

SRF LIMITED

(TECHNICAL TEXTILES BUSINESS UNIT)

Manali Industrial Area, Manali, Chennai - 600068,
Tamil Nadu, India.

GHG EMISSION REPORT

For the Period: 01st January 2025 to 31st December 2025

Form No : SRF/ESG/051

Rev No : 00

Date : 17th January, 2026

SRF LIMITED TTBM MANALI, CHENNAI-68

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1. Executive Summary

1.1 Overview of Organization and Reporting Period

SRF Limited's Technical Textiles Business manufactures reinforcement and industrial textile products. The attached organizational chart shows a unit-head structure supported by administration, HR and safety functions, with manufacturing functions covering polymerisation, spinning, textiles, dipping and twisting, and support functions including maintenance, quality assurance, electrical, instrumentation, utilities, operations, purchase, stores, dispatch, new product development, accounts and information technology. The attached product brochure identifies the Manali site in Chennai as the Technical Textiles Business location and describes SRF's integrated Nylon 6 value chain.

For this draft, FY2025 (01st January 2025 to 31st December 2025) is used as the reporting period because a period was not stated in the supplied GHG summary. This date must be confirmed against the source calculation workbook before controlled issue.

1.2 Key Emission Results

Organizational Boundary

SRF LIMITED

(TECHNICAL TEXTILES BUSINESS UNIT)

Manali Industrial Area, Manali, Chennai - 600068, Tamil Nadu, India.

Calculation period: 01st January, 2025 to 31st December, 2025

All values are in MT CO2 e

GHG Emission Reporting Frequency: Annually

Scope	Emissions (tCO_2e)
Scope 1	**5,389.64**
Scope 2	**7,022.07**
Scope 3	**114,535.68**
Scope 3 Upstream	**109,837.68**
Scope 3 Downstream	**4,698.00**

The provisional carbon footprint is 126,947.39 tCO_2e. Scope 3 dominates the inventory at 90.22%, indicating that procurement, inbound/outbound logistics, waste and other value-chain categories should receive strong management attention once the underlying Scope 3 calculation is reconciled.

1.3 Highlights and Reduction Opportunities

- SRF's Technical Textiles operations are vertically integrated through polymerisation, spinning, twisting, weaving/textile operations and dipping, creating opportunities for process-energy optimisation.
- SRF's current Technical Textiles information identifies recycled N6 chips/yarns/fabrics, renewable-energy-based operations within the wider Technical Textiles network, and reuse of packing materials as sustainability measures; the quantitative GHG benefit attributable to the Manali reporting boundary is not provided and therefore is not claimed here.
- The supplied inventory shows a material Scope 3 footprint; supplier-specific data, low-carbon raw materials, logistics optimisation and customer/end-of-life collaboration should therefore be prioritised.
- Actual year-on-year reduction achievement cannot be confirmed because no comparable historical GHG inventory or reduction baseline was included in the supplied data.

2. Introduction

2.1 Purpose of the Report

This report establishes a transparent organizational GHG inventory for SRF's defined reporting boundary, quantifies emissions in tonnes of carbon-dioxide equivalent (tCO_2e), identifies major sources and data-quality limitations, and provides a management basis for reduction planning and future verification.

2.2 Intended Users

Intended users include SRF management, Technical Textiles Business leadership, EHS/ESG personnel, finance and procurement teams, customers requesting carbon information, auditors/verification bodies, and other relevant stakeholders.

2.3 Reporting Objectives

The inventory is intended to support voluntary ESG/climate reporting, customer information requests, internal carbon management, future assurance/verification, and structured reduction planning. It is not presented as a statutory emissions filing unless separately approved for that purpose.

3. Organization Description

3.1 Company Profile

SRF Limited is a diversified Indian manufacturing company with a Technical Textiles Business covering tyre cord fabrics, belting fabrics and industrial yarns. The Technical Textiles brochure records the Manali Industrial Area site in Chennai and describes the company's long-standing Nylon tyre cord manufacturing capability.

3.2 Products and Operations Relevant to This Inventory

Area	Company-specific activity
Nylon 6 chips	Integrated polymerisation/value-chain activity at Manali
Nylon / industrial yarns	Spinning and related yarn manufacturing
Tyre cord fabrics	Textile/weaving, twisting and dipping operations for reinforcement fabrics
Quality and testing	QA/QC, product testing and traceability activities
Utilities	Utility systems supporting production and site services
R&D / NPD	Pilot and product/process development activities associated with Technical Textiles
Support	Maintenance, electrical, instrumentation, purchase, stores, dispatch, accounts, IT, administration, HR and safety

3.3 Organizational Structure

The attached organization chart places a Unit Head above Administration, HR and Safety and separates Manufacturing Functions from Support Functions. Manufacturing functions include Polymerisation, Spinning, Textiles, Dipping and Twisting. Support functions include Maintenance, Quality Assurance, Electrical, Instrumentation, Utilities, Operations, Purchase, Stores, Dispatch, New Product Development, Accounts and Information Technology.

The organization chart therefore provides a practical responsibility map for GHG data ownership: Utilities/Electrical for energy data; Operations/Manufacturing for process data; Purchase/Stores for material data; Dispatch/Logistics for transport data; HR/Admin for commuting and employee data; Accounts for financial cross-checks; and Safety/EHS for environmental records and review.

3.4 Operations, Facilities and Boundaries

The current SRF website confirms Manali, Tamil Nadu as an established Technical Textiles manufacturing location with an integrated value chain for Nylon 6 chips, yarns and fabrics. It describes polymerisation, spinning, twisting, weaving, dipping, testing, packing and dispatch as the relevant tyre-cord-fabric manufacturing flow. A dedicated Technical Textiles R&D facility is also identified at Manali.

4. Reporting Boundary

4.1 Organizational Boundary

Operational control is proposed for this facility-level draft. Under this approach, sources over which SRF's reporting entity has operational control are included irrespective of ownership structure. This approach should be formally approved in the inventory methodology before verification.

4.2 Operational Boundary

Category	Included / screened sources
Scope 1	Stationary combustion such as boilers/DG sets where operated; company-controlled vehicles; refrigerant/fugitive losses; any direct process emissions identified during source screening.
Scope 2	Purchased electricity; purchased steam/heat/cooling if applicable.
Scope 3	Purchased raw materials and services; capital goods where material; fuel- and energy-related upstream emissions where used; inbound/outbound transportation; waste; business travel; employee commuting; upstream leased assets where applicable; downstream transport; processing/use/end-of-life where applicable and material.

4.3 Entities and Locations Covered

Primary draft boundary: SRF Limited – Technical Textiles Business, Manali Industrial Area, Chennai, Tamil Nadu. Other Technical Textiles sites such as Malanpur, Gummidipoondi and Viralimalai are not included in this facility-level draft unless their activity data are contained in the supplied GHG workbook. The supplied summary sheet does not identify its geographic consolidation; this is a critical reconciliation item.

5. Reporting Period

Item	Draft treatment
Start date	01st January, 2025
End date	31st December, 2025
Frequency	Annual inventory; monthly/quarterly data collection recommended
Period status	Assumed because the supplied GHG summary did not state the period
Next cycle	01st January, 2026 – 31st December, 2026, subject to management confirmation

6. GHG Accounting Methodology

6.1 Standards Followed

The methodology is structured around ISO 14064-1:2018 for organization-level quantification and reporting and the GHG Protocol Corporate Standard and Corporate Value Chain (Scope 3) Standard. ISO 14064-1:2018 remains the current ISO edition. The GHG Protocol framework defines Scope 1 as direct emissions, Scope 2 as indirect emissions from purchased energy, and Scope 3 as other indirect value-chain emissions.

6.2 Calculation Approach

The standard calculation principle is: Activity Data × Applicable Emission Factor × Global Warming Potential adjustment, where required = tCO_2e. Where supplier-specific or measured data are available, they should be prioritised over generic assumptions. Biogenic CO_2, if any, should be separately identified.

6.3 Tools / Software

No dedicated carbon-accounting software is evidenced in the supplied documents. The inventory should be maintained in a controlled spreadsheet/calculation workbook with protected formulas, source-document references, version control, review sign-off and an auditable change log.

7. Emission Sources Identification

Source / activity	Likely scope	Status in supplied data
Purchased electricity for production and utilities	Scope 2	Included in supplied Scope 2 total; underlying kWh not supplied
Boiler / furnace / DG fuel, if operated under boundary	Scope 1	Source screened; quantity not supplied
Company-controlled vehicles, if applicable	Scope 1	Source screened; quantity not supplied
Refrigerant leakage from owned/controlled equipment	Scope 1	Source screened; refrigerant quantities/losses not supplied
Purchased Nylon/polymer/raw materials and chemicals	Scope 3 Category 1	Potentially material; source detail not supplied
Fuel- and energy-related upstream emissions	Scope 3 Category 3	Potential; calculation detail not supplied
Inbound and outbound logistics	Scope 3 Categories 4/9	Potentially material; source detail not supplied
Waste treatment/disposal	Scope 3 Category 5	Potential; source detail not supplied
Business travel	Scope 3 Category 6	Potential; source detail not supplied
Employee commuting	Scope 3 Category 7	Potential; source detail not supplied
Capital goods	Scope 3 Category 2	To be screened for materiality
End-of-life of products	Scope 3 Category 12	To be screened; customer/product pathway data required

The source screening is deliberately broader than the numerical source table because ISO 14064-1 and GHG Protocol inventories require completeness and transparency. Only the numerical totals supplied by SRF are treated as measured inventory results in this draft.

8. GHG Scope Classification

8.1 Scope 1 – Direct Emissions

Reported Scope 1 total from the supplied GHG summary: 5,389.64 tCO_2e.

Scope 1 gas / source	tCO_2e	Comment
CO_2 – combustion	5,250.00	Assumed allocation; validate against fuel consumption
CH_4 – combustion	15.00	Assumed allocation; validate against fuel-specific factors
N_2O – combustion	24.64	Assumed allocation; validate against fuel-specific factors
HFCs / refrigerants	100.00	Assumed allocation; validate against refrigerant leakage records
Other Kyoto gases	0.00	Assumed zero; confirm applicability
Total Scope 1	5,389.64	Matches supplied consolidated total

Gas-wise Scope 1 allocation cannot be reconstructed from the supplied sheet without inventing source data. Therefore, the consolidated Scope 1 figure is retained and the gas-wise table is marked as a finalization requirement.

8.2 Scope 2 – Indirect Energy Emissions

Reported Scope 2 total: 7,022.07 tCO_2e. The supplied data do not identify purchased electricity quantity, grid factor, renewable electricity instruments, or purchased steam/heat/cooling. The final inventory should document electricity consumption in kWh/MWh and the selected location-based factor, with market-based treatment where applicable and supportable.

8.3 Scope 3 – Other Indirect Emissions

Reported Scope 3 total: 114,535.68 tCO_2e, comprising upstream 109,837.68 tCO_2e and downstream 4,698.00 tCO_2e.

Scope 3 grouping	Reported tCO_2e	Share of total
Upstream	109,837.68	86.52%
Downstream	4,698.00	3.70%
Total Scope 3	114,535.68	90.22%

The upstream/downstream totals supplied do not provide the 15-category Scope 3 breakdown. Before assurance, the calculation workbook should map each included category to GHG Protocol Category 1–15, document exclusions, and show the calculation basis for each material category.

8.4 Scope 3 screening

The following screening identifies relevant Scope 3 categories for SRF Limited's manufacturing activities. The reported Scope 3 total is 114,535.680 tCO_2e, comprising 4,698.000 tCO_2e upstream and 109,837.679 tCO_2e downstream, as provided in the GHG summary.

Sl. No.	Activity / Material	Scope 3 Category	Emission Source	Applicability
1	Raw Materials	Category 1 – Purchased Goods and Services	Extraction, processing and production of purchased raw materials	Applicable
2	Recycled Input Materials Used	Category 1 – Purchased Goods and Services	Collection, sorting, recycling and processing of purchased recycled materials	Applicable
3	Hazardous Waste Generated	Category 5 – Waste Generated in Operations	Third-party treatment and disposal of hazardous waste	Applicable
4	Spent Oil	Category 5 – Waste Generated in Operations	Used oil recycling, recovery or disposal	Applicable
5	VP Latex Residue	Category 5 – Waste Generated in Operations	Treatment, incineration or authorized disposal of latex residue	Applicable
6	ETP Sludge	Category 5 – Waste Generated in Operations	Sludge treatment, incineration or landfill disposal	Applicable
7	Depoly Crackers	Category 5 – Waste Generated in Operations	Recycling, recovery or disposal of process residues	Applicable
8	Empty Barrels	Category 5 – Waste Generated in Operations	Cleaning, recycling or disposal of used barrels	Applicable
9	Oil-Soaked Cotton Waste	Category 5 – Waste Generated in Operations	Incineration or authorized hazardous waste treatment	Applicable
10	Non-Hazardous Waste Generated	Category 5 – Waste Generated in Operations	Third-party recycling, treatment and disposal	Applicable
11	Dump Waste	Category 5 – Waste Generated in Operations	Landfill or other authorized waste disposal	Applicable
12	Paper Tubes	Category 5 – Waste Generated in Operations	Paper recycling or disposal	Applicable
13	Wooden Pallets	Category 5 – Waste Generated in Operations	Wood recycling, recovery or disposal	Applicable
14	Used Lactam Bags	Category 5 – Waste Generated in Operations	Packaging waste recycling or disposal	Applicable
15	Ash from Husk	Category 5 – Waste Generated in Operations	Ash transportation, treatment, utilization or disposal	Conditional
16	Employee Commuting by Bus	Category 7 – Employee Commuting	Fuel combustion associated with employee bus travel	Applicable

Applicability above is a preliminary screening judgment based on the stated manufacturing activities, not confirmation that every category has been quantified.

8.5 Reported Scope 3 emissions

Scope 3 grouping	Emissions (tCO_2e)
Upstream emissions	4,698.000
Downstream emissions	109,837.679
Reported Scope 3 total	114,535.680

The upstream and downstream values have a 0.001 tCO_2e rounding difference compared with the reported total.

9. GHG Data Collection & Quality

9.1 Data Sources and Collection Method

Data owner / function	Primary evidence recommended
Utilities / Electrical	Electricity invoices, meter readings, DG/boiler fuel logs, utility summaries
Operations / Manufacturing	Production records, process fuel/energy records, operating logs
Maintenance / Instrumentation	Refrigerant purchase/top-up/recovery records, equipment registers
Purchase / Stores	Purchase quantities, supplier invoices, material specifications and supplier emission factors
Dispatch / Logistics	Transporter data, distance, weight, mode and shipment records
HR / Administration	Employee headcount, commuting survey/transport records, business travel records
EHS / Safety	Waste manifests, hazardous/non-hazardous waste records, environmental monitoring
Accounts	Invoice and financial cross-checks

9.2 Accuracy, Completeness and Reliability

The consolidated numerical totals are internally arithmetically consistent: Scope 3 upstream plus downstream equals the reported Scope 3 total, and Scopes 1–3 sum to the reported overall footprint. However, source-level accuracy and completeness cannot be verified from the supplied summary alone.

9.3 Data Management Controls

- Assign one accountable data owner for every emission source.
- Retain source evidence for every monthly data point and calculation factor.
- Use a controlled master calculation workbook with locked formulas and version history.
- Perform monthly reconciliation of utility and fuel data to invoices/meters.
- Perform annual cross-checks between procurement, finance, production and logistics data.
- Document estimates, assumptions, exclusions, data gaps and recalculations.

10. Emission Factors

Emission factors should be selected according to the hierarchy: measured/supplier-specific factor → India-specific government factor → recognized international factor (e.g., DEFRA/IPCC/GHG Protocol) → documented proxy/estimate only where better data are unavailable.

Emission-factor application	Preferred source / treatment
Indian purchased electricity	Central Electricity Authority (CEA) CO_2 Baseline Database, using the appropriate reporting-year factor and methodology
Fuels	Supplier/Indian fuel properties where available; otherwise IPCC/recognized national or international factors
Refrigerants	Actual refrigerant GWP for the refrigerant used, with the GWP source/version recorded
Purchased materials	Supplier-specific PCF/EPD data where available; otherwise GHG Protocol/recognized secondary databases
Transport	Mode, mass, distance and fuel/vehicle factors from recognized factors; supplier-specific data preferred
Waste	Waste-type and treatment-specific factors from recognized sources

The CEA database contains year-specific electricity emission-factor information; the factor must match the reporting methodology and reporting year rather than copying an illustrative value from an older CEA example. GWP values and factor versions should be frozen for the reporting year and retained with the calculation workbook.

11. Calculation Results

11.1 Total GHG Emissions

Metric	Result
Scope 1	5,389.64 tCO_2e
Scope 2	7,022.07 tCO_2e
Scope 3	114,535.68 tCO_2e
Total carbon footprint	126,947.39 tCO_2e
Scope 3 upstream	109,837.68 tCO_2e
Scope 3 downstream	4,698.00 tCO_2e

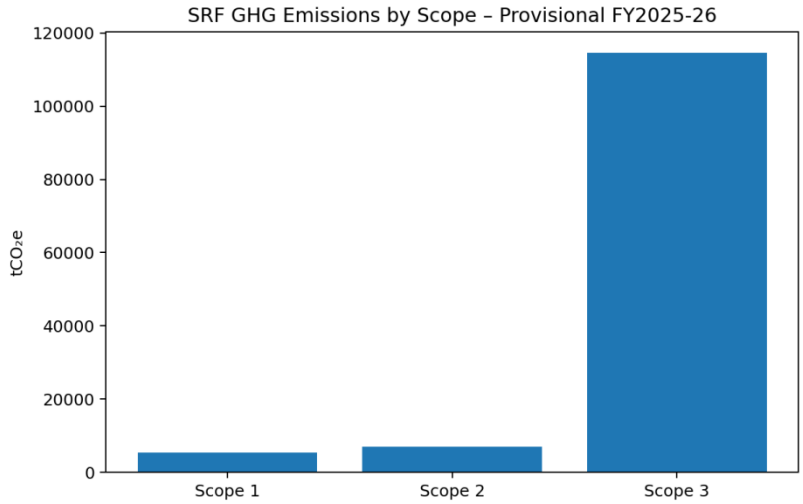

Figure 1. Provisional emissions by scope based solely on the supplied GHG summary.

11.2 Emission Breakdown by Source

A source-level numerical breakdown is not present in the supplied GHG sheet. The following source map is therefore a controlled reporting template rather than a fabricated numerical allocation:

Source group	Scope	Numerical status
Stationary/mobile/fugitive/process direct sources	1	Total only: 5,389.64 tCO_2e
Purchased electricity/energy	2	Total only: 7,022.07 tCO_2e
Upstream value chain categories	3 upstream	Total only: 109,837.68 tCO_2e
Downstream value chain categories	3 downstream	Total only: 4,698.00 tCO_2e

11.3 Emission Intensity Indicators

Indicator	Result	Status
tCO_2e per employee	Not calculable	Employee count for reporting boundary not supplied
tCO_2e per tonne of actual production	Not calculable	Actual FY2025-26 production quantity not supplied
tCO_2e per tonne of production capacity	2.12 (using 60,000 MTPA network capacity)	Not a production intensity; capacity is not actual output and should not be used for assurance

Total Employee Count - 548

For formal reporting, use actual tonnes of Nylon 6 chips/yarn/tyre cord fabric produced, preferably with product-level or weighted production data. If multiple products are combined, disclose the production denominator and aggregation method.

12. Base Year & Trend Analysis

12.1 Base Year Selection & Justification

Proposed base year: FY2022-22, because it is the first complete reporting period represented by the supplied numerical summary in this draft. This is a proposed base year, not a confirmed corporate base year.

12.2 Historical Comparison

No prior-year Scope 1–3 results were included in the supplied GHG data sheet; therefore no defensible historical trend can be calculated.

12.3 Adjustments for Organizational Changes

If additional Technical Textiles facilities are added to the boundary, or if acquisitions, divestments, major capacity changes or methodology changes occur, the base year should be recalculated where the change is material and consistent with the approved recalculation policy.

13. Uncertainty Assessment

A quantitative uncertainty interval cannot be calculated from the supplied summary because activity data, emission factors and source-level calculation uncertainties are absent. The appropriate approach for the final inventory is to estimate uncertainty by source using activity-data quality, emission-factor quality and any estimation assumptions, then aggregate uncertainty consistently.

Area	Provisional confidence	Reason
Scope 1 total	Medium-Low	Consolidated value supplied; source/activity details absent
Scope 2 total	Medium-Low	Consolidated value supplied; electricity quantity and factor absent
Scope 3 total	Low-Medium	Large value supplied, but category-level methodology and activity data absent
Overall inventory	Medium-Low	Arithmetic totals are consistent, but source evidence is incomplete

Confidence should be upgraded after invoice-to-ledger reconciliation, meter/fuel validation, supplier data review and category-level Scope 3 mapping.

14. Data Quality Assessment

The GHG data review identifies provisional Scope 1, Scope 2, Scope 3, and emission-factor information requiring validation and traceability. Production and employee denominators are currently missing and must be obtained from approved records. Historical data should also be collected to support trend analysis, consistency checks, accurate intensity calculations, and future GHG reporting.

14.1 Cross-Checks and Validations

- Scope 3 upstream + downstream = reported Scope 3 total: verified from supplied figures.
- Scope 1 + Scope 2 + Scope 3 = total footprint: verified arithmetically.
- Reconcile electricity consumption with utility invoices and meters.
- Reconcile fuel consumption with purchase records and opening/closing stock.

- Reconcile purchased materials with stores and accounts records.
- Reconcile transport emissions with dispatch quantities and logistics records.
- Review exclusions and double counting between Scope 1, Scope 2 and Scope 3.

15. GHG Reduction Initiatives

15.1 Energy Efficiency Programs

- Optimise polymerisation, spinning, twisting and dipping process energy through equipment performance monitoring and specific-energy KPIs.
- Track kWh per tonne of Nylon 6 chips, yarn and fabric by process section.
- Use preventive maintenance and instrumentation calibration to avoid inefficient operating conditions.
- Assess high-efficiency motors, variable-frequency drives, compressed-air optimisation, heat recovery and utility-system optimisation where technically feasible.
- Increase renewable electricity procurement/generation within the approved site and business boundary.

15.2 Waste and Water Reduction Measures

- Increase recovery and recycling of process materials and textile waste.
- Expand reuse of packing materials where product protection and quality requirements permit.
- Improve segregation and traceability of hazardous and non-hazardous waste.
- Track water consumption and recycling by major process and utility area.
- Integrate waste and water KPIs into monthly plant performance review.

15.3 Future Sustainability Goals – Recommended

Goal	Recommended management target
Scope 1 & 2	Develop a quantified reduction target after two validated years of source-level data; prioritise absolute and intensity metrics.
Scope 3	Reduce material and logistics footprint through supplier engagement, low-carbon materials, logistics optimisation and category-specific action plans.
Renewable electricity	Increase renewable share subject to technical feasibility, contractual availability and boundary accounting.
Carbon data quality	Achieve source-level monthly data coverage and documented emission-factor traceability for all material sources.
Product carbon footprint	Develop product-level carbon footprints for Nylon 6 chips, yarns and selected tyre cord fabrics as customer demand and data maturity permit.

16. GHG Governance, Responsibility and Verification Readiness

The organization chart supports a distributed data-control model. The Unit Head should own the inventory; Utilities/Electrical should own energy data; Operations and Manufacturing should own production/process information; Purchase/Stores should own purchased-material data; Dispatch should own logistics data; HR/Admin should own workforce-related activity data; EHS/Safety should coordinate environmental data and review; Accounts should perform financial reconciliation; and the designated ESG/GHG coordinator should control the inventory workbook and evidence file.

Independent verification is not evidenced in the supplied documents. Before issuing a verification-ready statement, SRF should complete source-level calculations, establish an evidence register, perform internal review, close data gaps, document exclusions and assumptions, and appoint an independent competent verifier if external assurance is required.

17. Standards Referred

S. No.	Standard / Reference	Purpose / Application
1	**ISO 14064-1:2018**	Principles and requirements for quantifying and reporting organizational GHG emissions and removals.
2	**GHG Protocol Corporate Accounting and Reporting Standard**	Provides the framework for Scope 1, Scope 2 and organizational GHG inventory accounting.
3	**GHG Protocol Corporate Value Chain (Scope 3) Standard**	Used for identification and quantification of indirect Scope 3 emissions across the value chain.
4	**GHG Protocol Scope 2 Guidance**	Used for accounting and reporting of purchased electricity, steam, heat and cooling emissions.
5	**IPCC Guidelines for National Greenhouse Gas Inventories**	Reference for emission factors, calculation methodologies and GHG conversion principles.
6	**IPCC Global Warming Potential (GWP) Values**	Used to convert different greenhouse gases into CO_2 equivalent (CO_2e).
7	**Central Electricity Authority (CEA) CO_2 Baseline Database**	Reference for India-specific grid electricity emission factors for purchased electricity.
8	**DEFRA / UK Government GHG Conversion Factors**	Reference for applicable fuel, transport, business travel and other activity-based emission factors where appropriate.
9	**ISO 14064-3:2019**	Provides principles and requirements for verification and validation of GHG statements and inventories.
10	**ISO 14065:2020**	Provides requirements for bodies validating and verifying environmental information, including GHG statements.

18. Conclusions

SRF's draft GHG inventory indicates a total footprint of 126,947.39 tCO_2e, with Scope 3 emissions contributing the majority of reported emissions. The company should strengthen activity-data traceability, particularly for significant upstream sources, while continuing energy and process-efficiency initiatives. During the next reporting period, SRF should confirm reporting boundaries, maintain monthly source-level data, assess all Scope 3 categories, establish suitable intensity denominators, document emission factors, and conduct internal quality checks before independent verification.