

Verification Statement

VS-3733747

The declaration about greenhouse gas emissions, water withdrawal and waste generation for the year 2022 (file name: "Consolidated file 2022.xlsx"), dated 22nd Feb 2023, prepared by

Elementis plc

was verified in accordance with ISO 14064-03:2019 regarding the compliance with the requirements of ISO 14064-1:2018.

We hereby confirm for the **year 2022**:

Reported metric:		Total Elementis:
GHG emissions	Scope 1:	207,058 t CO ₂ -equ.
	Scope 2, location-based:	81,365 t CO ₂ -equ.
	Scope 2, market based:	57,810 t CO ₂ -equ.
Water withdrawn:		3,840,035 m ³
Waste generated:		23,424 MT

Elementis plc operated 22 manufacturing sites, 2 non-manufacturing sites and 7 offices in 2022, which are listed in the attached verification report.

Level of assurance: reasonable

Level of materiality:

- 5% for GHG emissions
- 5% for water withdrawal
- 5% for waste generation

This verification statement is only valid for the mentioned scope of application and in combination with the objectives, explanations and criteria for evaluation specified in the following verification report.

TÜV SÜD Industrie Service GmbH
 Verification Body for Greenhouse Gases
 accredited according to ISO 14065
 Westendstrasse 199, 80686 Munich, Germany

Munich, 26th February 2023





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Explanation to the Verification Statement

Brief description of the Verification process

Elementis plc has voluntarily entrusted TÜV SÜD Industrie Service GmbH (verification body) to carry out an independent (third party) verification of the declaration on greenhouse gas (GHG) emissions, water withdrawal and waste generation.

This review is based on the intended area of application, the goals and criteria as agreed upon with the commissioning on 25th November 2022.

Roles and responsibilities

The determination and reporting of GHG emissions, water withdrawal and waste generation are the sole responsibility of our client.

Our role and responsibility as a verification body was to independently verify the adequacy of the metrics reported by our client, as well as the underlying systems and processes for data collection, analysis and control, in accordance with the requirements of ISO 14064-3.

Standard for GHG accounting and reporting

ISO 14064-1:2019 (“Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals”)

Scope of application / System boundaries

The declaration on GHG emissions, water withdrawal and waste generation was conducted for the calendar year 2022 for the business sectors “Performance Specialties”, “Personal Care” and “Chromium” as well as two non-manufacturing sites and offices, with Elementis plc being the parent company. The reporting covers the following locations:

Performance Specialties and Personal Care

- Milwaukee (WI, USA)
- New Martinsville (WV, USA)
- Huguenot (NY, USA)
- Wallkill (NY, USA)
- Palmital (Brazil)
- Songjiang (China)
- Hsinchu (Taiwan)
- Ludwigshafen (Germany)
- Taloja (India)
- Livingston (UK)
- Amsterdam (The Netherlands)
- Vuonos (Finland)
- Katwijk (The Netherlands)
- Sotkamo (Finland)
- Anji (China)
- St.Louis (MO, USA)
- Newberry (CA, USA)

Chromium

- Corpus Christi (TX, USA)

- Castle Hayne (NC, USA)
- Amarillo (TX, USA)
- Dakota City (NE, USA)
- Milwaukee LTP (WI, USA)

Non-Manufacturing Sites

- Eaglescliffe (UK)
- Scipark (NJ, USA)

Offices

- London (UK)
- Mumbai (India)
- Chongqing (China)
- Qingdao (China)
- Shanghai (China)
- Wuhan (China)
- Cologne (Germany)

As the business sector Chromium was sold in the beginning of 2023, separate results of the reported metrics without the business sector Chromium are shown in the below table in order to allow comparisons with the remaining locations in the future years:

Table 1: Overview on accounted metrics

Reported metric:		Total Elementis with Chromium locations:	Total Elementis without Chromium locations:	Total only Chromium locations:	Units:
GHG emissions	Scope 1:	207,058	47,666	159,392	t CO2-equ.
	Scope 2, location-based:	81,365	42,956	38,409	t CO2-equ.
	Scope 2, market based:	57,810	19,401	38,409	t CO2-equ.
Water withdrawn:		3,840,035	1,573,678	2,266,357	m ³
Waste generated:		23,424	20,372	3,052	MT

The accounting of the reported metrics by Elementis plc is done by the following means:

Greenhouse gases

Elementis plc accounts only for Scope 1 (direct emissions under the control of Elementis plc) and Scope 2 emissions (indirect emissions through the consumption of energy). Scope 3 emissions are not accounted. The greenhouse gas inventory contains the specified greenhouse gases as CO₂ equivalents.

The activity data on GHG-relevant processes (e.g. quantities of fuel or electricity consumed) was either provided by the respective supplier or recorded from meter readings done by local staff. The emission factors to calculate the GHG emissions resulting from the relevant Scope 1 and 2 activities were taken from the following sources:

Table 2: Overview on applied emission factors

Emission source:	Emitting sites:	Emission factor source:
Scope 1		
Natural gas	All, except: New Martinsville, Palmital, Hsinchu, Vuonos, Sotkamo (these sites do not consume natural gas)	DEFRA
LPG	Walkill, Palmital, Songjiang, Livingston, Amsterdam, Vuonos, Castle Hayne	DEFRA
Light fuel oil & Diesel	Songjiang, Hsinchu, Amsterdam, Vuonos, Katwijk, Sotkamo, Anji, St.Louis	DEFRA
Wood chips	Anji	DEFRA
Refrigerants	Castle Hayne	IPCC 2 nd AR (1995), ASHRAE
Process emissions	Castle Hayne, Corpus Christi, Ludwigshafen	Stoichiometric
Scope 2		
Electricity (location-based)	All	IEA for all country, except DEFRA for Livingston and Eaglescliffe
Electricity (market-based)	Huguenot, Walkill, Livingston, Amsterdam, Vuonos, Sotkamo	<ul style="list-style-type: none"> ▪ Huguenot: "NewMix® Renewable Energy Certificate (REC)" provided by Green-e® Energy ▪ Walkill: "NewMix® Renewable Energy Certificate (REC)" provided by Green-e® Energy ▪ Livingston: "Renewable Energy Guarantees of Origin (REGOs)" provided by Scottish Power ▪ Amsterdam: "Certificaat EuropeseWind" provided by Vattenfall ▪ Vuonos: "CO² - Free Energy" (Nuclear) Guarantee of Origin (GoO) provided by Gasum ▪ Sotkamo: "CO² - Free Energy" (Nuclear) Guarantee of Origin (GoO) provided by Gasum
Steam	New Martinsville, Ludwigshafen, Anji, Corpus Christi	DEFRA

No direct GHG removals or storages were present at the time of the verification.

Water withdrawal and waste generation

The quantities of water withdrawn were either provided by the respective supplier or recorded from meter readings done by local staff. The water is withdrawn either from municipal supply (towns water), boreholes/rivers/lakes (process water) or as hot water from external suppliers. For the Specialties sites, only one value for the total water withdrawn was reported, meaning that there is not differentiation in the water source.

Regarding the waste generation, Elementis plc distinguished between hazardous and non-hazardous waste. Further categorization was not done. The quantities of waste generated were provided by the respective waste disposal companies.

Specific Measures / Findings and Recommendations

Elementis plc aims to implement the following optimization measures to improve the quality in the accounting of the specified metrics:

- Using location-based or preferably market-based emission factors for natural gas. Currently, the DEFRA factor is used for all locations worldwide. However, there is a notable difference between countries in terms of quality and purity of natural gas depending on the natural gas fields, which results in different emission factors.
- Using supplier-specific emission factors for the consumption of steam (only New Martinsville, Ludwigshafen, Anji and Corpus Christi purchase external steam at the time of the verification). Currently, the DEFRA factor is used for all the applicable locations worldwide which might not represent the actual power generation at these sites.
- Waste is only distinguished between “hazardous” and “non-hazardous” waste. However, there are significant differences within such general categories, which make a further sub-categorization necessary (e.g. in production wastes/paper/cardboard /pallets/plastics/organics, etc.) in order to better interpretate and work with the reported numbers.
- The GWPs for refrigerants are still based on the 2nd Assessment Report (AR) of the IPCC from 1995. These values should be updated to the newest AR (6th).
- Implementation of a systematic GHG management system according to ISO 14064-1 in an online platform to significantly improve the central monitoring, control and reporting of the GHG related processes and emissions for each site and to facilitate the auditing through third parties. The same systemic approach should be applied to water withdrawal and waste generation as well.

Intended use of this Verification Statement

- Annual sustainability reporting
- Internal management for creating strategies on reducing GHG emissions, water withdrawal and waste generation

Standard for the Verification

ISO 14064-3:2019 ("Specification with guidance for verification and validation of GHG statements"), applied analogously for the statement on water withdrawal and waste generation

Objectives of the Verification

The assessment was performed with due regard to our impartiality in a risk-based approach. Rational procedures were applied to reach reliable and reproducible conclusions. Within the scope of our audit, a sufficient amount of suitable evidence needed to be collected and explained in the audit by representatives of Elementis plc and persons appointed for this purpose. This was to enable sufficient traceability of the information presented with the declaration on GHG emissions, water withdrawal and waste generation.

Criteria

The data review was conducted according to the following criteria:
Relevance, completeness, accuracy, transparency of information and consistency.
The assessment of alternatives according to the quantification model used was carried out based on the principle of conservatism.

Agreed level of assurance

reasonable

Comment:

At a reasonable - but not absolute - level of assurance, we check that the declaration on GHG emissions, water withdrawal and waste generation is substantially correct. This includes a review of the processes, data and evidence on their correctness and accuracy with an appropriately adequate sample size.

Materiality threshold

Level of materiality:

- 5% for GHG emissions
- 5% for water withdrawal
- 5% for waste generation

Comment:

The materiality threshold is a benchmark for our assessment of data gaps, misstatements and non-conformities remaining at the end of our review.

Gaps, omissions, inaccuracies identified during the review that result in quantities greater than the established thresholds constitute a "material deviation", i.e. non-conformity, that must be addressed before a verification statement can be issued.

Methods of Verification and site inspection

The staff deployed by the verification body carried out a document review at the client's premises and on-site audit of responsible and collaborating staff at the following sites:

- Livingston (UK): 12th Jan 2023
- Ludwigshafen (Germany): 17th Jan 2023

Additionally, virtual audits with staff of production sites were conducted for the following sites:

- Amsterdam (The Netherlands): 16th Jan 2023
- Songjiang (China): 19th Jan 2023
- Castle Hayne (NC, USA): 19th Jan 2023
- Wallkill (NY, USA): 23rd Jan 2023

Further methods of verification were:

- Document review and reconciliation with documentation requirements
- Interviews of personnel of Elementis plc or subsidiaries within the scope of audit
- Random sample checks of supporting evidence and database values
- Review of data and information systems and methodology for collection, aggregation, analysis and verification of information used to determine GHG emissions, water withdrawal and waste generation
- Plausibility checks
- Strategic analysis and risk assessment based on the submitted declaration
- Independent review through an auditor that was not participating in the audits (four-eyes principle)

Conclusions

With our review of the declaration on greenhouse gas emissions, water withdrawal and waste generation of Elementis plc (file name: "Consolidated file 2022.xlsx"), dated 22nd February 2023, we conclude that, in all material respects, the reported metrics are presented fairly and factually in accordance with the specifications and standards used as a basis here.

Based on the results of our verification process, we confirm the reported emissions and the achievement of the agreed level of assurance and compliance with materiality thresholds.

Our verification statement is only to be interpreted together with the declaration on greenhouse gas emissions, water withdrawal and waste generation of Elementis plc.

This statement is issued in accordance with the agreement reached with the client and within the framework of our validation and verification regulations. The results recorded here are based on our internal documentation dated 26th February 2023 for this verification with project no. 3733747.