ENVIRONMENTAL CLAIMS VERIFICATION STATEMENT
ECVS/25/PCF/0001

Verification report reference:
ECVS-VR-TW-25500017

Statement issue date:
2025-10-15

Statement Holder:
RETECH ENVIRONMENTAL SOLUTIONS CO., LTD.
7 F., No. 247, E. 1st Sec., Guangming 6th Rd., Zhubei City, Hsinchu County, Taiwan



Factory:
RETECH ENVIRONMENTAL SOLUTIONS CO., LTD.
No. 1, Xinke Rd., Xitun Dist., Taichung City, Taiwan
No. 1-1, Zhangbin E. 1st Rd., Xianxi Township, Changhua County, Taiwan

Description of the study

Title of the study	:	RETECH ENVIRONMENTAL SOLUTIONS CO., LTD.Carbon Footprint Inventory Report – Artificial Cryolite (CTSP)
Report version under verification	:	Rev.04, 2025-09-23
Commissioner of the study	:	RETECH ENVIRONMENTAL SOLUTIONS CO., LTD.
Practitioner of the study	:	RETECH ENVIRONMENTAL SOLUTIONS CO., LTD.
Product and model no.	:	Artificial cryolite (CTSP)
Declared Unit	:	per kg of Artificial cryolite (CTSP)
Goal of study	:	Voluntary purpose
System boundary	:	Cradle-to-gate
Time boundary	:	2024-01-01 to 2024-12-31
Nature of data	:	Historical
Calculated GHG emission	:	1.704 kg CO_2e

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Verification Body

SGS Testing & Control Services Singapore Pte Ltd
30 Boon Lay Way #03-01 Singapore 609957
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Description of the review

Verifier(s)	:	Yvonne Wu No. 125, Wu Kung Road, Wu Ku District, New Taipei City, 248516 Taiwan Jenny-JY Li No. 125, Wu Kung Road, Wu Ku District, New Taipei City, 248516 Taiwan
Independent reviewer	:	Carmen_Ng SGS HK, 1/F On Wui Center, 25 Lok Yip Road, Fanling, N.T. Hong Kong
Verification type	:	Third party
Verification criteria	:	ISO14064-3:2019 ISO14067:2018
Level of assurance	:	Reasonable
Materiality threshold	:	5%
Objective of verification	:	With the above stated level of assurance and materiality threshold, about the accuracy of the quantification result and the conformity with ISO 14067:2018
Scope of verification	:	As stated in the verification report
Verification opinion	:	Unmodified

Methods of verification

SGS conducts the verification process based on the verification criteria and bilateral agreement, using a variety of methods for evidence collection and review, including site visits and/or remote audits, interviews with personnel, ownership evaluation, tracking of data aggregation and sampling, and analysis of production and emissions. All data is re-calculated, and documents reviewed to ensure accuracy and completeness.

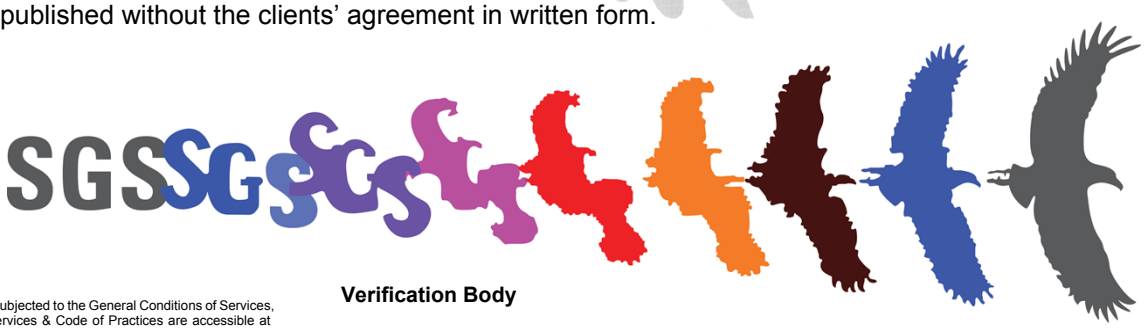
Roles and responsibilities

The client is fully responsible for establishing and maintaining the greenhouse gas data system within their organization, including the determination, calculation, and reporting of product lifecycle greenhouse gas emissions. All related operations are conducted in accordance with the client's internal procedures and relevant standards.

As a third-party, SGS is responsible for providing an objective and credible verification opinion on the product's lifecycle greenhouse gas emissions, based on the verification scope, objectives and criteria as agreed between RETECH ENVIRONMENTAL SOLUTIONS CO., LTD. and SGS, and in accordance with the principles and requirements of ISO 14067:2018 and ISO 14064-3:2019.

Confidentiality

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.



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GHG Data Characteristics

The emission factors used in this analysis are primarily sourced from the following databases:

- Carbon Footprint Information Platform;
- Ecoinvent 3;
- GHG Emission Factor Management Table Version 6.0.4 (Taiwan EPA);
- SimaPro 10.2.0.0. Life Cycle Assessment (LCA) software.

The data processing and emission calculations were conducted using the following tools and methods:

- Life cycle emission calculations were performed using Excel.
- The Global Warming Potential (GWP) values from the IPCC Sixth Assessment Report (2021) were applied.

This report covers greenhouse gases, including those listed in the IPCC Sixth Assessment Report (AR6, 2021) and other relevant GHGs, all of which are converted to CO_2-equivalents (CO_2e) in accordance with international standards for consistent reporting.

Conclusion

RETECH ENVIRONMENTAL SOLUTIONS CO., LTD. has prepared a greenhouse gas (GHG) statement in accordance with the requirements of ISO 14067:2018. SGS has conducted a verification to a reasonable assurance, covering the reported GHG data, supporting evidence, and the underlying systems and procedures for quantification, monitoring, and reporting.

Based on the verification activities performed and the evidence obtained, the following findings were identified:

- Activity data and emission factor of sodium aluminate solution were incorrect.
- Omission of bulk bag and buffer tank at the Central Taiwan Science Park (CTSP) plant.
- Natural gas for the dryer was corrected using actual feedstock input.
- Electricity data at the Changbin plant were corrected based on electricity bills.

After corrections were made, SGS issues an unmodified opinion, concluding that the GHG statement was prepared in accordance with ISO 14067:2018 and meets the relevant requirements for GHG quantification, monitoring, and reporting. No material misstatements was identified.

This verification statement is valid only for the defined scope and is to be read in conjunction with the associated study report and verification report.

Note: This statement is issued based on the agreement reached with the client and in accordance with SGS's verification framework. It does not imply compliance by the client with any local, national, or regional regulations, nor does it constitute any responsibility of SGS or its personnel. Any provisions contrary to this statement shall not be binding on SGS, and SGS assumes no responsibility except toward the client.

Yvonne Wu
Verifier

Carmen Ng
Independent reviewer

Verification Body

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環境聲明查驗聲明書

ECVS/25/PCF/0001

查驗報告:

ECVS-VR-TW-25500017

核發日期:

2025-10-15

聲明書持有者:

鋒霈環境科技股份有限公司
新竹縣竹北市光明六路東一段 247 號 7 樓

工廠:

鋒霈環境科技股份有限公司
台中市西屯區新科路 1 號
彰化縣線西鄉彰濱東一路 1-1 號

內容說明

報告名稱	:	鋒霈環境科技股份有限公司 碳足跡盤查報告書-人造冰晶石(中科)
查驗盤查報告版本次	:	第 4 版，2025-09-23
委託單位	:	鋒霈環境科技股份有限公司
執行單位	:	鋒霈環境科技股份有限公司
產品名稱與型號.	:	人造冰晶石(中科)
產品宣告單位	:	每公斤人造冰晶石(中科)
報告目的	:	自願性用途
系統邊界	:	搖籃到大門
時間邊界	:	2024-01-01~2024-12-31
資料類型	:	歷史
溫室氣體排放量	:	1.704 kg CO_2e

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查驗資訊

查驗員	:	Yvonne Wu No. 125, Wu Kung Road, Wu Ku District, New Taipei City, 248516 Taiwan Jenny-JY Li No. 125, Wu Kung Road, Wu Ku District, New Taipei City, 248516 Taiwan
獨立審查員	:	Carmen Ng SGS HK, 1/F On Wui Center, 25 Lok Yip Road, Fanling, N.T. Hong Kong
查驗類型	:	第三方
查驗準則	:	ISO 14064-3:2019 ISO 14067:2018
保證等級	:	合理保證
實質性門檻	:	5%
查驗目標	:	就上述保證等級與實質性門檻下，就量化結果的準確性以及其是否符合 ISO 14067:2018 進行查證
查驗範圍	:	請參閱查證報告
查驗結論	:	無保留意見

查驗方法

SGS 依據查驗準則及雙邊協議執行查驗程序。查驗涵蓋文件審核、現場訪查及遠距稽核、人員訪談、資料追蹤與抽樣分析等多項方法，並對相關數據進行重新計算與核實，以確保所提供資料之準確性、完整性、一致性及透明度。

角色與責任

客戶負責建立並維護其組織內的溫室氣體資訊管理系統，包括產品生命週期溫室氣體排放的界定、計算與報告。所有相關作業皆依客戶內部程序及相關標準執行，並向 SGS 提供支持查證所需的相關資料。

SGS 秉持第三方查驗單位之準則，依據鋒霈環境科技股份有限公司與 SGS 雙方約定之查驗範圍、目標及準則，並遵循 ISO 14067:2018 與 ISO 14064-3:2019 之原則與要求，負責提供產品生命週期溫室氣體排放之客觀且具公信力之查驗意見。

保密性聲明

此報告及附件可能包含相關機密資訊，未經書面同意，禁止任何個人、團體或公司擅自編輯、複製或發行。

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溫室氣體排放資訊

本次報告所使用之排放係數主要來源於以下資料庫:

- Ecoinvent 3
- 產品碳足跡資訊網
- 環保署溫室氣體排放係數管理表 6.0.4
- 生命週期軟體 SimaPro 10.2.0.0

資料處理及排放量計算係採用以下工具與方法進行:

- 使用 EXCEL 進行生命週期排放量的計算
- 應用 IPCC 2021 年第六次評估報告之全球暖化潛勢數值進行計算

本報告涵蓋溫室氣體，包括 IPCC 第六次評估報告（AR6, 2021）中列出的氣體，及其他相關溫室氣體，均依照國際標準換算為二氧化碳當量（CO_2e），以確保報告內容的一致性。

結論

鋒霈環境科技股份有限公司 依據 ISO 14067:2018 要求提出溫室氣體（GHG）聲明。SGS 已依合理保證等級，對聲明之溫室氣體數據、佐證資料及其量化、監測與報告之相關作業系統與程序，執行查證作業。。

根據查證所執行之程序及取得的證據，經查驗作業確認下列事項:

- 鋁酸鈉溶液活動數據與排放係數有誤
- 遺漏中科廠太空包、緩衝槽
- 乾燥機天然氣修正使用實際投料量
- 彰濱廠電力修正以電費單計算

經完成修正後，SGS 出具無保留意見之查驗聲明，確認該溫室氣體聲明係依 ISO 14067:2018 之規定編製，並符合溫室氣體量化、監測及報告之相關要求。查驗結果未發現重大不實陳述。
本查驗聲明僅適用於本次界定之查證範疇，並應與相關研究報告及查驗報告併同參閱。

附註: 本聲明係依據 SGS 與受查證單位所簽訂之協議，並依 SGS 查驗作業規範辦理。聲明內容不代表受查證單位符合任何地方法規、國家法規或區域性規範，亦不構成 SGS 或其人員之法律責任。對於任何與本聲明內容不符之條款，SGS 概不承擔相關義務，且僅對受查單位負責。
附註: 本中文內容為英文原文之翻譯，僅供參考。如中英文版本間有任何歧異，應以英文原文為準。

Yvonne Wu
主導查驗員

Carmen Ng
獨立審查員

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