BIOCARBON REGISTRY MONITORING REPORT TEMPLATE

First Monitoring Report of the project "Treatment of non-hazardous industrial waste to obtain Biocompost"

Document pr.pared by WORMS S.A

Version number 2 - 21/11/2024

Monitoring Report	
Name of project	Treatment of non-hazardous industrial waste to obtain Biocompost
BCR Project ID	BCR-AR-763-13-001
Registration date of the project activity	13/04/2024
Project holder	WORMS ARGENTINA S.A.
Contact	PABLO MAURICIO ZIMMERMAN, Nucci y San Martín Arroyo Seco Santa Fe (Argentina), ftiscornia@wormsargentina.com.ar +543402575283
Version number of the Project Document applicable to this monitoring report	*Version number 2 (21/11/2024)*
Applied methodology	The methodology used to calculate CO_2 emission savings is a UN CDM methodology: AMS.III.F, Avoid methane emissions through composting, Version 12.0 - Sectoral scope(s): 13.

Monitoring Report	
Project location (Country, Region, City)	Country: Argentina Region: Santa Fe City: Arroyo Seco
Project starting date	*01/04/2018*
Quantification period of GHG reductions/removals	*01/04/2018 to 31/03/2028*
Monitoring period number	*1*
Monitoring period	01/04/2018 to 31/03/2023
Amount of emission reductions or removals achieved by the project in this monitoring period	*Total of GHG reduction or removals in this monitoring period* 59,574 tCO_2e
Contribution to Sustainable Development Goals	9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. 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	not applicable

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1 General description of project

The project activity consists of composting the organic fraction of non-hazardous organic waste from biodiesel, oil and cellulose plants, the dairy industry, breweries and agro-industries that produce GHG. It does NOT involve any of the below:

- Recover or combust landfill gas from disposal site.
- Undertake controlled combustion of the waste that is not treated biologically in a first step.
- Recover biogas from wastewater treatment.
- Co-digestion of organic matters.

1.1 Sectoral scope and project type

For the validation and verification of projects and program of activities by a designated operating entity (DOE) that uses this methodology, the application of sectoral scope 13 is mandatory.

1.2 Project start date

The project starts on 01/04/2018.

1.3 Project quantification period

The time period for quantification of GHG emission reduction, as section 11.5 of the BCR Standard for activities in the waste sector (“other than AFOLU”), is 10 years without renovation: since 01/08/2019 to 31/07/2029.

The first period of this project is 5 years: since 01/04/2018 to 31/03/2023.

The emissions have been verified because of the validation of amount of solid waste disposed and used by the project holder.As mentioned in BCR Standard, the project begins less than five years before the start of validation.

1.4 Project location and project boundaries

The project boundary is defined as the physical, geographical location of the following:

a) The landfill sites, where the solid waste would have been disposed and the methane emission occurs in absence of the proposed project activity;

b) The composting facility, where the treatment of biomass through composting takes place;

c) Consumer places where the compost is handled, disposed, submitted to soil application;

d) And the itineraries between b and c where the transportation of compost occurs. It should be noted that the waste transportation itineraries between a & b are not considered as the project site is located next to the landfill site.

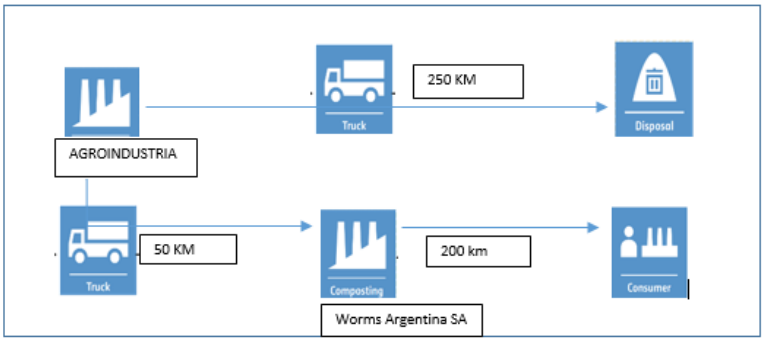

Figure 1. Project Boundary.

Previously, waste generators needed to transfer the product (waste) from their generating plant to facilities located in the Province of Buenos Aires (Argentina) to achieve the Final Disposal of non-hazardous organic waste. Since the beginning of the project, these agro-industrial plants have carried the waste, with the same logistics but with a distance of approximately 50 km, since Worms Argentina S.A. is located in the town of Arroyo Seco (Santa Fe) and the main generators operate within a ratio of 200km around the project location.

It should be noted that Worms Argentina S.A does not have distribution or facilities outside the plant for the sale of its product; the product obtained is sold at its plant to final consumers.

INCOME	PRODUCTION	DEPARTURES
*Matter of agroindustries *fuel consumption until reaching the plant (does not correspond to Worms Argentina S.A) *Packing material	*composting and packaging *co-products *waste (it is reused in the composting process) *power consumption *fuel consumption	*Distribution (only makes direct sales) *electricity consumption (included in production)

Physical address	Geographic coordinates/Other information
Industrial Sector 3 Prof. Nucci St. S/N between Buenos Aires highway and San Martín street, Arroyo Seco, Santa Fe, Argentina	33°08'28.7"S, 60°32'09.3"W

https://maps.app.goo.gl/NxNMjtcmwnuV4QpHA

Figure 2. Picture from the location of Worms Argentina S.A. Source: Google Earth

1.5 Summary Description of the Implementation Status of the Project

The project involves reducing the emission of methane into the atmosphere from organic matter (from non-hazardous organic waste from biodiesel, oil and cellulose plants, the dairy industry, breweries and agro-industries that produce GHG) that otherwise, they would have been left to decompose anaerobically in a solid waste disposal site (SWDS) or in an animal waste management system (AWMS), or in a wastewater treatment system (WWTS). Controlled aerobic treatment through biomass composting is introduced in the project activity.

The project activity consists of composting the organic fraction of non-hazardous organic waste from biodiesel, oil and cellulose plants, the dairy industry, breweries and agro-industries that produce GHG. It does NOT involve any of the below:

- Recover or combust landfill gas from disposal site.
- Undertake controlled combustion of the waste that is not treated biologically in a first step.
- Recover biogas from wastewater treatment.
- Co-digestion of organic matters.

YEAR	TOTAL EMISSIONS SAVINGS	
1/april/2018-31/march/2019	9,525	
1/april/2019-31/march/2020	13,052	
1/april/2020-31/march/2021	10,974	
1/april/2021-31/march/2022	13,275	
1/april/2022-31/march/2023	12,748	
TOTAL EMISSION (5 YEARS)	59,574	tCO_2e

2 Title, reference and version of the baseline and monitoring methodology applied to the project

The methodology used to calculate CO_2 emission savings is a UN CDM methodology: AMS.III.F, Avoid methane emissions through composting, Version 12.0 - Sectoral scope(s): 13.

- Also, the tools applied for the calculations are:
- Tool 4. Emissions from solid waste disposal sites. Version 08.1.
- Tool 13. “Project and leakage emissions from composting” Version 02.0.
- Tool 5. “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation” Version 03.0.

3 Registry or participation under other GHG Programs/Registries

Not Applicable because the project is not in other GHG program/registry.

4 Contribution to Sustainable Development Goals (SGD)

According to the SDG Tool provides by BioCarbon Registry, which is annexed to this PDD, this project is aligned with four SDG.

In the SDG tool (from BCR) annexed to this PDD, the verification period is divided by two periods: ex ante (since 1/april/2018 to 31/march/2023) and expost (since 1/april/2023 to 31/march/2028).

- SDG 9. Industry, Innovation and Infrastructure: Promote inclusive and sustainable industrialization and, by 2030, significantly increase the share of industry in employment and gross domestic product, according to national circumstances, and double its share in least developed countries; by the creation of local and quality employment in an innovative project of a sustainable industries. Specifically, the contribution is in the global target 9.2, with indicator 9.2.2. Manufacturing employment as a proportion of total employment. The project involves the increase of proportion of local people employed (in total number of employees).

SDG, global target and project activity (UNIT)	VERIFICATION PERIOD
	1/april/2018 to 31/march/2023
9.2. Proportion of local people employed in total number of employees (%)	40%

- SDG 11. Sustainable Cities and Communities: By 2030, reduce the per capita adverse environmental impact of cities, including by paying special attention to air quality and municipal and other waste management; The project activity consists of composting the organic fraction of the solid waste from agro-industrial plants into biocompost. So, the project activity requires the collection and use of solid waste. Specifically, the contribution is in the global target 11.6, indicator 11.6.1. Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities. This contribution is quantified by the tons of solid waste treated by the project activity, which is increased every year.

SDG, global target and project activity (UNIT)	VERIFICATION PERIOD
	1/april/2018 to 31/march/2023
11.6 Quantity of the organic waste collected by the project activity (tons)	75,443.99

- SDG 12. Responsible consumption and production: By 2030, substantially reduce the generation of waste through prevention, reduction, recycling and reuse; The project activity consists of composting the organic fraction of the solid waste from agro-industrial plants into biocompost. So, the project follows the principle of reusing and recycling. Specifically, the contribution is in the global target 12.5, indicator 12.5.1. National recycling rate, tons of material recycled, because the project increases the use of a municipal waste and transform it in biocompost. So, the unit of measurement is the quantity of materials recycled in the biocomposting process (tons).

SDG, global target and project activity (UNIT)	VERIFICATION PERIOD
	1/april/2018 to 31/march/2023
12.5 Quantity of materials recycled in the biocomposting process (tons)	75,443.99

- SDG 13 - Climate action: Continue along the same path in the fight against climate change; The project involves reducing the emission of methane into the atmosphere from organic matter (from non-hazardous organic waste from biodiesel, oil and cellulose plants, the dairy industry, breweries and agro-industries that produce GHG) that otherwise they would have been left to decompose anaerobically in a solid waste disposal site (SWDS). Controlled aerobic treatment through biomass composting is introduced in the project activity. Specifically, the project contributes to global target number 13.2. with the emission reduction of the project activity, because the project involves reducing the emissions of methane into the atmosphere from organic matter. So, the activity unit of measurement is the tons of $CO_{2\,e}$ reduced by the project activity.

SDG, global target and project activity (UNIT)	VERIFICATION PERIOD
	1/april/2018 to 31/march/2023
13.2 Emissions Reductions of the Project activity (t CO_2e)	59,574

5 Compliance with Applicable Legislation

Worms Argentina S.A. complies with all the regulations required at local, regional and national level, in addition to having updated all the necessary permits, as shown by the following links to the documents.

- 7-Otorgamiento uso conforme de suelo A. Seco 29-06-2017
- 34-Habilitación Munic. Planta A. Seco - Resol.Nº 024-18 - 16.03.2018

- 27-Resol. Nº 523 WORMS ARG. S.A. EIA
- 55-Disp. 287-19 Renov. Reg. RT 0029
- Permiso vuelco de efluentes 21-06-19 WORMS
- 2-WORMS Renovacion directorio 2021

The project location corresponds with an area where there are not indigenous communities or traditional territories according to the Indigenous Affairs Institute INAI ("Instituto Nacional de Asuntos Indígenas", in spanish), the governmental body of Argentina that regulates and controlled issues related with traditional an ingenuous communities with in the country. The following map provides information of the Territories with actual Occupation, Traditional and Public according to the law 26.160 that clearly specifies that there are not indigenous territories near the project location or spatial limit.

Figure 3. Map of territories with current, traditional and public occupation (Law 26,160) of the Indigenous Affairs Institute. (Source; INAI Instituto Nacional de Asuntos Indígenas".

6 Climate change adaptation

According to BCR Standard and BCR Tool No Net Harm Environmental and Social Safeguards (NNH), Worms Argentina S.A. has many actions to reduce and to demonstrate our contribution to mitigating Greenhouse Gases.

In BCR Standard Version 3.2, section 10.8, determines that the project holder should demonstrate that considers one or more of the strategic lines proposed in the National Climate Change Policies and/or focuses aspects outlined in the regulations of the country where the project is implemented.

In addition to complying with all environmental regulations, as indicated in the legislation section, WORMS S.A. addresses aspects framed in Argentina's regulations, its national policies and its strategic plans. Worms Argentina S.A. is aligned with the National Plan of Adaptation and Mitigation to Climate Change 2030 in Argentina (2022). Specifically, the strategic line “Productive Transition” aims to integrate the macroeconomic, social and environmental component, implementing policies and improvements in the competitiveness of national productive development, which promote the reduction of GHG emissions and the increase in the resilience of the national productive system. Some policies for the promotion of energy efficiency and efficiency and rational use of resources in Argentina’s national plan are:

- Development of national value chains.
- Sustainable design and process innovation.
- Circular economy.
- Productive resilience.

Worms Argentina S.A. is an example of circular economy and innovation because of its innovative process of waste treatment, which not only reduces the problem of the waste generation and degradation, with its consecutive contamination and incrementation of Green House Gases, but also recovers waste, transforming it into raw material and a circular resource.

It implements different practices and policies aligned to preserve and care for the resources and the environment where we operate. The raw material used in the production process (non-hazardous organic waste) is 98% industrial waste, providing a solution to the problem of final deposition and solid waste from the country's large generators, which over the years, in the absence of government regulations and lack of responsibility on the part of these industries, have led to the contamination of rivers, lakes and seas; to the expansion of open-air landfills, clandestine landfills, decompositions, harming the population and living beings of other species: fish and plants.

Worms Argentina S.A. is also committed to the efficient use and reuse of energy: it has a rainwater collection system for the production of liquid humus, it does not use potable water and it does not have a potable water installation use bottled water from returnable containers for human water consumption. In fact, the efficiency of the electric system allows to reduce our impact and our emissions of GHG.

As part of the climate change adaptation policies and compromises of the company, Worms Argentina S.A. has increased its production with the implementation of new installations that allows for liquid waste treatment. The process design and implementation does not require additional energy or fuel consumption, which means that the production and waste treatment capabilities of the company has increased exponentially without an increase in GHG emissions as a result of the project activity.

Worms Argentina S.A. is also endorsed by the BCorp certification. This compromise is compiled in the Environmental Manual, the Resource Conservation Manual and the Environmental Management System, which are included in the certification of B Corp Company.

The Environmental Manual establishes the project commitment with the respect and responsible uses of the sources in the company: environment (ecosystems, water, soil and air), offices (waste separation and recycling, energy efficiency and water care).

The objective of the Environmental Management System is the control of selected indicators in order to monitor and determine the degree of impact produced on the environment from the activities of all the business units operating in Worms Argentina S.A.

It is also worth noticing that the project activity does not compromise the biodiversity present in the area, instead, some of the measures implemented foster both biodiversity and ecosystem services. The main example is the use of plant trees as a barrier (for both visual and odorous impact) surrounding the perimeter of the installations. This forest barrier also serves as a shelter for local fauna (especially birds).

7 Carbon ownership and rights

The owner of the project is Worms Argentina S.A. All the carbons rights will remain within the company Worms Argentina S.A. The project location corresponds to an area where there are not indigenous communities or traditional territories according to the Indigenous Affairs Institute INAI, the governmental body of Argentina that regulates and controlled issues related to traditional and ingenuous communities within the country, as can be seen in figure 9 above. Also, Worms S.A. is the owner of the land and the main stakeholder and responsible for production, assuming all the costs, risks and will be the one in control of the carbon rights that will remain in its entirety within the company.

8 Environmental Aspects

Worms Argentina S.A. executes a series of control programs in order to comply with regulations and maintain the best practices available in its management and quality system. The main programs are described below and reports condensing soil, water and air monitoring are attached.

SOIL RESOURCE PROTECTION PROGRAM

Hazardous Waste Management Subprogram:

This Subprogram is based on the segregation of hazardous waste streams at their generation points. The operating personnel will be trained and made aware of the areas where the generation of hazardous waste is foreseeable.

In the eventual case of receiving improper or rejects with dangerous characteristics, they will be stored in compliance with current regulations, and subsequent referral to an authorized operator according to the current in question.

Drainage and Flooding Control Subprogram:

The construction works of the internal circulation roads and transport parking areas were carried out respecting the natural drainage conditions of the land, avoiding the generation of flooding inside the property.

Likewise, the maintenance of the internal protection channels and the external pluvial drainage channels is carried out, controlling the clogging and vegetation in them.

WATER RESOURCE PROTECTION PROGRAM

Groundwater monitoring subprogram

From the construction of the extraction well, a sampling of the resource extracted from the aquifer will be carried out in order to determine the base conditions and their variation over time. The objective of the monitoring will be to ensure the quality of the water extracted and at the same time determine that the extraction carried out does not affect the hydrogeological profile of the resource.

- Number of samples: 1.
- Sampling Point: underground water extraction well.
- Maximum admissible limits (LMA): s/Annex A of Law 11,220.

Parameter	Annual Frequency	Optional Analyzes
Turbidity	X	
Color	X	
Smell and taste	X	
Ph	X	
Total Alkalinity	X	
Total hardness		X
Chloride		X
Sulfate		X
Magnesium		X
Fluorine		X
Arsenic	X	
Lead		X
Nitrites	X	
Nitrates	X	
Ammonia		X
Iron		X
Total dissolved solids	X	
Conductivity	X	
Bacteriological: total aerobes, total coliforms, *Escherichia coli, Pseudomonas aeruginosa*	X	

AIR QUALITY REPORT

Worms Argentina S.A. has prepared a report with the objective of determine the concentration of Suspended Particulate Matter (PM10) and Hydrogen Sulfide in the air, in four (4) assigned monitoring posts, for a short measurement period (20 min).

The work has been carried out under standardized procedures, by trained personnel and through the use of equipment and instruments developed for this purpose. HSE Engineering guarantees the veracity of the information contained in this report and its confidentiality. The environmental regulation applicable to this monitoring report is the Resolution Nº 201/04 – Air quality guide levels for province of Santa Fe.

contaminants	C.A.P.C. (20 min) mg/m^3
particulate matter (PM10)	0.50
Hydrogen sulfide (H2S)	—

The methodologies applied were:

- EPA1 Method IO-2.3: Reference standard for determining suspended particulate matter (such as PM10) for short monitoring periods (20 min.).
- Methods of Air Sampling and Analysis (Third Edition) - 701: Standard method for determination of hydrogen sulfide in the atmosphere.

Four SKC model 1700 air sampling equipment with a PM10 cyclone and an impingers system containing a capture solution for H2S were used.

MONITORING DESCRIPTION

The monitoring positions were recorded with the applicant. They were located around the plant, arranged as shown in the following image:

Figure 4. Monitoring positions for air quality at Worms Argentina S.A. Source: Google Earth,

The equipment was installed and put into operation on 11/04/2021.

At the time of monitoring, the following data was recorded:

Temperature	Humidity	Pressure	Visibility	Win-Dir	Win - speed	Precipitation	Weather Conditions
28º	33 %	1003.73 HPa	14 Km/h	SO	9 Km/h	N/A	Partly cloudy

RESULTS

The results obtained are presented below:

PARAMETERS	Point 1 CA-01	Point 2 CA-02	Point 3 CA-03	Point 4 CA-04	UNIT	Guide Level *
particulate matter PM10	0,07	0,11	0,008	0,007	mg/m^3	0,50
Hydrogen sulfide (H_2S)	Not detected	Not detected	Not detected	Not detected	mg/m^3	-

** NOTE: Analysis Protocol No. 2254-2255-2256-2257 issued by the HSE Laboratory is attached.*

CONCLUSION

In accordance with the provisions of Resolution 201/04 of the Secretary of the Environment of the Province of Santa Fe, all the monitoring points of the Plant belonging to the company Worms Argentina S.A. - from the town of Arroyo Seco - COMPLY with the guide values established as maximum concentration in short periods (C.A.P.C.), for all the parameters analyzed: Suspended Particulate Matter and Hydrogen Sulfide (H2S).

WATER QUALITY ANALYSIS

Worms Argentina S.A has prepared a report with the objective of determine and evaluate the concentration of the following parameters in the effluent: pH, color, conductivity, turbidity, solids in total suspension, bod, cod, total coliforms and fecal coliforms.

This report was prepared based on the results obtained from the monitoring carried out at the request of Worms Argentina S.A – Dry Creek (Sta. Fe). The work has been carried out under standardized procedures, by trained personnel and through the use of equipment and instruments developed for this purpose. HSE Engineering guarantees the veracity of the information contained in this document and its confidentiality.

The analytical determinations to which the water samples obtained from the monitored wells were subjected were selected as required by Law 11,220 Annex A, identical parameters and limits established in Provincial Resolution No. 1089/82 Annex A (Limits for the provision of drinking water).

Said law provides for the regulation of service provision and provides for a system for the preservation of natural resources and the environment.

The purposes of this law are to guarantee the maintenance and promote the rehabilitation, improvement and development of the service throughout the province of Santa Fe, to establish the standards that ensure quality and efficiency levels consistent with the nature of the service, to establish an adequate legal framework that allows reconciling an efficient and effective provision of the service by providers, with the proper exercise of state powers related to the protection of the health interest, the welfare of the population, and the environment and natural resources throughout the province of Santa Fe.

The sampling methodology used is that recommended in the manual of Standardized Methods for the Analysis of Potable and Residual Water published by the APHA-AWWA-WEF1, 23rd edition.

All analytical determinations are performed using international standardized methods.

Methods from the manual of Standardized Methods for the Analysis of Drinking and Wastewater published by the APHA-AWWA-WEF, 23rd edition, together with the EPA 481.1 standard, are currently used.

MONITORING DESCRIPTION

The sampling was carried out in the corresponding phreatic wells that the company has for this purpose. It was only possible to take samples from wells 1, 2, 6, 7 and 8, since the rest of the parameters were dry. The following image shows the location of the water meters on the property, with their respective coordinates:

P4 (blanco)	33° 8'29.90"S; 60°32'18.30"O
P1	33° 8'35.00"S; 60°32'2.20"O
P2	33° 8'38.30"S; 60°32'9.40"O
P3	33° 8'31.60"S; 60°32'8.00"O
P5	33° 8'28.86"S; 60°32'6.10"O
P6	33° 8'33.29"S; 60°31'57.93"O
P7	33° 8'30.24"S; 60°31'53.03"O
P8	33° 8'26.91"S; 60°31'55.52"O

Figure 5. Location of the water meters on the property and theirs respective coordinates. Source: Google Earth.

The sampling was carried out on 11/04/2021.

RESULTS

The results obtained by the analysis laboratory are presented below:

PARAMETERS	LC	UNIT	P1	P2	P6	P7	P8	LIMIT
Color	1	PI/Co	1					20
Conductivity	0,1	µS/cm	935	734	804	1701	805	-
BIOCHEMICAL DEMAND FOR OXYGEN (DBO)	10	mg/l	N/D	N/D	N/D	N/D	N/D	-
CHEMICAL DEMAND OF OXYGEN (DQO)	5	mg/l	N/D	N/D	N/D	N/D	N/D	-
PH	-	UpH	7,4					-
SOLIDS IN SUSPENSION TOTALS (SST)	1	mg/l	<1	<1	<1	<1	<1	-
Turbidity	1	UNT	<1					
FECAL COLIFORMS	2,2	NMP/100ml	<1,1	<1,1	<1,1	<1,1	<1,1	<2,2
TOTAL COLIFORMS	2,2	NMP/100ml	<1,1	<1,1	<1,1	<1,1	<1,1	<2,2

** NOTE: Analysis Protocol No. 2258-2259-2260-2261-2262 issued by the HSE Engineering Laboratory is attached.*

CONCLUSION

In accordance with the guide values established for the parameters legislated in Provincial Resolution No. 1089/82 Annex A (Limits for the provision of drinking water), the analyses are below said established limit values.

Likewise, groundwater is not used as a source of drinking water supply, but with its control it must be verified that there has been no impact on the water resource in relation to the inputs, raw materials and products used in the production. industrial activity developed in the complex.

Observing the results, it can be stated that there are no impacts that negatively affect the groundwater resource at the groundwater level.

9 Socioeconomic Aspects

As a B Corporation (BCorp) certified company, Worms S.A. analyses social aspects as part of its focus on social and environmental impact. The B Corp certification is an

international standard that assesses the social and environmental responsibility of companies, beyond economic profitability. This certification is the result of the effort to become a sustainable company that considers society as the main part of the project.

Since its inception, Worms has analyzed the main socio-economic effects of its activities. Before the start of the process, an analysis of the demographic and labor analysis was analyzed: based on official statistic datas of Argentina and Arroyo Seco governments (https://www.municipalidad-argentina.com.ar/municipalidad-arroyo-seco-s.html ; https://www.arroyoseco.gov.ar/web/), an analysis of the population in the immediate surroundings was carried out. According to these sources, the population of Arroyo Seco is around 20,000 inhabitants and its economy is based mainly on agricultural and livestock activities. This environment makes it a great support for Rosario. Being close to Rosario, many inhabitants work in that city, so there is a large constant flow of people who depend on that other city. Arroyo Seco is surrounded by fields where soybeans, corn, wheat and sunflowers are grown, as well as land for cattle raising. In terms of poverty, economic crises have greatly affected this agricultural sector, generating a reduction in purchasing power and an increase in the unemployed population.

Taking into account this analysis of the socio-economic situation of the environment closest to Worms, S.A. the environment close to the facilities was analyzed:

- Close population: the installations are more than 2 kilometers from the nearest population center (Arroyo Seco), there is no houses nearby.

- Neighborhood conditions: the boundaries of Worms S.A. are farmland and other companies: pig farm and agricultural land. The access roads to the facilities are made of dirt, which can lead to dust being raised when entering.

- Indigenous communities or traditional territories: the project location corresponds with an area where there are not indigenous communities or traditional territories according to the Indigenous Affairs Institute INAI (Instituto Nacional de Asuntos Indígenas in spanish), the governmental body of Argentina that regulates and controlled issues related with traditional and ingenuous communities with in the country.

Taking into account this initial situation, the socioeconomic effects of this project are:

- Improvement of the environment.

- Increase in local employment.

- Give a second life to the waste generated by neighbouring companies.

All these impacts are positive, not generating relevant negative effects, so following the BCR tool No Net Harm, no corrective actions and measures are established.

The project activities do not cause harm to local communities or society in general.

10 Stakeholders' Consultation

Worms Argentina S.A. has formal and regular processes for gathering information from stakeholders (focus groups, surveys, community meetings, neighbors, authorities, etc.) and has not received any negative feedback from them so far. In the other hand, is focusing in improving the positive impact in the community.

Worms Argentina S.A. has made a consultation with the principal stakeholders. All the information of the project can be consulted in our website https://worms.ar/ or in our social media: Instagram, Twitter, LinkedIn and Facebook. These platforms remain open throughout the project to facilitate access to all information related to the project, as well as its potential environmental and social effects.

As a BCorp company, stakeholders are essential for Worms Argentina S.A., since its mission is to create value not only for shareholders, but also for society and the environment. Worms Argentina S.A. takes a complete approach about the role of the company in the environment and the society, by creating excellent relations and being active in sharing knowledge and creating awareness about the project.

All stakeholders have been consulted and are invited to provide comments. Appropriate mechanisms are also in place for them to provide comments on an ongoing basis throughout the project development. All stakeholders are involved in the process in an appropriate manner. Also, every year Worms Argentina S.A. makes a general mapping of social organizations and analysis of the areas we work with (impact areas) to evaluate which ones we identify with and begin to generate networks and joint projects.

The stakeholders detected and their influence on the project are following:

Local community:

Although the company is located more than 2 kilometers from the nearest population center (Arroyo Seco), and considering that there are no indigenous populations in the

area, Worms Argentina S.A. believes it is important to improve its immediate surroundings and create a positive impact on the local community.

The actions to include all the interested parties by the local community are:

- Yearly meetings: by having yearly meetings with local authorities and with neighbors to discuss the different actions that can be taking to support different initiatives.

- Visits to the premises: by organizing visits to the premises in order to create awareness about the project and the positive impact, by donating compost for local gardens.

From these meetings, Worms Argentina S.A. took the initiative to improve the road that goes to the premises and is taking all corrective actions needed to avoid any problem for the rest of the users of the road. Minutes are taken from all these meetings, signed by both parties, which record all the suggestions, complaints from the community and all the actions that Worms will take to resolve them.

Since the start of the project, meetings with local community have collected comments about the dust generated on the unpaved roads surrounding the company. This meetings take place at the Worms Argentina S.A. facilities, accompanied by a visit to the same. Since the roads are not paved, the traffic of trucks causes dust to rise and wear them out more than they should.

Over the years, agreements with local communities have been maintained.

To avoid raising dust, Worms Argentina S.A. has taken the decision to increase irrigation with its treated effluent and thus not have to use fresh water, keeping the roads as dust-free as possible and improving the well-being of residents. This can be seen reflected in the minutes with the community of December 23, 2018, November 15, 2019, November 10, 2020, December 1, 2021, December 15, 2022 and December 18, 2023.

- Suggestion book and box: also, the company has and implemented a book of complaints and suggestions and a suggestion box as well open to the community in the area where the non-hazardous organic waste processing plant is located. This book reflects that there have been no comments in the five years of the project.

- Donations: on the other hand and in addition to road maintenance and infrastructure improvements, Worms makes charitable donations to local organizations. The donations are directed to those civil and/or commercial organizations of the town of Arroyo Seco, since Worms Argentina S.A is committed to developing the local territory in which our production plant is located. Worms Argentina S.A makes monetary donations to Volunteer Firefighters of the town of Arroyo Seco.

Local Authorities:

The local authorities have a big influence in the authorizations and regulations of the project activity. Hence, Worms S.A. maintains a close relationship with local authorities through different mechanisms: by having regular meetings to get the licenses and all necessary local authorizations, before the project start, and therefore every time that needs renovation, also every year by visiting the municipality and asking them for direct feedback.

In addition to the regular meetings held with local authorities regarding the licenses and authorizations required to develop the project, numerous visits have also been made to the facilities over the years.

During this first visit (13/06/2020) by the deputy of the province of Santa Fe, Maximiliano Pullaro, and his advisors, they were informed of the innovative and entrepreneurial activity of Worms S.A. and visited the facilities to learn about our project first-hand. (https://twitter.com/WormsSA/status/1271927365594230785?cxt=HHwWgsC95ebM5aYjAAAA). The comments received were very positive, highly appreciating the innovative spirit that generates jobs and enriches the province, in addition to safeguarding the planet.

National and Regional Authorities:

Worms collaborates with different authorities to support with the expertise in the development of the sustainability in the Country, by organizing meetings in their premises.

From a national point of view, the visit of the Minister of Productive Development of the Argentine Republic (Matias Kulfas) has been received at the facilities. He himself has

declared that the circular economy is 1 of the 4 axes of the Green Productive Development Plan promoted by the Nation, being a plan to reduce the environmental impact of its productive activities and will allow the generation of more jobs. (https://twitter.com/KulfasM/status/1453851371195744256?cxt=HHwWgICyhdGHj60oAAAA, https://twitter.com/WormsSA/status/1453861053650120724?cxt=HHwWqMC5-Zy7k60oAAAA). He himself has declared that the circular economy is 1 of the 4 axes of the Green Productive Development Plan promoted by the Nation, being a plan to reduce the environmental impact of its productive activities and will allow the generation of more jobs.

We also received a visit (6/2/2021) from the Minister of Production of the Nation (Daniel Schteingart) with his team, interested in the continuous improvements of his projects. (https://x.com/WormsSA/status/1358163038558388224;https://twitter.com/WormsSA/status/1363628583772635141?cxt=HHwWioCy1Zu-yuwlAAAA). Schteingart and his team toured the facilities and discussed the different production processes.The minister praised our actions and contribution to the planet through the circular economy.

Workers:

The company has a commitment to workers, considering them as key agents in the creation of social and environmental value. The actions and mechanisms that are taken to promote, include and interact with employees are the following:

- Employee handbook: the purpose of the employee handbook is to inform Worms Argentina S.A's general policies, standards, procedures and benefits. This handbook helps the organization to have a more effective and efficient operation, to maintain an optimal work environment for all employees and to generate awareness of why our company exists.

- Work environment survey: Worms Argentina S.A. strives to provide a friendly environment in which people thrive, accept challenges, develop themselves by fulfilling their goals and those of the company. Also, the company values the talents and abilities of its employees and seeks to foster an open, cooperative and dynamic environment in which both they and the company can thrive.

- Inclusive searches mechanism and recruitment policy: Worms Argentina S.A. encourages the search for professionals and collaborators who are promoters of a corporate and social culture, committed to caring for the environment and that contemplates integration without distinction of gender, sexual preferences, different abilities, ideology, religion. Also, Worms prioritizes hiring local workers.

- Performance evaluation policy: Worms Argentina S.A. continuously diagnoses and evaluates the comprehensive management of human capital, psycho-social conditions, and the degree of employee satisfaction with their team and the company. To do so, Worms Argentina S.A. has a performance evaluation system and implements work environment surveys.

All these actions allows to collect workers' point of view of the project on an ongoing basis.

Among all the measures taken to analyse employee satisfaction, such as surveys, suggestion books and other mechanisms and satisfaction policies, no negative comments have been recorded about the project.

Suppliers:

Counting on products that are not raw material of these project, more than 80% of suppliers are national, spending on local suppliers is more than 60%, contributing to the improvement of socio-economic conditions in the local community. Besides, all waste suppliers are localized in less than 200 km around the installations of Worms Argentina S.A.

All suppliers adhere to the Supplier Code of Conduct. We are committed to strengthening communication and establishing common criteria and bases with our suppliers to contribute together to sustainable development. Worms Argentina S.A. do not maintain business relations with companies that do not comply with requirements as transparency, environmental protection or SDG alignment. Also, Worms S.A. has a continuous communication process and open communication channels with its suppliers to receive complaints and suggestions and to show closeness and transparency.

In addition to the usual communications with suppliers due to the daily actions of the project, each supplier adheres to our code of conduct through the signing of the agreement. To date, no comments have been received from suppliers. In fact, Worms Argentina S.A. has always received praise when presenting and signing the agreements, given its great commitment to the planet and society.

Customers:

As the Customer Satisfaction Procedure establishes, Worms Argentina S.A: sends a customer satisfaction surveys to all customers after delivery of units. The objetive of this surveys is the determination of the degree of satisfaction and perception regarding the degree of compliance with respect to the services provided. All comments were related to minor procedures such as the delivery of products and have been immediately resolved by the work team.

In summary, the company maintains its way of working and continuously improves to continue in the fight against climate change, investing in technology to achieve its objectives; and the most important thing is that to date the company has no complaints from the neighboring population regarding the treatments it carries out without generating odors. As mentioned before, Worms Argentina S.A. has no received comments about the development of the project. However, all communication channels remain open to achieve continuous improvement and to maintain the good work of the project.

11 REDD+ Safeguards

Not applicable because it's not a REDD+ project.

12 Special categories, related to co-benefits

Not applicable because the project is not a special category.

13 Grouped Projects

Not applicable because it's not grouped project.

14 Implementation of the project

14.1 Implementation status of the project

1. *The starting date of operation of the project and, the operation of the project activities during this monitoring period. The description shall include any*

information on events that may impact the GHG emission reductions or removals and monitoring;

The starting date of operation of the project is 01/04/2018. There were no events that could impact the reductions or removals of GHG emissions and their monitoring during this monitoring period (since 01/04/2018 to 31/03/2023).

2. *For project activities that consist of more than one site, the report shall clearly describe the status of implementation and starting date of operation for each site;*

Not applicable because the project is not in more than one site.

3. *The information regarding the actual operation of the project during this monitoring period, including information on special events, for example overhaul times, downtimes of equipment, exchange of equipment, etc.;*

There were no special events during this monitoring period.

4. *A brief description of: (i) events or situations that occurred during the monitoring period, which may impact the applicability of the methodology, and (ii) how the issues resulting from these events or situations are being addressed.*

There were no special events, situations or issues during this monitoring period.

14.2 Revision of monitoring plan

Not applicable because this is the first monitoring period.

14.3 Request for deviation applied to this monitoring period

Not applicable because this is the first monitoring period.

14.4 Notification or request of approval of changes

Not applicable because this is the first monitoring period.

15 Monitoring system

15.1 Description of the monitoring plan

Following the BCR Standard, the monitoring plan is designed to ensure that both the project process and all the data required to calculate the GHG mitigation are constantly updated and allow the project to be more efficient, detect possible problems or threats and implement contingency and improvement plans when required.

a) Project boundary monitoring

The project boundary is defined as the physical, geographical location of the following:

a) The landfill sites, where the solid waste would have been disposed and the methane emission occurs in absence of the proposed project activity;
b) The composting facility, where the treatment of biomass through composting takes place;
c) Consumer places where the compost is handled, disposed, submitted to soil application;
d) And the itineraries between b and c where the transportation of compost occurs. It should be noted that the waste transportation itineraries between a & b are not considered as the project site is located next to the landfill site.

As part of the usual operation of the installations, the project boundary monitoring consists of a surveillance and control service that controls that there are no interferences with regular activity by any external or uncontrolled element within the project boundary.

As established in the applicability conditions of the methodology AMS.III.F, the project cannot exceed 200 km in radius. Hence, the location of the waste generators is analyzed annually to ensure that this distance is not exceeded. This analysis will be carried out every time a new operator wants to work with Worms Argentina S.A., being an essential condition to be one of our suppliers.

b) Monitoring of the execution of project activities

To ensure a correct execution of the project activities there are a few significant aspects:

Parameter	Monitoring action
Distance of the suppliers	As established in the applicability conditions of the methodology AMS.III.F, the project cannot exceed 200 km in radius. Hence, the location of the waste generators is analyzed annually to ensure that this distance is not exceeded. This analysis will be carried out every

	time a new operator wants to work with Worms Argentina S.A., being an essential condition to be one of our suppliers.
Income and download control	- Manifest check: this document includes the type of residue (always non-hazardous) and weight control. Weight control will be ensured by the provider with his own scale or by providing with a public scale ticket specifying the cargo weigh. - Visual inspection: visual inspection of the cargo to compare it with the manifest information. - Verifying the appearance and characteristics of the waste at times prior to unloading, that is, at the time the load is lowered from the truck. The reception operator is monitored by a trained area manager and remains there making visual contact with the waste to be unloaded.
Compost piles control	- Humidity field test: Periodically, an operator controls taking a sample to verify the correct humidity of the mixture, to decide if it is necessary to irrigate the controlled pile. - Temperature. controls of the material's temperature continue to be carried out and it must be reported if there are increases that indicate that the fermentation process has not been completely completed. In these cases, the battery must be removed to promote ventilation and avoid unwanted increases in temperature. The supervisor defines the moment of completion of the process by sensory review of the product (smell, color, granulometry, percentage of structuring agent). A dark brown or black homogeneous mass should be obtained, without an unpleasant odor.
Laboratory control	In para 33 of AMS.III-F "The operation of composting facilities shall be documented in a quality control program, monitoring the conditions and procedures that ensure the aerobic condition of the waste during the composting process (e.g. temperature and moisture during different composting stages)". To ensure compliance with this condition, there are a quality control and assurance procedures to ensure the quality of the compost generated,the Company has a Laboratory that fulfills the functions of: - controls of the materials entered - quality controls of products for soil amendment - production of *Trichoderma harzianum* to improve the composting process and the quality of the products.
Soil Application	As per para 34 of AMS.III.F, "Soil application of the compost in agriculture or related activities will be monitored". As part of Worms

	Argentina S.A.'s standardized procedure, the sale of compost as a final product is documented. To ensure the quality of the final product, Worms Argentina S.A.'s laboratory makes analysis of humidity, odor, pH, temperature and connectivity. This procedures ensures the quality of the compost final product. Once sold, Worms Argentina S.A, has an process to verify the correct application to the soil carried out by the final buyers. Worms Argentina S.A. is close to its buyers by establishing quality protocols and, as Customer Satisfaction Procedure establishes, Worms Argentina S.A. sends a customer satisfaction surveys to all customers after delivery of units. The objetive of this surveys is the determination of the degree of satisfaction and perception regarding the degree of compliance with respect to the services provided. The quality of the final product and the studies made by AACS (Asociación Argentina de Ciencia del Suelo, in spanish), ensure that the application of this kind of compost (with the same characteristics) is perfect to maintain soil fertility and health.

c) Monitoring of the quantification of project emission reduction/removals

Project emission is due to both fuel and electricity consumption as well as the emissions from the composting process itself:

Parameter	Monitoring action
Fossil fuel consumption	- Control of consumption: based on the quantity of fuel purchased, invoices received will be controlled and correctly recorded. - Monitoring and periodic control of compost piles to adjust the use of machinery use to flip the piles and that way minimizing the emissions from trucks movement and machinery. - Number of flips and hours of use of the trucks and machinery base on internal records and suppliers provided information.
Energy consumption	- Consumption of electricity based on suppliers' information.

d) Quality control and quality assurance procedures

To guarantee the quality of the production of Worms Argentina S.A. control procedures are carried out by performing chemical and bacteriological analyses. Documented information referring to the inscriptions of the products of Worms Argentina S.A. is

attached hereto, used as soil amendment by Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA).

The company gradually incorporates into its practices the guidelines of Joint Resolution Nº 1/2019 (RESFC-2019-1-APN-SECCYMA#SGP) issued by the NAC SERVICE OF HEALTH AND AGRO-FOOD QUALITY and the SECRETARY OF ENVIRONMENTAL CONTROL AND MONITORING of the Nation that approves the REGULATORY FRAMEWORK FOR THE PRODUCTION, REGISTRATION AND APPLICATION OF COMPOST.

However, it is necessary to sanction a provincial rule that adopts it in the local legal system (or one that establishes the conditions for regulating the activity at the Provincial discretion), as well as the adaptation and updating of regulations by SENASA.

Notwithstanding this, to date the firm is in the process of managing a new application for registration in the National Registry of Fertilizers, Amendments, Substrates, Conditioners, Protectors and Raw Materials within the framework of this Resolution.

e) Verification of field data and review of information processing

All the results of analysis and control are double checked between the operators and the person responsible of the lab. This double verification allows to ensure that there parameters and datas are correct and the process is not committed. All the data recovered are annually audited and checked by the manager of the company and the production manager.

f) Data recording and archiving system

All information regarding waste and residue entrance as well as compost produce and sell is adequately preserved in a physical archive. All information coming from suppliers, clients and any other part intervening in the project activity is also preserved.

In order to improve the efficiency of the recording and archiving system, a digitalization process has already started to keep both a physical and on-line registries of the data parameters and information regardless the entire monitoring plan and all the compatible procedures (environmental, safety and quality control procedures, etc.).

g) Specification of any potential emissions that would occur outside the project boundary as a result of GHG project activities (leakage)

Not applicable because there is no leakage in this project.

h) Information related to the environmental impact assessment of the GHG project activities

The information regarding the environmental impact assessment could be segregated depending on the natural resource impacted.

Resource	Protection program
Soil	- Hazarous waste management subprogram: this Subprogram is based on the segregation of hazardous waste streams at their generation points. The operating personnel will be trained and made aware of the areas where the generation of hazardous waste is foreseeable. - Drainage and Flooding Control Subprogram: the construction works of the internal circulation roads and transport parking areas were carried out respecting the natural drainage conditions of the land, avoiding the generation of flooding inside the property. Likewise, the maintenance of the internal protection channels and the external pluvial drainage channels is carried out, controlling the clogging and vegetation in them.
Water	- Groundwater monitoring subprogram: from the construction of the extraction well, a sampling of the resource extracted from the aquifer will be carried out in order to determine the base conditions and their variation over time. The objective of the monitoring will be to ensure the quality of the water extracted and at the same time determine that the extraction carried out does not affect the hydrogeological profile of the resource. - Water quality analysis: Worms Argentina S.A. has prepared a report with the objective of determine and evaluate the concentration of the following parameters in the effluent: pH, color, conductivity, turbidity, solids in total suspension, bod, cod, total coliforms and fecal coliforms. This report was prepared based on the results obtained from the monitoring carried out at the request of Worms–Dry Creek (Sta. Fe).

Air	Worms Argentina S.A. has prepared a report with the objective of determine the concentration of Suspended Particulate Matter (PM10) and Hydrogen Sulfide in the air, in four (4) assigned monitoring posts, for a short measurement period (20 min). The monitoring positions were recorded with the applicant.

i) Established procedures for the management of GHG emission reductions or removals and associated quality control for monitoring activities.

In order to ensure the correct data quality for the GHG calculations in place, there are various protocols in place to control he origin, the reliability, the pertinence and the update status of the data used.

Primary data:

This information is the one that is directly measure by the company. For the GHG calculation this data group is related with the amount of waste treated. The cargo control protocols include the actual weight of the cargo and the comparison with the amount declared by the suppliers.

The scale used for weighing the amount of waste has a calibration plan to minimize the uncertainty generated.

All the measures are stored with the corresponding receipts where the origin and amount of waste are specified.

Secondary data:

This information is acquired and not directly measure by the company. There are two main groups of data in this category:

1- Supplier's invoices regarding emission related products consumed: in particular electricity and fossil fuels. Suppliers' invoices specify the amount of these that have been consumed by Worms in the correspondent period adding transparency and traceability.

2- Factors: factors are all the parameters determined by public, relevant and trustworthy sources used in the calculations according to the methodologies

applied to the process. All of then come from the IPCC Guidelines or the IPCC Emission Factor Database (EFDB).

In those cases where the information is not available in those sources or a more specific data is required Argentinian national documents have been consulted (National energy mix or fossil fuels emissions factors).

Data update:

All the primary data is daily control, checked and correctly stored in the facilities to fulfil the company obligations with the current legislation and internal environmental and quality control systems.

Supplier's invoices are generated for every period depending of the characteristics (electricity or fossil fuels). Those are also generated based on the actual demand and use and not on estimations.

For every calculation and verification period all the factors will be checked again to ensure that the latest and most updated version of the reputable sources is the one being used.

Sectorial national policies:

There are two main regulations in place in the country host of the project (Argentina) affecting directly the sectorial scope an de project activity:

- The joint resolution 1/2019 or RESFC-2019-1-APN-SECCYMA#SGP determines in Annex 1 the regulatory framework for the production, registration and application of compost.

- The Law 24.916 of Household waste management, approved in august 4, 2004 that regulates the urban solid waste treatment.

All the activities within the project boundaries are conducted according to those as well as with the National Plan of Adaptation and Mitigation to Climate Change 2030 in Argentina (2022).

New parameters, activities or requirements could be modified in the future to adapt to possible regulatory changes, therefore, all the policies mentioned will be monitored to ensure that future updates and requirements will be adequately incorporated in the company's activities and procedures.

All the information mentioned above has been gathered, checked and stored according to the principles applied in the general procedures of QA/QC for emission reductions of GHG of the project ("Procedimientos generales de GC/CC para las reducciones de emisiones de GEI del proyecto" in Spanish).

j) Description of established procedures for periodic calculation of GHG emission reductions or removals and leakage

Project's reductions will be calculated following the last version of CDM methodology AMS-III.F, and all of its tools. The project holder will ensure that the tools, methodologies and standards are updated in their last version before every calculation. The calculation of emission reductions will be done every three years, as the monitoring period establishes.

k) Assignment of roles and responsibilities for monitoring and reporting of variables relevant to the calculation of GHG emission reductions or removals

Monitoring of the entire project and its calculations will be carried out by the person in charge of general management of Worms Argentina S.A.

l) Procedures for assessing the project's contribution to the Sustainable Development Goals (SDGs)

The procedures to assess the project's contribution to SDG depends on the nature of the information required to monitor the extent of the contribution:

SDG	Procedure
SDG 9 - Industry, Innovation and Infrastructure.	Anual control of the proportion of local people employed in total number of employees (%). This will be checked with the contracts and payrolls and the employees information.
SDG 11 - Sustainable Cities and Communities	Control of the organic waste composted by Worms Argentina S.A., will be checked with the cargo control and delivery notes of the trucks.

SDG 12 - Responsible consumption and production:	Control of quantity of materials recycled in the biocomposting process
SDG 13 - Climate action: Continue along the same path in the fight against climate change	To monitor and control the emissions avoided by composting organic waste instead of its deposition in landfills.

m) Criteria and indicators related to the project's contribution to sustainable development goals, applicable to the project activities proposed by the project holder

Criteria and indicators	Measure (unit)
SDG 9, indicator 9.2.2. Manufacturing employment as a proportion of total employment.	9.2. Proportion of local people employed in total number of employees (%)
SDG 11, indicator 11.6. Proportion of urban solid waste regulary collected and with adequate final discharge out of total urban solid waste generated, by cities.	11.6 Quantity of the organic waste collected by the project activity (tons)
SDG 12, indicator 12.5.1. National recycling rate, tons of material recycled.	12.5 Quantity of materials recycled in the biocomposting process (tons)
SDG 13, indicator 13.2 Take urgent action to combat climate change and its impacts.	13.2 Emissions Reductions of the Project activity (t CO_2e)

n) Procedures related to co-benefits and special category monitoring, where applicable

Not applicable because this project has no special category.

o) The criteria and indicators established to demonstrate the additional co-benefits and the measurement of co-benefits and the special category, when applicable.

Not applicable because this project has no special category.

15.2 Data and parameters to quantify the reduction of emissions

The monitoring plan is designed to ensure that both the project process and all the data required to calculate the GHG mitigation are constantly updated and allow the project to be more efficient, detect possible problems or threats and implement contingency and improvement plans when required.

15.2.1 Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors

To estimate GHG emission reduction during the project quantification period and in order to keep the information updated, the following parameters will be monitored:

Data and parameters available at the validation:

Data/Parameter 1

<table>
<tr><td>Data/Parameter</td><td>EF_{EF,j,y}</td></tr>
<tr><td>Data unit</td><td>t CO₂/MWh</td></tr>
<tr><td>Description</td><td>Emission factor for electricity generation for source j in year y</td></tr>
<tr><td>Source data</td><td>Methodological tool 5 “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation“(version 3).</td></tr>
<tr><td>Value applied</td><td>
<table>
<tr><td>PERIOD / YEAR</td><td>1
1/april/2018-31/march/2019</td><td>2
1/april/2019-31/march/2020</td><td>3
1/april/2020-31/march/2021</td><td>4
1/april/2021-31/march/2022</td><td>5
1/april/2022-31/march/2023</td></tr>
<tr><td>EF_{,EF,j,y} (t CO₂/MWh)</td><td>0,2815</td><td>0,271</td><td>0,2835</td><td>0,28185</td><td>0,25135</td></tr>
</table>
</td></tr>
<tr><td>Justification of choice of data or description of measurement methods and procedures applied</td><td>Based on the information from the Argentine Government: https://www.argentina.gob.ar/economia/energia/energia-electrica/estadisticas ;https://cammesaweb.cammesa.com/download/factor-de-emision/., the emission factor is an average of each years for the period.</td></tr>
</table>

		2018	2019	2020	2021	2022	2023
	$EF_{,EF,j,y}$ (CO_2t/MWh)	0,296	0,267	0,275	0,292	0,2717	0,231
Purpose of data	Determination of the project emissions						
Any comments	-						

Data/Parameter 2

Data/Parameter	***TDLj,y***
Data unit	-
Description	Average technical transmission and distribution losses for providing electricity to source j in year y
Source data	IEA Statistics OECD/IEA 2018.
Value applied	15%
Justification of choice of data or description of measurement methods and procedures applied	Based on The Wolrd Bank stadistics (IEA), the electric power transmisión and distribution losses (% of outputs) in Argentina is 15.% https://data.worldbank.org/indicator/EG.ELC.LOSS.ZS
Purpose of data	Determination of the project emissions
Any comments	-

Data/Parameter 3

Data/Parameter	$EF_{FC,default}$
Data unit	Tons of CO_2 per liters (tCO_2/L)
Description	Emission factor of diesel in year y
Source data	Govern of Argentina
Value applied	0,00261
Justification of choice of data or description of measurement methods and procedures applied	Based on dates from the Goverment of Argentina: "Emisiones de CO_2 calculadas a partir de las ventas al público de combustibles líquidos en EESS- año 2018"
Purpose of data	Determination of the project emissions
Any comments	-

Data/Parameter 4

Data/Parameter	$EF_{CH4,y}$

Data unit	*t CH_4 / t*
Description	Emission factor of methane per tonne of waste composted valid for year *y*
Source data	Methodological tool 13 “Project and leakage amissions from composting” version 2.0.
Value applied	0,002
Justification of choice of data or description of measurement methods and procedures applied	As per table 2, page 11 from the tool, $EF_{CO4,y}$ (option 2) is a default value. The emission factor was selected based on studying published results of emission measurements from composting facilities, literature reviews on the subject and published emission factors. Data from recent, high quality sources was analyzed and a value conservatively selected from the higher end of the range in results.
Purpose of data	Determination of the project emissions.
Any comments	-

Data/Parameter 5

Data/Parameter	$EF_{N2O,y}$
Data unit	*t N_2O/ t*
Description	Emission factor of nitrous oxide per tonne of waste composted valid for year *y*
Source data	Methodological tool 13 “Project and leakage amissions from composting” version 2.0.
Value applied	0,0002
Justification of choice of data or description of measurement methods and procedures applied	As per table 3, page 12 from the tool, $EF_{N2O,y}$ (option 2) is a default value. The emission factor was selected based on studying published results of emission measurements from composting facilities, literature reviews on the subject and published emission factors. Data from recent, high-quality sources was analyzed and a value conservatively selected from the higher end of the range in results.
Purpose of data	Determination of the project emissions.
Any comments	-

Data/Parameter 6

Data/Parameter	GWP_{N2O}
Data unit	t CO_2e/t N_2O
Description	Global Warming Potential of nitrous oxide.
Source data	IPCC
Value applied	265
Justification of choice of data or description of measurement methods and procedures applied	Global warming potential of nitrous oxide valid for the relevant commitment period.
Purpose of data	Determination of the project emissions.
Any comments	*https://ghgprotocol.org/sites/default/files/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_0.pdf*

15.2.2 Data and parameters monitored

Relevant parameters will be monitored during the crediting period as indicated in the tables below:

Data/Parameter 7

Data/Parameter	$W_{j,x}$
Data unit	t
Description	Amount of solid waste type j prevent from disposal in the SWDS in year x
Source data	Measurements by project holder.
Value applied	Since the measurement of the amount of solid waste has an 2% of uncertainly, the final values applied are above,

PERIOD / YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
$W_{j,x}$ (t)	12,046.71	16,520.30	13,893.60	16,800.88	16,182.50

Justification of choice of data or description of measurement methods and	According to paragraph 25, of the methodological tool 4 "*Emissions from solid waste disposal sites. Version 08.1*" "in case that only one type of waste is disposed, then $W_{j,x,} = W_x$ and $W_{x,} = W_{i.}$" And, as per table 11 (page 19), for application B this parameter

procedures applied	is the total amount of waste disposed in a SWDS in year x and its data source are the measurements of the project holder.
Purpose of data	Determination of the baseline
Monitoring frequency	Monitored continuously with the entrance of each truck at the plant.
Any comments	-

Data/Parameter 8

Data/Parameter	Q_y
Data unit	t
Description	Quantity of waste composted in year y
Source data	Measurements by project holder.
Value applied	Since the measurement of the amount of solid waste has an 2% of uncertainly, the final values applied are above

PERIOD / YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
Q_y (t)	12,046.71	16,520.30	13,893.60	16,800.88	16,182.50

Justification of choice of data or description of measurement methods and procedures applied	According to paragraph 14, of the methodological tool 13 "*Project and leakage emission from composting*", option 1, the composting installation monitor the weight of waste delivered using an on-site weighbridge or any other applicable and calibrated weighing device. So, Qy and W_j has the save values.
Purpose of data	Determination of the project emissions.

Monitoring frequency	Monitored continuously with the entrance of each truck at the plant.
Any comments	-

Data/Parameter 9

Data/Parameter	$FC_{,i,y}$
Data unit	Liters per year
Description	Fossil fuel consumption
Source data	Measurements by project holder.
Value applied	

PERIOD / YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
FC (L)	12,174.80	20,528.73	17,923.14	19,959.50	34,699.79

Justification of choice of data or description of measurement methods and procedures applied	As per page 15 of the methodology AM0057 and table 1 (page 5) the Methodological tool number 3 “Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion” (version 3), these parameters are measured by the project holder continuously.
Purpose of data	Determination of the project emissions.
Monitoring frequency	Monitored continuously with the invoice of fuel consumption by the supplier.
Any comments	-

Data/Parameter 10

<table>
<tr><td>Data/Parameter</td><td>$EC_{PJ,j,y}$</td></tr>
<tr><td>Data unit</td><td>MWh/yr</td></tr>
<tr><td>Description</td><td>Quantity of electricity consumed by the project electricity consumption source j in year y</td></tr>
<tr><td>Source data</td><td>Methodological tool 5 “Baseline, project and/or leakage emissions from electricity consumption and monitoring
of electricity generation” (version 3).</td></tr>
<tr><td>Value applied</td><td>
<table>
<tr><td>PERIOD/ YEAR</td><td>1
1/april/2018-31/march/2019</td><td>2
1/april/2019-31/march/2020</td><td>3
1/april/2020-31/march/2021</td><td>4
1/april/2021-31/march/2022</td><td>5
1/april/2022-31/march/2023</td></tr>
<tr><td>$EC_{PJ,j,y}$ (MWh)</td><td>16.75</td><td>19.50</td><td>21.25</td><td>22.50</td><td>20.00</td></tr>
</table>
</td></tr>
<tr><td>Justification of choice of data or description of measurement methods and procedures applied</td><td>As per table 10, pages 20 and 21 from the tool, the quantity of electricity consumption are measured by the project holder continuously.</td></tr>
<tr><td>Purpose of data</td><td>Determination of the project emissions</td></tr>
<tr><td>Monitoring frequency</td><td>Monitored continuously with the invoice of electricity consumption by the supplier.</td></tr>
<tr><td>Any comments</td><td>-</td></tr>
</table>

16 Quantification of GHG emission reduction / removals

16.1 Baseline emissions

As per para 24 of the applied methodology (AMS III.F.), baseline emissions shall exclude emissions of methane that would have to be captured, fuelled or flared to comply with national or local safety requirements or legal regulations.

$$BE_y = BE_{CH4,SWDS,y} + BE_{ww,y} + BE_{CH4,manure,y} - MD_{y,reg} \times GWP_{CH4}$$

Where:

BE_y	=	*Baseline emissions in the year y (tCO_2e)*
$BE_{CH4,SWDS,y}$	=	*Yearly methane generation potential of the solid waste composted by the project activity during the years x from the beginning of the project activity (x=1) up to the year y estimated as per the latest version of the methodological tool "Emissions from solid waste disposal sites" (tCO_2e). The tool may be used with the factor "f=0.1" taking into account the methane oxidation effect by the upper layer of the landfill. With the definition of year x as 'the year since the project activity started diverting wastes from landfill disposal, x runs from the first year of crediting period (x=1) to the year for which emissions are calculated (x=y)'*
$MD_{y,reg}$	=	*Amount of methane that would have to be captured and combusted in the year y to comply with the prevailing regulations (tone)*
$BE_{CH4,manure,y}$	=	*Where applicable, baseline emissions from manure composted by the project activities, as per the procedures in AMS-III.D (tCO_2e)*
$BE_{ww,y}$	=	*Where applicable, baseline emissions from the wastewater co-composted, calculated as per the procedures in AMS-III.H (tCO_2e)*
GWP_{CH4}	=	*Global Warming Potential for CH_4 applicable to the crediting period (t CO_2e/t CH_4)*

The project does not involve co-composting along with waste water. The project does not involve composting of manure. Also, the existing landfill does not contain a methane recovery system: in order to comply with the prevailing regulations, it's not required to capture or combust methane for the project activity. So, final equation applied is:

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

Yearly methane generation potential from solid waste disposal site ($BE_{CH4,SWDS,y}$)

The Yearly Methane Generation Potential for the solid waste ($BE_{CH4,SWDS,y}$) is calculated using the first order decay model as described in the latest version of the methodological tool "Emissions from solid waste disposal sites" (version 08.1).

Since the methane generation from municipal solid waste is treated with composting technology, the tool is applicable for the project under 'Applicability B' of the project activity. As per para 17, the baseline methane emission from solid waste disposal site will be calculated as below:

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

Where:

$BE_{CH4,SWDS,y}$ = Baseline methane emissions occurring in year y generated from waste disposal at a SWDS during a time period ending in year y (t CO_2e/yr)

x = Years in the time period in which waste is disposed at the SWDS, extending from the first year in the time period (x = 1) to year y (x = y)

y = Year of the crediting period for which methane emissions are calculated (y is a consecutive period of 12 months)

$DOC_{f,y}$ = Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions occurring in the SWDS for year y (weight fraction)

$W_{j,x}$ = Amount of solid waste type j disposed or prevented from disposal in the SWDS in the year x (t)

φ_y = Model correction factor to account for model uncertainties for year y.

f_y = Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year y

GWP_{CH4} = Global Warming Potential of methane

OX = Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste)

F = Fraction of methane in the SWDS gas (volume fraction)

MCF_y = Methane correction factor for year y

DOC_j = Fraction of degradable organic carbon in the waste type j (weight fraction)

k = Decay rate for the waste type j (1 / yr)

j = Type of residual waste or types of waste in the MSW

Model correction factor to account for model uncertainties for year y (φ_y)

The default value is applied for application B and in humid/wet conditions, so φ_y = 0,85.

Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year y (fy)

For application B the monitoring annually: Select the maximum value from the following: (a) contract or regulation requirements specifying the amount of methane that must be destroyed/used (if available) and (b) historic data on the amount captured. fy = 0 (assumed)

Global Warming Potential of methane (GWP_{CH4})

This parameter is established by IPCC for each years. GWP_{CH4} = 28 tCO_2e / t CH_4

Oxidation factor (OX)

For applications A and B, the default value of OX is 0,1. OX = 0,1

Fraction of methane in the SWDS gas (volume fraction) (F)

For applications A and B, the default value of F is 0,5. F = 0,5

Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions occurring in the SWDS for year y (weight fraction) ($DOC_{f,y}$)

For application B, and table 14 (page 14) in the case of MSW, default value is established by IPCC Guidelines for National GGI. So, $DOC_{f,y}$ = 0,5

Methane correction factor for year y (MCF_y)

For application B, considering SWDS without a water table above the bottom of the SWDS, the default values (based on SWDS type) for MCFy is 1, as per table 5, for anaerobic managed solid waste disposal sites. MCF_y = 1

Amount of solid waste type j disposed or prevented from disposal in the SWDS in the year x (t) ($W_{j,x}$)

YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
$W_{j,x}$ (t)	12,046.71	16,520.30	13,893.60	16,800.88	16,182.50

Fraction of degradable organic carbon in the waste type j (weight fraction) (DOC_j)

For application B, and table 6, the value for MSW and food, food waste, beverages and tobacco (other than sludge) is 15% wet waste. **DOC_j = 15%**

Decay rate for the waste type j (1/yr) (k_j)

For rapidly degrading waste (food, food waste, beverages and tobacco) and boreal and temperate (MAT ≤ 20ºC), Wet (MAP/p ET > 1), the value is 0,185 1/yr. **k_j = 0,185 1/yr.**

So, the results of the baseline for each year are:

YEAR	BASELINE (t CO_2 e)
1 1/april/2018-31/march/2019	10,873
2 1/april/2019-31/march/2020	14,911
3 1/april/2020-31/march/2021	12,540
4 1/april/2021-31/march/2022	15,164
5 1/april/2022-31/march/2023	14,606
TOTAL (t CO_2 e)	59,574

16.2 Project emissions/removals

Project emissions from composting process (PE_y) will be determined as per the methodological tool "Project and leakage emissions from composting", version 2. As per the tool the project emission from composting is calculated as below:

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

Where:

$PE_{COMP,y}$ = Project emissions associated with composting in year y (t CO_2e/yr)

$PE_{EC,y}$ = Project emissions from electricity consumption associated with composting in year y (t CO_2/yr)

$PE_{FC,y}$ = Project emissions from fossil fuel consumption associated with composting in year y (t CO_2/yr)

$PE_{CH4,y}$ = Project emissions of methane from the composting process in year y (t CO_2e/yr)

$PE_{N2O,y}$ = Project emissions of nitrous oxide from the composting process in year y (t CO_2e/yr)

$PE_{RO,y}$ = Project emissions of methane from run-off wastewater associated with co-composting in year y (t CO_2e/yr)

Since the project does not involve co-composting ($PE_{RO,y}$=0), the project emission equation is reduced as below:

$$PE_y = PE_{EC,y} + PE_{FC,y} + PE_{CH4,y} + PE_{N20,y}$$

Determination of project emissions from electricity consumption ($PE_{EC,y}$)

Since the electricity will be consumed only from grid, the project emission from electricity consumption is estimated as per the methodological tool 05 'Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation", version 3, as per para 16 of the tool the project emission from electricity consumption. It's calculated as below:

$$PE_{EC,y} = \sum_j EC_{PJ,j,y} * EF_{EL,j,y} * (1 + TDL_{j,y})$$

Where,

$PE_{EC,y}$ = Project emissions from electricity consumption in year y (t CO_2 / yr)

$EC_{PJ,j,y}$ = Quantity of electricity consumed by the project electricity consumption source j in year y (MWh/yr)

$EF_{EL,j,y}$ = Emission factor for electricity generation for source j in year y (t CO_2/MWh)

$TDL_{j,y}$ = Average technical transmission and distribution losses for providing electricity to source j in year y

Quantity of electricity consumed by the project electricity consumption source j in year y (MWh/yr)

YEAR	1 1/april/2018- 31/march/2019	2 1/april/2019- 31/march/2020	3 1/april/2020- 31/march/2021	4 1/april/2021- 31/march/2022	5 1/april/2022- 31/march/2023
$EC_{PJ,j,y}$ (MWh)	16.75	19.50	21.25	22.50	20.00

Emission factor for electricity generation for source j in year y (t CO_2/MWh)

Based on the information from the Argentine Government: https://www.argentina.gob.ar/economia/energia/energia-electrica/estadisticas ;https://cammesaweb.cammesa.com/download/factor-de-emision/., the emission factor is an average of each years for the period.

	2018	2019	2020	2021	2022	2023
$EF_{,EF,j,y}$ (t CO_2 e /MWh)	0,296	0,267	0,275	0,292	0,2717	0,231

So,

PERIOD / YEAR	1 1/april/2018- 31/march/2019	2 1/april/2019- 31/march/2020	3 1/april/2020- 31/march/2021	4 1/april/2021- 31/march/2022	5 1/april/2022- 31/march/2023
$EF_{,EF,j,y}$ (t CO_2 e /MWh)	0,2815	0,271	0,2835	0,28185	0,25135

Average technical transmission and distribution losses for providing electricity to source j in year y (TDL).

Based on The Wolrd Bank stadistics (IEA), the electric power transmission and distribution losses (% of outputs) in Argentina is 15%. So, **$TDL_{j,y}$ = 15%**

So, the results of the project emission from electricity consumption are:

YEAR	1 1/april/2018- 31/march/2019	2 1/april/2019- 31/march/2020	3 1/april/2020- 31/march/2021	4 1/april/2021- 31/march/2022	5 1/april/2022- 31/march/2023

$PE_{EC,y}$ (t CO_2e)	5	6	6	7	5

Determination of project emissions from fossil fuel consumption ($PE_{FC,y}$)

Project emissions from fossil fuel consumption ($PE_{FC,y}$), since the only fuel in the project activity is diesel, is calculated as below:

$$PE_{FC,j,y} = FC_y \times EF_{FC,default}$$

Where:

$PE_{FC,j,y}$ = CO_2 emissions from fossil fuel combustion in process j during the year y (tCO_2/yr)

FC_y = Quantity of diesel combusted in process j during the year y (L/yr)

$EF_{FC,default}$ = Emission factor of diesel in year y (tCO_2/L)

The value of the emission factor of diesel for every year is based on the information from the Argentine Government: https://www.energia.gob.ar/contenidos/archivos/Reorganizacion/informacion_del_mercado/mercado_hidrocarburos/mapas/metodologia_huella_CO2_eess.pdf

The results of this equation are collected in the following table:

YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
FC (L)	12,174.80	20,528.73	17,923.14	19,959.50	34,699.79
EF (ton CO_{2e}/L)	0,00261	0,00261	0,00261	0,00261	0,00261
$PE_{FC,y}$ ton CO_2e)	**31**	**53**	**46**	**52**	**90**

Determination of project emissions of methane ($PE_{CH4,y}$)

As per para 22 of the tool, Project emissions of methane from composting are determined as follows:

$$PE_{CH4,y} = Q_y \times EF_{CH4,y} \times GWP_{CH4}$$

Where:

$PE_{CH4,y}$ = Project emissions of methane from the composting process in year y (t CO_2e / yr)

Q_y = Quantity of waste composted in year y (t / yr)

$EF_{CH4,y}$ = Emission factor of methane per tonne of waste composted valid for year y (t CH_4 / t)

GWP_{CH4} = Global Warming Potential of CH_4 (t CO_2e / t CH_4)

As per option 2, the default value is used for emission factor of methane per tonne of waste; $EF_{CH4,} = EF_{CH4,efault}$ = 0,002 (t CO_2 e /t CH_4).

Hence, the emissions of methane are as following:

YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
$PE_{CH4,y}$ (ton CO_2e)	674	925	778	940	906

Determination of project emissions of nitrous oxide ($PE_{N2O,y}$)

As per para 26 of the tool, project emissions of nitrous oxide from composting are determined as follows:

$$PE_{N20,y} = Q_y \times EF_{N20,y} \times GWP_{N20}$$

Where:

$PE_{N2O,y}$ = Project emissions of N_2O from the composting process in year y (t CO_2e/yr)

Q_y = Quantity of waste composted in year y (t /yr)

$EF_{N2O,y}$ = Emission factor of N_2O per tonne of waste composted valid for year y (t N_2O/t)

GWP_{N2O} = Global Warming Potential of N_2O (t CO_2e / t N_2O)

As per option 2, the default value is used for emission factor of N_2O per tonne of waste, ie, $EF_{N2O,} = EF_{N2O,default}$ = 0,0002 (t CO_2 e /t N_2O)

Hence, the emissions of nitrous oxide are as following:

YEAR	1 1/april/2018-31/march/2019	2 1/april/2019-31/march/2020	3 1/april/2020-31/march/2021	4 1/april/2021-31/march/2022	5 1/april/2022-31/march/2023
$PE_{N2O,y}$ (t CO_2 e)	638	875	736	890	857

In conclusion, the results of the project emissions are as following:

YEAR	1 1/april/2018- 31/march/2019	2 1/april/2019- 31/march/2020	3 1/april/2020- 31/march/2021	4 1/april/2021- 31/march/2022	5 1/april/2022- 31/march/2023
$PE_{EC,y}$	5	6	6	7	5
$PE_{FC,y}$	31	53	46	52	90
$PE_{CH4,y}$	674	925	778	940	906
$PE_{N2O,y}$	638	875	736	890	857
TOTAL (t CO_2 e)	**1,348**	**1,859**	**1,566**	**1,889**	**1,858**

16.3 Leakages

Based on methodology AMS.III.F, there is no leakage emission from this project activity because:

- No composting technology equipment is transferred from or to another activity.
- The compost is not stored in anaerobic condition and not disposed of in a SWDS.

The permanence of the project is ensured because this project is retroactive and the emission reduction is calculated after its commissioning.

So, $LE_y = 0$.

16.4 Net GHG Emission Reductions / Removals

he project is a retroactive project, and the emission reduction is calculated after the commissioning of the project. The results shown in the table are the consequence of the application of the methodology AMS-III.F for composting non-hazardous solid waste.

All the activities described are the result of the construction of new composting facilities or the expansion of capacity of existing composting facilities within the period contemplated. Therefore, the formula used as indicated in the methodology AMS-III.F. Small-scale methodology: Avoidance of methane emissions through composting Version 12.0, is the Equation 2:

$$ER_y = BE_y + (PE_y - LE_y)$$

Where:

ERy = Emission reduction in the year y (tCO_2e)
BEy = Baseline emissions in year y (tCO_2e)
PEy = Project emissions in the year y (tCO_2e)
LEy = Leakage emissions in year y (tCO_2e)

PERIOD	BASELINE EMISSIONS	PROJECT EMISSIONS	LEAKAGE EMISIONS	EMISSION REDUCTION
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 (tCO_2e)	68,094	8,520		59,574

16.5 Comparison of actual emission reductions with estimates in the project document

There is comparison because the first fourth periods of this projects are ex-ante and this is the first document presented to BCR.

16.6 Remarks on difference from estimated value in the registered project document

There is no increase of the actual emission reduction because this is the first monitoring period.