

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in 2021 of

MINASLIGAS S.A.

Maria Luiza Santiago, street, 200 - 20°
floor - Santa Lúcia, Belo Horizonte -
MG, Brazil, 30360-740

Has been verified in accordance with ISO 14064-3:2007 as meeting the requirements of.

ISO 14064-1:2018 and Brazil GHG Protocol Program.

For the following activities:

Production, trading, and sales of standard and high purity ferro silicon alloys, Silicon Metal; Production, trading, and sales of silica fume. Biomass Production Units

Containing total Emissions of **198,911.578** metric tons of CO₂ equivalent, **location based (Scope 1 + Scope 2 Location Based + Scope 3)**

Lead auditor: Rafael da Silva Caldeira

Authorized by



Thiago Dorreto
National Manager

Date: December 2022, 22

SGS do Brasil Ltda .

CNPJ: 00.272.073/0007-28

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SGS has been contracted by **MINASLIGAS S.A.** (hereinafter referred to as “CLIENT”), Maria Luiza Santiago, street nº 200 - 20º floor - Santa Lúcia, Belo Horizonte - MG, 30360-740, Brasil Brazil, for the verification of direct and indirect Greenhouse Gas in accordance with

ISO 14064-3:2007

As provided in the Greenhouse Gas (GHG) Assertion in the form of report covering GHG emissions of the period January 1st, 2021, to December 31st, 2021.

Roles and responsibilities

The client is responsible for the organization’s GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS’s responsibility to express an independent GHG verification opinion on the GHG emissions as provided in the GHG Assertion.

SGS conducted a third-party verification of the provided GHG assertion against the principles of ISO 14064-1:2018 and ISO 14064-3:2007 and Brazil GHG Protocol Program in the period 2021. The verification was based on the verification scope, objectives and criteria as agreed between CLIENT and SGS on december 5th to 9th, 2022.

Level of Assurance

The level of assurance agreed is that of **reasonable**.

Scope

The client has commissioned an independent verification by **SGS do Brasil Ltda** of reported GHG emissions to establish conformance with ISO 14064 principles within the scope of the verification as outlined below.

The data and information supporting the GHG assertion were calculated based on monitored and historical data.

This engagement covers verification of emission from anthropogenic sources of greenhouse gases included within the organisation’s boundary and based on ISO 14064-3:2018.

- The organizational boundary was established following operational control approach.

- Title or description activities: Production, trading, and sales of standard and high purity ferro silicon alloys, Silicon Metal; Production, trading and sales of silica fume. Biomass Production Units.
- Location/boundary of the activities: Forestry and Charcoal Production Activities of Minasligas, João Pinheiro Nucleus - MG, Três Marias Nucleus - MG, Grão Mogol Nucleus - MG, Buritizeiro Nucleus - MG. Iron-silicon Alloy Factory Pirapora-MG.
- Physical infrastructure, activities, technologies, and processes of the organization:
 - Production, trading and sales of standard and high purity silicon iron alloys, silicon metal; production, trading, and sales of silica fume. Biomass production units.
 - Alloys plant.
 - Forestry and charcoal production farms.
 - Corporate headquarters.
- GHG sources, sinks and/or reservoirs included: This inventory covers Scope 1, Scope 2, and Scope 3 emissions.
- Scope 1:
 - Stationary combustion emissions
 - Combustion emissions from mobile sources.
 - Emissions from industrial processes.
 - Fugitive emissions.
 - Agricultural activities.
 - Land use and land change, removals.
- Scope 2: Power purchase by location-based approach, and market-based approach, from photovoltaic power plant.
- Scope 3:
 - Category 1- Purchased Goods and Services.
 - Category 4 - Transportation and Distribution - Upstream;
 - Category 5 - Waste Generated in Operations.
 - Category 6- Business travel.
 - Category 7- Employee commuting (home-work);
 - Category 9 - Transportation and Distribution - Downstream.
- Types of GHGs included: CO₂, CH₄, N₂O, HFC, PFC and SF₆.
- Directed actions: Not applicable.
- GHG information for the following period was verified: January 1st2021 to December 31st, 2021.

- Intended user of the verification statement: MINASLIGAS S.A.

Objective

This verification purposes to review the objective evidence and to independently review:

- Whether the GHG emissions are as declared by the organization’s GHG assertion.
- The data reported are accurate, complete, consistent, transparent, and free of material error or omission.

Criteria

Criteria against which the verification assessment is undertaken are the principles of ISO 14064:2018 and the Brazil GHG Protocol Program.

Materiality

The materiality required of the verification was considered by SGS to 5%, based on the needs of the intended user of the GHG Assertion.

Conclusion

The client provided the GHG declaration based on the requirements of ISO14064-1:2018 and the GHG Protocol Program. The GHG information for the **2021** period containing emissions of **198,911.578** metric tons of CO₂ equivalent, approach by location, and removals of **-256,533.467** of CO₂ has been verified by SGS to a reasonable level and confidence, consistent with the agreed verification scope, objectives, and criteria.

The results of the verified emissions and removals were:

Emissions in metric tons of CO ₂ equivalent (tCO ₂ e)	
Scope 1	53,780.182
Scope 2 - Location Based	122,257.914
Scope 2 - Market Based	4,937.326
Scope 3 - Upstream/Downstream	22,873.482
Total Emissions – Market Based	81,590.990
Total Emissions – Location Based	198,911.578

Emissions in metric tons of CO ₂ Biogenic	
Scope 1	240,729.280
Scope 3 (Upstream/ Downstream)	612.189
Emissions in metric tons of CO₂ Biogenic	241,341.470

Removals in metric tons of CO ₂	
Scope 1: Use of Soil Change – CO ₂ Removals	- 256,533.467
Total Biogenic CO₂ Removals	- 256,533.467

SGS’s approach is risk based, drawing on an understanding of the risks associated with reporting GHG emissions information and the controls in place to mitigate these. Our examination, based on test, includes relevant evidence assessment related to quantities and the GHG information reported by the organization.

Our verification work is performed to obtain the information, explanations, and evidence that we considered necessary to provide a limited level of assurance that the GHG emissions for the period 2021 are fairly stated.

We conducted our verification with regard to the GHG assertion of **MINASLIGAS S.A.** which included assessment of GHG information system, monitoring, and reporting plan/protocol. This assessment includes the provisions of the protocol reference are consistently and appropriately applied.

In SGS’s opinion the presented GHG assertion

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO14064-1:2018 on GHG quantification, monitoring, and reporting.

This statement shall be interpreted with the GHG assertion of **MINASLIGAS S.A.**



Note: This Statement is issued, on behalf of Client, by **SGS do Brasil Ltda** ("SGS") under its General Conditions for Green Gas Verification Services available at http://www.sgs.com/terms_and_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings, and the supporting GHG Assertion may be consulted at **MINASLIGAS S.A.** This Statement does not relieve Client from compliance with any bylaws, federal, national, or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.