

INDEPENDENT VERIFICATION OPINION OF GREENHOUSE GAS EMISSIONS DATA

Avieco Ltd have prepared this verification opinion for Croda International PLC (hereby Croda), through which it is confirmed that Croda's reported scope 1, 2 and 3 greenhouse gas (GHG) emissions for reporting year 2021 have received **reasonable verification** in accordance with the requirements of the ISO 14064 – part 3: 2019 standard.

Reasonable verification is distinguished from limited verification as it provides a high degree of confidence that the information disclosed is accurate and complete compared to the limited level. This is because the verification procedures for reasonable verification employ a lower risk threshold and a higher level of data testing and review compared to limited verification, to reduce the risk of material misstatements to an acceptably low level.

The verification covers Croda's stated historic emissions and intensity metric reported for one reporting year – the 12 months starting 1st January 2021 and ending 31st December 2021 (FY21), as shall appear in Croda's Annual Report and Accounts and wider environmental reporting. In addition, the verification also covers the year-on-year performance change compared to reporting periods 2020, 2019 and 2018 (baseline year).

Of note – baseline year 2018 and the newest emissions reporting year 2021 have had their scope 3 values recalculated and verified using a new, more granular emissions calculation methodology. This new method has not been applied to 2019 and 2020, which remain calculated and verified per our prior years' reasonable verification engagement. Both approaches to scope 3 calculation remain compliant with the reporting standards as referenced in the reporting methodologies section of this statement.

RESPONSIBILITIES OF CRODA AND AVIECO

Croda was responsible for the preparation of the GHG emission statements and the internal management controls governing the data collection, collation and GHG calculations performed.

Avieco was responsible for carrying out a verification assessment in accordance with the ISO 14064-3: 2019 'Greenhouse gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements' and providing an independently expressed opinion to a **reasonable level** on the reported GHG emissions totals for each of the data sources included in the scope of this verification exercise.

VERIFICATION SCOPE AND SUBJECT MATTER

The boundary of the verification process included all sites across the globe over which Croda International Plc have operational control.

GHG sources included in the reasonable verification process:

- **Scope 1:** Natural gas; landfill gas; biogas; light fuel oil; heavy fuel oil; gasoline; diesel; propane/LPG; energy from waste oil; biodiesel, VOCs
- **Scope 2:** Electricity; steam; renewables; district heating
- **Scope 3:** Purchased goods and services, capital goods, fuel and energy-related activities, upstream transportation and distribution, waste, business travel, employee commuting and homeworking
- **Outside of scopes:** Biogenic portion of vehicles fuels; biofuels
- **Types of GHGs** included, as applicable: CO₂e, CO₂, N₂O, CH₄, HFCs, PFCs and SF₆

Croda's GHG statements verified by Avieco cover 100% of emissions by scope (in tCO₂e) as follows:

Year	Scope 1	Scope 2 (location-based)	Scope 2 (market-based)	Scope 3	Outside of scopes	tCO ₂ e/£m value add**
2018	154,681	72,134	54,311	994,235*	20,980	316
2019	141,910	68,585	39,164	1,017,135	15,397	275
2020	149,621	73,994	27,843	984,871	20,700	264
2021	160,835	71,181	21,628	1,141,056*	14,867	193

*The 2018 and 2021 GHG emissions statements for scope 3 in the table above have been calculated on a newer and more granular methodology than 2019 and 2020. This has triggered a restatement in the scope 3 value for baseline year 2018. Interim years 2019 and 2020 remain in the prior approach per the 2020 verification statement and the methodology remains valid and aligned to international reporting standards.

**Intensity on the basis of scope 1 + scope 2 market based per £m value add

TEMPORARY BIOGENIC CARBON SEQUESTRATION

In addition to the above stated scope 1, 2 and 3 emissions, Avieco has also verified the temporary biogenic carbon sequestration associated with one specific¹ bio-based raw material Croda purchased in year ending 31st December 2021, as 271,783 tCO₂e. However, we note this figure does not take into account the associated downstream emissions and therefore does not include any end-of-life emissions associated with its use.

REPORTING METHODOLOGIES AND VERIFICATION CRITERIA

Croda's GHG inventory has been completed in accordance with the World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol, Corporate Accounting and Reporting Standard (Revised Edition), The GHG Protocol Corporate Value Chain Scope 3 standard, The GHG Protocol Scope 2 Guidance for market-based reporting, and with Defra's 'Environmental reporting guidelines: Including Streamlined Energy and Carbon Reporting requirements. The verification criteria assessed the adherence of Croda's GHG statements and procedures to the best practice reporting principles of relevance, completeness, consistency, transparency and accuracy.

Avieco conducted the reasonable verification engagement in three separate phases: in September/October 2021 through an initial phase of engagement with material and non-material sites to carry out verification of Q1 - Q2 data, in November/December to carry out verification of Q3 data and throughout January/February 2021 to conduct verification of the final Q4 site data, new environmental reporting software, emission calculations and scope 3 inventory calculations. We used the appropriate verification planning, validation, GHG assessment and evaluation steps in accordance with the requirements of ISO 14064:3 2019, and in adherence to the standard's principles of independence, ethical conduct, fair presentation and due professional care.

OBJECTIVES

The objectives of the verification engagement were to ensure Croda's GHG statements are materially correct to an acceptable materiality threshold of 2% at the GHG source level and organisational level (appropriate for reasonable level of verification); and to ensure the GHG

¹ The specific raw material the biological sequestration is related to is commercially sensitive, so to avoid back calculation of the results the name has been redacted. Croda is prepared to discuss further details related to this raw material on specific request from stakeholders.

inventory provides the relevant material information required by stakeholders for the purpose of decision making.

AVIECO'S VERIFICATION PROCESS

Our verification conclusions are based on the following activities:

- Agreement on the levels of verification, objectives, criteria, organisational scope and materiality thresholds
- Review of the processes and procedures for establishing the organisational and operational boundary, ensuring relevance in emissions reporting across scope 1, 2 and 3 emissions sources
- Development of the verification project plan and data sampling plan (based on risk and materiality appropriate for reasonable verification in relation to GHG emissions)
- To reflect the reasonable level of verification, Avieco's sample included >80% of Croda's total scope 1, 2 and 3 emissions
- Assessment of the GHG data collection system and controls through online interviews
- Assessment of the data collection process from raw data comparison with primary evidence, through to data entry into the new environmental software system. This step included assessment of estimations and extrapolation systems in place and their underlying assumptions
- Review of online data collection systems and third-party supply chain impact tools
- Review of the appropriateness and application of the methodologies and calculations used for conversion of activity data to CO₂e emissions
- Review of the change in scope 1, 2 and 3 emissions and intensity metrics between all reporting years and the 2018 baseline
- Evaluation of the internal quality assurance procedures and results
- Our evidence gathering procedures included but were not limited to:
 - In depth online interviews with representatives of 4 sites to confirm completeness of GHG inventory, changes to previous years, operational behaviour and standard procedures for data collection and reporting to Group SHE
 - In depth online interviews and virtual visits were carried out at 2 other manufacturing sites, with further physical inspection conducted at Rawcliffe Bridge
 - Desktop study of data of 10 further manufacturing and non-manufacturing sites and central data
 - Desktop study of site level and centralised data for scope 3 reporting to confirm accuracy of source data and applied calculations

VERIFICATION OPINION

Based on the verification procedures for **reasonable verification**, Avieco declares that Croda's 2021 scope 1, 2 and 3 emissions, intensity metrics and year-on-year performance changes to 2018 baseline are:

- Prepared in accordance with Croda 's relevant internal GHG emissions reporting methodologies, which adhere to the internationally recognized WRI/WBCSD Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard (revised version) (scope 1, 2 and 3) and to Defra's "Environmental reporting guidelines: Including Streamlined Energy and Carbon Reporting requirements"
- Materially correct and a fair representation of their GHG emissions within the established scope of reporting
- Prepared in adherence to the best practice reporting principles of relevance, completeness, consistency, transparency and accuracy
- Worthy of the award of reasonable verification

AVIECO'S INDEPENDENCE AND TEAM COMPETENCIES

We can confirm our independence, ethics and competence as follows:

- We are independently appointed by Croda and no member of the verification team has a business reason for bias with regard to the reasonable verification engagement
- We have complied with the ethical requirements relevant for the performance of the ISO14064:3 engagement in respect of professional experience in environmental reporting and assurance. We have acted with the integrity, objectivity, professional competence, due

care and confidentiality to be expected of a professional services provider and the rigor of our work is sufficient to the level required by the ISO 14064:3 standard

- Our team have extensive experience in GHG reporting to WRI/WBCSD GHG Corporate Accounting and Reporting Standard (revised) standard, wider WRI GHG Protocol Scope 2 and 3 standards and ISO 14064 – part 3: 2019.

Avieco applies quality control and management approaches equivalent to ISO 9001 International Standard and as encompassed in the Avieco Quality and Ethics Policies. Our commitment to ethical conduct is appropriate for that required for environmental and sustainability professionals in respect of conducting the verification engagement.

RECOMMENDATIONS FOR IMPROVEMENT

In future Croda should:

1. Ensure all sites are trained to upload raw data evidence onto the new environmental reporting system through the course of the year. This will create a centralised evidence record for values in the system, ensuring ongoing rigor in internal quarterly reporting and the end of year verification and external reporting exercise
2. Where newly identified / deployed sources of process / fugitive emissions have been identified at sites during the last phase of the 2021 verification engagement; conduct a gap analysis of such sources, collect qualifying data and calculate emissions during the course of 2022. Assess the need for restatement in 2022 if any sources are found to breach materiality threshold

Avieco declares that Croda International Plc have received reasonable verification for reporting year ending 31st December 2021; and also, in previous years have received reasonable verification for reporting years 2020 and 2019, plus limited verification for reporting year 2018 for the following:

- Scope 1, 2 and 3, plus outside of scopes GHG emissions and intensity metric (Scope 1+ 2 tCO₂e/£m value add)
- Scope 1, 2 and 3 year-on-year performance change relative to baseline
- Temporary biogenic carbon sequestration from raw material (2021 purchase)



Julie Craig

Director

Avieco

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Verifying organisation: Avieco Ltd, 22 St. James's Walk, London EC1R 0AP

Verified organisation: Croda International Plc, Cowick Hall, Snaith, Goole, DN14 9AA