión de gases de GEI, balances de materia u otro análisis de ingeniería relacionado a emisiones de GEI para el cliente potencial.	No	No	No	No	No	1		
		c	Diseño de proyectos de eficiencia energética, energía renovable y/u otros que identifiquen explícitamente el desempeño y/o reducción de GEI como un beneficio para el cliente potencial.	No	No	No	No	No	1		
		d	Diseño, desarrollo y/o implementación de una verificación/validación interna, consultoría, o mantenimiento de un proyecto vinculado al desempeño y/o reducción de emisiones de GEI y/o esquemas de compensación y/o neutralidad.	No	No	No	No	No	1		
		e	Ser propietario, comprador, o vendedor, o participante en la comercialización o retiro de Certificados de Reducción de Emisiones o Unidades de Reducción de Emisiones, o realice o haya realizado servicios de intermediación para un proyecto que fue desarrollado por o para el cliente potencial, o cuyos Certificados de Reducción de Emisiones o Unidades de Reducción de Emisiones pertenecen al cliente potencial.	No	No	No	No	No	1		
		f	Desarrollo de manuales en temas de elaboración, control de calidad y cualquier tema relacionado a emisiones y compuestos de GEI para el cliente potencial.	No	No	No	No	No	1		
		g	Implementación de cursos especializados y/o de capacitación en los que se incluyan temas relacionados a la realización y/o al uso de metodologías sobre inventarios o de estimación de emisiones o de cualquier tópico relacionado a la elaboración de inventarios de emisiones de GEI, ya sea para un Establecimiento Sujeto a Reporte de manera particular o en eventos con menos de tres ESR como asistentes.	No	No	No	No	No	1		
		h	Servicios de consultoría y/o de intermediación sobre mercados de carbono y sistemas de comercio de derechos de emisión.	No	No	No	No	No	1		
		i	Servicios referentes a sistemas de gestión ambiental tales como ISO 14001 (cuando se integre como aspecto ambiental significativo, indicador o programa de actividades, acciones sobre desempeño y/o reducción de emisiones de GEI) o sistemas de gestión de energía, ISO 50001 (que integren indicadores de desempeño o proyectos de GEI).	No	No	No	No	No	1		
		j	Cualquier servicio legal vinculado a energía, medio ambiente y/o emisiones de GEI.	No	No	No	No	No	1		
		k	Gestión de cualquier servicio de consultoría sobre seguridad, salud y ambiente en el cliente potencial.	No	No	No	No	No	1		
		m	Preparación y/o desarrollo de contratos sobre la tenencia, compra-venta o intercambio de Certificados de Reducción de Emisiones o Unidades de Reducción de Emisiones en nombre del operador, o desarrollador de un proyecto de reducción de emisiones donde el proyecto o las reducciones de emisiones provenientes de dicho proyecto pertenecen al cliente potencial.	No	No	No	No	No	1		
		n	Implementación de servicios de asesoramiento, consultoría o verificación/validación interna o externa al cliente potencial y que incluyan controles contables internos, sistemas financieros o estados financieros y cuentas relacionadas.	No	No	No	No	No	1		
									Valor mayor de acuerdo a tabla	**1**	

ACCIONES	**SALVAGUARDAS**	*a*	PROHIBICIONES	**1, 2, 4, 5, 6**	**2, 4, 5, 6**	**2, 4, 5, 6**	**2, 4, 5, 6**	**2, 4, 5, 6**	FOROVV-P04.01.15
		b	RESTRICCIONES	**3, 7**	**3, 7**	**3, 7**	**3, 7**	**3, 7**	
		c	DIVULGACIÓN	**8**	**8**	**8**	**8**	**8**	
		1	No utilizará personal con un conflicto de intereses real (verificadores líderes) o potencial (verificadores, verificadores en entrenamiento, expertos técnicos, revisores independientes).						
		2	No verificará/validará una declaración sobre los GEI si se ha prestado servicios de consultoría a la parte responsable que apoya la declaración sobre GEI.						
		3	No verificará/validará una declaración sobre los GEI si la existencia de una relación con quienes proporcionaran los servicios de consultoría de GEI supone un riesgo inaceptable para la imparcialidad.						
		4	No verificará/validará una declaración sobre GEI utilizando personal comprometido con quienes proporcionaron los servicios de consultoría de GEI a la parte responsable que apoya la declaración sobre						
		5	No transferirá/validará la responsabilidad de revisión y emisión de la declaración de verificación.						
		6	No ofrecerá productos o servicios que representen un riesgo para la imparcialidad.						
		7	No declarará que la verificación de una declaración GEI sería más fácil, más rápida o menos cara si se usa un servicio de consultoría.						
		8	Firma de Código de Ética y Conducta así como el Reglamento de confidencialidad y declaratoria de no COI.						
		9	No se realizará una verificación de declaración de GEI si se ha realizado el servicio de validación de proyectos de GEI).						
		10	No verificará/validará las declaraciones sobre GEI del mismo proyecto, a menos, que este permitido por el Programa de GEI aplicable.						
		11	No se debe declarar que la verificación/validación de una declaración GEI sería más fácil, más rápida o menos cara si se usa un servicio de consultoría.						
	ACCIONES DE MITIGACIÓN			**a, b, c, d, e, etc...**	**c, d, e, h, j**	**c, d, e, h, j**	**c, e, h, j**	**c, e, h, j**	
				a) El Organismo no realizará la elaboración del inventario y lo verifica.					
				b) El Organismo solicita información al cliente potencial sobre todos los servicios recibidos para confirmar que no existe riesgo a la imparcialidad					
				c) El Organismo confirma con cada miembro del equipo verificador antes de asignarle una actividad de verificación si está libre de conflicto de inter					
				d) El Organismo notifica al cliente potencial los datos de los miembros del equipo verificador designado y solicita la recusación de algún miembro d					
				e) El Organismo designará un equipo de verificación que no tenga ninguna relación/familia con el cliente potencial.					
				f) El Organismo designará un verificador líder que no haya ejecutado la verificación del Reporte de Emisiones mas de dos años consecutivos.					
				h) El equipo verificador designado se apegará a las políticas de ANCE y no aceptará beneficios personales durante la ejecución de servicios de verifi					
				i) El Organismo designará personal que no haya participado en el desarrollo y ejecución de otros servicios con el cliente potencial.					
				j) El Organismo designará un equipo variador que no cuente con parentesco, consanguineidad o relación extralaboral con el cliente potencial.					
				k) El Organismo proporcionará al equipo verificador designado platicas y cursos de concientización en materia de soborno para evitar dicho riesgo.					
				l) El Organismo proporcionará al equipo verificador designado capacitación en materia de instrumentos aplicables en el área del soborno.					

Annex 6. Abbreviations

ANCE	Asociación de Normalización y Certificación, S.A. DE C.V.
BCR	BioCarbon
CAB	Conformity Assessment Body
CAR	Corrective action requirement
CH_4	Metanhe
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CL	Clarification request
GHG	Green House Gases
IPCC	The Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
VCC	Verified Carbon Credits
PDD	Proyect Descrition Document
FAR	Forward action request
CDM	Clean Development Mechanism
N.A.	Not applicable
N_2O	Nitrous oxide
SDG	Sustainable Development Goals
VVB	Validation and Verification Body
T	Tons