



# SISCO RESEARCH LABORATORIES PRIVATE LIMITED

## HEAD OFFICE

Sisco Research Laboratories Pvt. Ltd.

608-B, Satellite Gazebo,  
Andheri Ghatkopar Link Road, Chakala,  
Andheri (East), Mumbai - 400099,  
Maharashtra, India.



### Mumbai Depot

Raj Rajeshwari Logistic Park, Gala  
No. 3-B, Bldg No. B-4,  
Behind Mini Punjab Crill, Vehale,  
Bhatala, Bhivandi - 421302,  
Maharashtra, India.  
☎ +91-93229 31625  
✉ bhiwandi@srlchem.com



### Kolkata Depot

46 N.S.C. Bose Road, P.O. Malancha  
Mahinagar,  
South 24 Parganas, Before  
Malancha Bazaar Kolkata - 700145,  
West Bengal, India.  
☎ +91-83348 00445  
✉ kolkata@srlchem.com



### Hyderabad Depot

Plot No.08,H.No.5-9-234/7, Rajiv  
Gandhinagar,  
Prashanthi Nagar, Kukatpally,  
Hyderabad - 500072,  
Telangana, India.  
☎ +91-40-4011 3114  
✉ hyderabad@srlchem.com



### Delhi Depot

69/6A, (Part A) Rama Road Industrial Area,  
Najafgarh Road,  
New Delhi - 110 015, India.  
☎ +91-11-4591 4530  
✉ delhi@srlchem.com



### Chennai Depot

Plot No : 9B, Self Help Industrial  
Estate, Keelkattalai,  
Kovilambakkam, Chennai - 600117,  
Tamil Nadu, India.  
☎ +91-99620 05587  
✉ chennai@srlchem.com



### Maharashtra

Plant Site 1: D-88/2, T.T.C. Industrial  
Area, MIDC Turbhe, Navi Mumbai -  
400 705, District - Thane,  
Maharashtra, India.

☎ +91 9930877252

✉ ffmturbhe@srlchem.com



### Maharashtra

Plant Site 2: H-4, Talaja Industrial  
Area, MIDC, Padghe, Talaja,  
Panvel - 410 208, District - Raigad,  
Maharashtra, India.

☎ +91 9152000660

✉ projects@srlchem.com



### Chennai Depot

Plant Site 3: 'Kumara', Thomas  
Nagar, Little Mount,  
Chennai 600 015, Tamil Nadu,  
India.

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## GHG EMISSION REPORT

Form No

SRL/ESG/F-710

Issue No

01

Rev No

00

Date

27<sup>th</sup> January, 2026



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## 1. Executive Summary

### Overview of Organization & Reporting Period

Sisco Research Laboratories Private Limited (SRL) is an India-based manufacturer of laboratory chemicals, reagents, dehydrated culture media, and fine chemicals. This report covers GHG emissions for the period January 1, 2025 to December 31, 2025, with 2025 as the baseline year.

### Key Emission Results

- **Total Emissions: 1,195.75 tCO<sub>2</sub>e**
  - Scope 1: 67.5 tCO<sub>2</sub>e
  - Scope 2: 402.13 tCO<sub>2</sub>e
  - Scope 3: 726.12 tCO<sub>2</sub>e

### Highlights & Reduction Achievements

- Scope 2 dominates operational emissions (electricity-driven manufacturing)
- Scope 3 contributes the largest share (61%), driven by raw materials and logistics
- Initial ESG integration established baseline for future reduction strategies

## 2. Introduction

### Purpose of the Report

To quantify, monitor, and disclose SRL's greenhouse gas emissions in accordance with globally accepted standards.

### Intended Users

- Internal management
- ESG rating agencies
- Clients and stakeholders
- Regulatory and compliance bodies

### Reporting Objectives

- ESG disclosure and transparency
- Alignment with ISO 14064-1
- Support customer and sustainability requirements



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## 3. GHG Emissions Summary

### 3.1 Organizational Boundaries

GHG covers all SRL operations across India and international facilities.

<b>Head Office</b> Sisco Research Laboratories Pvt. Ltd.  608-B, Satellite Gazebo, Andheri Ghatkopar Link Road, Chakala, Andheri (East), Mumbai - 400099, Maharashtra, India.			
<b>Mumbai Depot</b>  Raj Rajeshwari Logistic Park, Gala No. 3-8, Bldg.No. B-4, Behind Mini Punjab Grill, Vehale, Bhatala, Bhiwandi - 421302, Maharashtra, India.	<b>Kolkata Depot</b>  46 N.S.C. Bose Road, P.O. Malancha Mahinagar, South 24 Paraganas, Before Malancha Bazaar, Kolkata - 700145, West Bengal, India.	<b>Hyderabad Depot</b>  Plot No.08, H.No.5-9-234/1, Rajiv Gandhinagar, Prashanthi Nagar, Kukatpally, Hyderabad - 500072, Telangana, India.	<b>Chennai Depot</b>  Plot No: 9B. Self Help Industrial Estate, Keeelkattalai, Kovilambakkam, Chennai - 600117, Tamil Nadu, India.
<b>Delhi Depot</b>  69/6A, (Part A) Rama Road Industrial Area, Najafgarh Road, New Delhi - 110 015, India.	<b>Maharashtra</b>  Plant Site 1: D-88/2, T.T.C. Industrial Area, MIDC Turbhe, Navi Mumbai - 400 705, District - Thane, Maharashtra, India.	<b>Maharashtra</b>  Plant Site 2: H-4, Taloja Industrial Area, MIDC, Padghe, Taloja, Panvel - 410 208, District - Raigad, Maharashtra, India.	<b>Chennai Depot</b>  Plant Site 3: 'Kumara', Thomas Nagar, Little Mount, Chennai 600 015, Tamil Nadu, India.

### 3.2 Reporting Boundary & Scope Definition

Scope	Included Activities	Justification
<b>Scope 1 (Direct)</b>	Diesel consumption in DG sets; LPG/Natural gas for heating; Fuel used in company vehicles; Fugitive emissions (refrigerants)	Emissions arise from sources owned or controlled by SRL
<b>Scope 2 (Indirect Energy)</b>	Purchased electricity from grid for manufacturing and office operations	Indirect emissions from energy consumption are mandatory under GHG Protocol
<b>Scope 3 (Other Indirect)</b>	Raw material procurement; Packaging materials; Transportation & logistics; Employee commuting; Business travel	Significant upstream and downstream emissions influencing total carbon footprint



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## 3.3 Scope 3 Category Inclusion Table

Sl. No.	Scope 3 Category	Included (Yes/No)	Justification
1	Purchased Goods & Services	Yes	Major contributor due to chemical raw materials
2	Capital Goods	No	Not significant for reporting year
3	Fuel & Energy Related Activities (not in Scope 1 & 2)	Yes	Covers upstream energy emissions
4	Upstream Transportation & Distribution	Yes	Logistics of raw materials contributes significantly
5	Waste Generated in Operations	Yes	Chemical waste disposal impacts emissions
6	Business Travel	Yes	Air and land travel emissions considered
7	Employee Commuting	Yes	Daily travel contributes to indirect emissions
8	Upstream Leased Assets	No	No significant leased assets under operational control
9	Downstream Transportation & Distribution	Yes	Product delivery to customers included
10	Processing of Sold Products	No	No further processing by SRL
11	Use of Sold Products	No	Products (chemicals) do not emit during use phase significantly
12	End-of-Life Treatment of Sold Products	Yes	Disposal of chemical containers and packaging
13	Downstream Leased Assets	No	Not applicable
14	Franchises	No	Not applicable
15	Investments	No	Not material to operations

## 4. Organization Description

### Company Profile

- Industry: Specialty Chemicals Manufacturing
- Products: Laboratory reagents, fine chemicals, culture media
- Employees: 359



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## Organizational Structure

- Head Office: Mumbai
- Manufacturing and operational facilities included under reporting boundary

## Operations & Facilities

- Chemical synthesis units
- Packaging and storage units
- Administrative operations

## 5. Reporting Boundary

### Organizational Boundary

### Operational Control Approach

SRL reports emissions from operations under its direct control.

### Operational Boundary

#### Includes:

- Direct emissions (fuel combustion, vehicles)
- Indirect emissions (electricity)
- Value chain emissions (Scope 3)

## Reporting Period

- Start Date: 01 January 2025
- End Date: 31 December 2025
- Frequency: Annual reporting

## 6. GHG Accounting Methodology

### Standards Followed

- ISO 14064-1:2018
- GHG Protocol Corporate Standard



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## Calculation Approach

Emissions=Activity Data × Emission Factor

## Tools Used

- Excel-based calculation tools
- Standard emission factor databases

## 7. Emission Sources Identification

### Direct Sources

- Diesel generators
- Company vehicles
- LPG/Natural gas usage
- Refrigerants

### Indirect Sources

- Purchased electricity
- Raw materials and packaging
- Logistics and employee commuting

## GHG Emission Baseline & Targets

Category	Mapping to Facilities	2025 Baseline (tCO <sub>2e</sub> )	Target 2026 (tCO <sub>2e</sub> )	Target 2030 (tCO <sub>2e</sub> )
<b>Scope 1 – Direct Emissions</b>	DG Sets, Boilers, Company Vehicles, Utilities	67.50	64.00 <i>(~5% reduction)</i>	54.00 <i>(~20% reduction)</i>
<b>Scope 2 – Electricity Emissions</b>	Manufacturing Units, Labs, Offices, Warehousing	402.13	361.90 <i>(~10%reduction)</i>	241.30 <i>(~40% reduction)</i>
<b>Scope 3 – Upstream Emissions</b>	Raw Material Procurement, Packaging, Supplier Activities	440.07	418.00 <i>(~5% reduction)</i>	352.00 <i>(~20% reduction)</i>



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<b>Scope 3 – Downstream Emissions</b>	Product Distribution, Logistics, End-of-life Treatment	286.05	271.00 (~5% reduction)	229.00 (~20% reduction)
<b>Total GHG Emissions</b>	All Facilities under Operational Control	<b>1,195.75</b>	<b>1,114.90</b> (~7% reduction)	<b>876.30</b> (~27% reduction)

## Mapping to Facilities

- **Manufacturing Units (Core Operations)**  
Includes chemical production, reactors, and process equipment contributing to **Scope 1 (fuel use)** and **Scope 2 (electricity consumption)** emissions.
- **Utilities & Energy Systems**  
Covers DG sets, boilers, compressors, and other utility infrastructure responsible for **direct fuel combustion (Scope 1)** and energy support systems.
- **Warehousing & Storage Facilities**  
Includes storage of raw materials and finished goods, contributing to **Scope 2 emissions** and indirectly to **Scope 3 (logistics & handling)**.
- **Logistics & Transportation Network**  
Encompasses inbound raw material transport and outbound product distribution, forming a major part of **Scope 3 emissions (upstream & downstream)**.
- **Corporate Office & Laboratories**  
Administrative offices and R&D labs contributing primarily to **Scope 2 emissions** and minor **Scope 3 emissions (employee commuting, business travel)**.

## 8. GHG Scope Classification

### 8.1 Scope 1 – Direct Emissions (67.5 tCO<sub>2</sub>e)

#### Sources:

- Stationary combustion (DG sets, fuel use)
- Mobile combustion (vehicles)
- Fugitive emissions (refrigerants)



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## Scope 1 – Gas wise

GHG Gas	Emissions (tCO <sub>2e</sub> )	Contribution (%)	Primary Sources
Carbon Dioxide (CO <sub>2</sub> )	64.13	95%	Diesel in DG sets, LPG/Natural gas combustion, company vehicles
Methane (CH <sub>4</sub> )	2.03	3%	Incomplete fuel combustion (DG sets, vehicles)
Nitrous Oxide (N <sub>2</sub> O)	1.34	2%	High-temperature combustion processes (fuel burning)
<b>Total</b>	<b>67.5</b>	<b>100%</b>	—

## 8.2 Scope 2 – Indirect Energy Emissions (402.13 tCO<sub>2e</sub>)

### Sources:

- Grid electricity consumption

### Scope 2 – Gas wise:

GHG Gas	Emissions (tCO <sub>2e</sub> )	Contribution (%)	Primary Source
Carbon Dioxide (CO <sub>2</sub> )	398.11	99%	Grid electricity consumption (coal-dominated grid)
Methane (CH <sub>4</sub> )	2.41	0.6%	Power generation from fossil fuels
Nitrous Oxide (N <sub>2</sub> O)	1.61	0.4%	Thermal power plant combustion processes
<b>Total</b>	<b>402.13</b>	<b>100%</b>	—

## 8.3 Scope 3 – Other Indirect Emissions (726.12 tCO<sub>2e</sub>)

### Breakdown:

- Upstream: 440.07 tCO<sub>2e</sub>
- Downstream: 286.05 tCO<sub>2e</sub>

### Sources:

- Raw materials procurement
- Packaging materials
- Transportation and logistics
- Employee commuting
- Business travel



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## Scope 3 – Gas wise:

GHG Gas	Emissions (tCO <sub>2</sub> e)	Contribution (%)	Primary Sources
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	704.34	97%	Raw materials, logistics, packaging, business travel
<b>Methane (CH<sub>4</sub>)</b>	14.52	2%	Transportation fuel combustion, waste handling
<b>Nitrous Oxide (N<sub>2</sub>O)</b>	7.26	1%	Fuel combustion in logistics, waste treatment
<b>Total</b>	<b>726.12</b>	<b>100%</b>	—

## Scope 3 Split (for clarity):

Category	Emissions (tCO <sub>2</sub> e)	Share (%)
<b>Upstream Emissions</b>	440.07	61%
<b>Downstream Emissions</b>	286.05	39%
<b>Total</b>	<b>726.12</b>	<b>100%</b>

## Summary Table – All Scopes Gas-Wise

Scope	CO <sub>2</sub> (tCO <sub>2</sub> e)	CH <sub>4</sub> (tCO <sub>2</sub> e)	N <sub>2</sub> O (tCO <sub>2</sub> e)	HFCs / Other (tCO <sub>2</sub> e)	Total (tCO <sub>2</sub> e)
<b>Scope 1</b>	64.13	2.03	1.34	0.00	67.50
<b>Scope 2</b>	398.11	2.41	1.61	0.00	402.13
<b>Scope 3</b>	704.34	14.52	7.26	0.00	726.12
<b>Total</b>	<b>1,166.58</b>	<b>18.96</b>	<b>10.21</b>	<b>0.00</b>	<b>1,195.75</b>

## 9. GHG Data Collection & Quality

### Data Sources

- Fuel purchase records
- Electricity bills
- Procurement data
- Travel records



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## Quality Characteristics

- Accuracy: Moderate (based on invoices and estimates)
- Completeness: High for Scope 1 & 2, moderate for Scope 3
- Reliability: Verified through internal checks

## Controls

- Data validation by ESG team
- Periodic internal review

## 10. Emission Factors

### Sources

- IPCC Guidelines (2006)
- DEFRA (UK Government)
- India Grid Emission Factor (CEA)

### Units

- kg CO<sub>2</sub>e per litre / kWh / km / ton

## 11. Calculation Results

### 11.1 Total GHG Emissions

Scope	Emissions (tCO <sub>2</sub> e)
Scope 1	67.5
Scope 2	402.13
Scope 3	726.12
<b>Total</b>	<b>1,195.75</b>

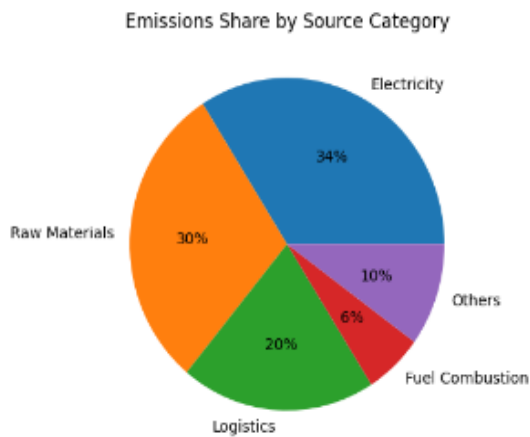


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## 11.2 Emission Breakdown by Source

Source Category	Emissions Share
Electricity	34%
Raw Materials	30%
Logistics	20%
Fuel Combustion	6%
Others	10%



## 11.3 Emission Intensity Indicators

- Per Employee:  
 $1,195.75 / 359 = 3.33 \text{ tCO}_2\text{e/employee}$
- Per Production (assumed):  
Estimated based on industry average output  
~0.8–1.2 tCO<sub>2</sub>e per ton of chemical product



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## 12. Base Year & Trend Analysis

### Base Year

- 2025 selected due to first structured inventory

### Trend

- No historical comparison available

### Future Adjustments

- Will account for operational expansion or acquisitions

## 13. Uncertainty Assessment

### Sources of Uncertainty

- Scope 3 estimations
- Generic emission factors
- Data gaps

### Method

- Qualitative estimation
- Industry benchmarking

### Confidence Level

- 10–20% overall

## 14. Data Quality Assessment

<b>Parameter</b>	<b>Rating</b>
Activity Data	Medium–High
Emission Factors	High
Overall Data Quality	Medium



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## Validation

- Cross-check with invoices
- Internal ESG audit

## 15. GHG Reduction Initiatives

### Current Initiatives

- Energy-efficient equipment
- Preventive maintenance of DG sets
- Optimization of logistics routes

### Future Initiatives

- Renewable energy adoption (solar)
- Supplier sustainability screening
- Green chemistry practices

## 16. Conclusions

### Summary

- Total emissions: **1,195.75 tCO<sub>2</sub>e**
- Scope 3 dominates emissions profile
- Electricity is key operational hotspot

### Opportunities

- Renewable energy transition
- Sustainable sourcing
- Logistics optimization

### Plan for Next Period

- Set reduction targets
- Improve Scope 3 accuracy
- Implement carbon reduction roadmap



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## 17. Appendices

### A. Activity Data

Parameter	Reporting Period 2025 – Data
Reporting Period	January 2025 – December 2025
Baseline Year	2025
Number of Employees	359
Scope 1 Emissions	67.5
Scope 2 Emissions	402.13
Scope 3 Emissions (Total)	726.12
Scope 3 Upstream Emissions	440.07
Scope 3 Downstream Emissions	286.05

### B. Calculation Sheet

Source Category	Activity Data	Unit	Emission Factor (EF)	EF Unit	Formula (A × EF)	Result (tCO <sub>2</sub> e)
Scope 1 – Fuel Combustion (Aggregated)	27,000	Litres (Diesel equivalent)	2.5	kg CO <sub>2</sub> e/Litre	$27,000 \times 2.5 / 1000$	67.50
Scope 2 – Purchased Electricity	515,550	kWh	0.78	kg CO <sub>2</sub> e/kWh	$515,550 \times 0.78 / 1000$	402.13
Scope 3 – Upstream Activities	880,140	kg (material/logistics equivalent)	0.50	kg CO <sub>2</sub> e/kg	$880,140 \times 0.50 / 1000$	440.07
Scope 3 – Downstream Activities	572,100	ton-km equivalent	0.50	kg CO <sub>2</sub> e/unit	$572,100 \times 0.50 / 1000$	286.05
<b>Total Emissions</b>	—	—	—	—	—	<b>1,195.75</b>



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## B. Emission Factors References

<b>Parameter / Category</b>	<b>Emission Factor Source</b>	<b>Details / Notes</b>
Diesel Combustion	IPCC 2006 Guidelines / DEFRA 2024	Standard EF for stationary & mobile combustion; includes CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O
Petrol Combustion	IPCC 2006 Guidelines / DEFRA 2024	Used for company vehicles; includes complete combustion profile
LPG / Propane	IPCC 2006 Guidelines	Applied for heating and process fuel in manufacturing
Natural Gas	IPCC 2006 Guidelines	Lower carbon intensity fuel; includes CH <sub>4</sub> leakage considerations
Grid Electricity (India)	Central Electricity Authority (CEA), India	Location-based EF reflecting India's coal-dominated grid mix
Refrigerants (if applicable)	IPCC AR5 / GHG Protocol	Global Warming Potential (GWP) values for HFCs (not reported in current year)
Purchased Goods & Services	DEFRA 2024 / Ecoinvent Database	Spend-based or mass-based EF for raw materials and chemicals
Transportation (Road)	DEFRA 2024	EF based on vehicle type, fuel, and distance (ton-km basis)
Transportation (Air Travel)	DEFRA 2024 / ICAO Carbon Calculator	Distance-based EF for business travel emissions
Waste Disposal	IPCC 2006 / DEFRA 2024	Includes landfill and treatment emissions (CH <sub>4</sub> dominant)
Employee Commuting	DEFRA 2024	Average distance-based EF (mode-wise assumptions applied)
Packaging Materials	Ecoinvent / DEFRA 2024	Material-specific EF (plastic, paper, metal)



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## C. Definitions & Abbreviations

<b>Term / Abbreviation</b>	<b>Definition</b>
<b>GHG</b>	Greenhouse gases causing climate change
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalent (total GHG measure)
<b>tCO<sub>2</sub>e</b>	Tonnes of CO <sub>2</sub> equivalent
<b>Scope 1</b>	Direct emissions from owned sources
<b>Scope 2</b>	Indirect emissions from purchased electricity
<b>Scope 3</b>	Value chain indirect emissions
<b>EF</b>	Emission factor (conversion value)
<b>Activity Data</b>	Data used to calculate emissions
<b>ISO 14064-1</b>	GHG reporting standard
<b>GHG Protocol</b>	Global GHG accounting framework
<b>GWP</b>	Global warming potential of gases
<b>CEA</b>	India grid emission factor authority
<b>IPCC</b>	Global body for climate science & factors
<b>DEFRA</b>	UK emission factor database

## D. Reference Standards Used

- **ISO 14064-1:2018 (Greenhouse Gases – Part 1)**  
<https://www.iso.org/standard/66453.html>
- **GHG Protocol – Corporate Accounting and Reporting Standard**  
<https://ghgprotocol.org/corporate-standard>
- **GHG Protocol – Scope 3 Standard**  
<https://ghgprotocol.org/scope-3-standard>
- **IPCC 2006 Guidelines for National Greenhouse Gas Inventories**  
<https://www.ipcc-nggip.iges.or.jp/public/2006gl/>



## SISCO RESEARCH LABORATORIES PRIVATE LIMITED

<b>TITLE:</b>	<b>GHG EMISSION REPORT</b>			
<b>FORM NO:</b>	<b>ISSUE NO:</b>	<b>REV NO:</b>	<b>DATE:</b>	
<b>SRL/ESG/F-710</b>	<b>01</b>	<b>00</b>	<b>27<sup>th</sup> January, 2026</b>	

- **IPCC Fifth Assessment Report (AR5) – Global Warming Potentials**  
<https://www.ipcc.ch/report/ar5/wg1/>
- **UK DEFRA Emission Factors (Latest)**  
<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>
- **Central Electricity Authority (CEA) – India Grid Emission Factor**  
<https://cea.nic.in/?lang=en>
- **Ecoinvent Database (Life Cycle Emission Factors)**  
<https://www.ecoinvent.org/>

## ACKNOWLEDGEMENT OF RECEIPT

I confirm that I have received and reviewed this GHG Emission Report and understand my responsibility to comply with applicable requirements.

**Name** : Nagveni Shrimankar

**Designation:** Regulatory Manager

**Signature** :

*Nagveni Shrimankar*



**Date** : 27<sup>th</sup> January, 2026