Vesuvius Plc Statement of verification

Vesuvius Plc engaged Carbon Footprint Ltd to verify their carbon footprint reporting and supporting evidence for the five-year period January 1st 2019 - December 31st 2023 inclusive.

Methodology

The verification was led by Carbon Footprint Ltd. Carbon Footprint Ltd, in accordance with the 'ISO 14064 Part 3 (2019): *Greenhouse Gases: Specification with guidance for the verification and validation of greenhouse gas statements'*. The work was undertaken to provide a limited level of assurance with respect to the GHG statements made. Carbon Footprint Ltd believes that the review of the assessment and associated evidence, coupled with this subsequent report, provides a reasonable and fair basis for our conclusion.

Data was within the scope of the verification and results:

CO$_2$e emissions Scope 1, 2 and 3 (market based): * ** *** ****

Metric Tonnes CO$_2$e	2023		2022		2021		2020		2019	
	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%
Scope 1: natural gas, coal, LPG, company car travel, process emissions, fugitive emissions	169,914	10.7%	284,879	17.2%	310,710	15.5%	272,257	16.2%	322,573	18.2%
Scope 2: purchased electricity **market based**	37,961	2.4%	55,861	3.4%	83,175	4.2%	92,360	5.5%	108,631	6.1%
Scope 3: business travel, electricity transmission & distribution; waste, supply chain (purchased goods and services and capital goods	1,381,457	86.9%	1,318,207	79.5%	1,605,873	80.3%	1,311,807	78.3%	1,341,498	75.7%
Total CO$_2$e emissions	1,589,332	100.0%	1,658,947	100.0%	1,999,759	100.0%	1,676,424	100.0%	1,772,702	100.0%

CO$_2$e emissions Scope 1, 2 and 3 (location based): * ** *** ****

Metric Tonnes CO$_2$e	2023		2022		2021		2020		2019	
	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%	tCO$_2$e	%
Scope 1: natural gas, coal, LPG, company car travel, process emissions, fugitive emissions	169,914	10.3%	284,879	16.7%	310,710	15.4%	272,257	16.2%	322,573	18.2%
Scope 2: purchased electricity **location based**	93,134	5.7%	97,843	5.8%	102,653	5.1%	93,447	5.6%	109,683	6.2%
Scope 3: business travel, electricity transmission & distribution; waste, supply chain (purchased goods and services and capital goods	1,381,457	84.0%	1,318,207	77.5%	1,605,873	79.5%	1,311,807	78.2%	1,341,498	75.6%
Total CO$_2$e emissions	1,644,504	100.0%	1,700,929	100.0%	2,019,237	100.0%	1,677,511	100.0%	1,773,754	100.0%

CO$_2$e Emissions intensity (market based and location based): * ** ***

Metric tonnes of CO$_2$e per metric tonne of product packed for shipment	2023	2022	2021	2020	2019
	MT/MT	MT/MT	MT/MT	MT/MT	MT/MT
CO$_2$e Emissions intensity (market based)	0.245	0.380	0.400	0.442	0.474
CO$_2$e Emissions intensity (location based)	0.310	0.426	0.420	0.443	0.475

Energy consumption Scope 1 and 2: * ** ***

Energy consumption kWh	2023		2022		2021		2020		2019	
	kWh	%	kWh	%	kWh	%	kWh	%	kWh	%
Scope 1: Energy consumption	699,010,686	78.0%	877,757,259	81.0%	949,035,812	81.9%	829,616,697	80.8%	958,190,599	81.5%
Scope 2: Energy consumption	196,611,670	22.0%	205,858,996	19.0%	210,414,774	18.1%	196,764,804	19.2%	217,718,707	18.5%
Total Energy consumption	895,622,356	100.0%	1,083,616,256	100.0%	1,159,450,586	100.0%	1,026,381,501	100.0%	1,175,909,306	100.0%

Energy intensity Scope 1 and 2: * ** ***

kWh of energy per metric tonne of product packed for shipment	2023	2022	2021	2020	2019
	kWh/MT	kWh/MT	kWh/MT	kWh/MT	kWh/MT
Scope 1 and 2: Energy intensity	1,054	1,207	1,177	1,243	1,293

*The business of Universal Refractories Inc (Vesuvius Penn Corporation) which was acquired in 2021, is included in 2022 and onwards. BMC (Yingkou YingWei Magnesium Co.,Ltd), which was acquired late 2022 is included in 2023 and onwards.

**Operational Control Boundary.

*** Conversion factors for GHG emissions and energy used the 2023 UK Government GHG Conversion Factors for Company Reporting.

Conversion factors for GHG emissions for electricity globally used the IEA Emission Factors 2023.

**** Calculation of Scope3 GHG emissions used the Carbon Footprint Limited Sustrax system for years 2019-2023.

The above verified data and verified methodology have been used in the equivalent re-baselined calculations incorporating Vesuvius Penn Corporation pre-acquisition to enable accurate presentation of performance internally and externally.

Assurance opinion
Based on the results of our verification process, Carbon Footprint Ltd provides limited assurance of the GHG emissions statement, **and found no evidence that the GHG emissions statement:**
- is not materially correct and is not a fair representation of the GHG emissions data and information;
- has not been prepared in accordance with ISO 14064 Part 3 (2019)

Based on the results of our verification process, Carbon Footprint Ltd provides reasonable assurance that the GHG emissions statement:
- is materially correct and is a fair representation of the GHG emissions data and information; and
- is prepared in accordance with ISO 14064 Part 3 (2019

It is our opinion that Vesuvius Plc has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the stated period and boundaries.

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