# GREENHOUSE GAS STATEMENT VERIFICATION REPORT

Mattson Containers GmbH / Konttivuokraus Oy
Production location:
Vinkkelitie 7, 03250
Ojakkala,

**Synergetic Insight Consultancy**
Pannipitiya
Sri Lanka

## Abbreviation

| | |
|---|---|
| CH4 | Methane |
| $CO_2$ | Carbon Dioxide |
| COI | Conflict of Interest |
| GHG | Greenhouse Gas |
| HFC | Hydrofluorocarbon |
| IPCC | Intergovernmental Panel on Climate Change |
| ISO | International Organization for Standardization |
| MT $CO_2e$ | Tonnes of Carbon Dioxide Equivalent |
| $N_2O$ | Nitrous Oxide |
| PRA | Partial Remote Assessment |
| SIC | Synergetic Insight Consultancy |

# Contents

## Introduction

MC Containers is a renowned global full-service supplier specializing in the provision of intermodal containers, custom containers, and modular spaces. With their comprehensive range of services, MC Containers caters to diverse needs, whether it is purchasing, leasing, or creating tailor-made special containers. Their commitment to excellence ensures that customers can rely on them to deliver efficient and reliable container-based solutions across various industries, including shipping and the education sector. MC Containers prioritizes exceptional service, allowing their clients to focus on their core businesses, no matter where they are located.

To meet the organizational sustainability objectives, MC Containers has quantified its greenhouse gas emissions for the year 2022 (1st January 2022 – 31st December 2022).

In response to the request made by the management of MC Containers, Synergetic Insight Consultancy carried out a third-party verification of the GHG statement for the MC Containers for the first time. The verification included a series of assessments and a review of supporting evidence submitted through an online platform. The verification was undertaken with guidance for the verification and validation of greenhouse gas statements.

This report provides the outcomes of the independent verification of the Greenhouse Gas (GHG) Statement of the MC Containers production facility located in Vinkkelitie 7, Ojakkala, Finland prepared based on the historical data and information covering the period from 1st January 2022 to 31st December 2022.

## 1 Verification Body Information

| | |
|---|---|
| Name | Synergetic Insight Consultancy |
| Address | 1185/1, Vidyalaya Junction, Pannipitiya, Sri Lanka |
| Contact Details | +94763665602 |

## 2 Client Information

| | |
|---|---|
| Name | Mattson Containers GmbH / Konttivuokraus Oy |
| Production location | Vihti Depot, Vinkkelitie 7, 03250<br>Ojakkala, Finland |
| Company Address | Ruhrstrasse 11A, 22761<br>Hamburg, Germany |
| Contact Details | jesse@mccontainers.com |

## 3 Verification Summary

The purpose of this report is to present a detailed analysis of MC Containers' emissions, specifically focusing on scope 1 and scope 2 emissions. The report aims to provide an accurate assessment of the organization's environmental impact.

| | |
|---|---|
| Verification Objectives | The objective of the verification was to assess whether the GHG statement for Vihti Depot production facility of MC Containers, 2022 operations is accurately prepared in accordance with appropriate criteria. |
| Verification Scope | The following elements were included in the scope of the analysis of operational emissions for the period 1st January 2022 to 31st December 2022. Only Scope 1 and 2 emissions were considered.<br>- Organizational and reporting boundaries<br>- Activities, technologies & processes<br>- Types of GHGs |
| Level of Assurance | Reasonable |
| Materiality | Quantitative discrepancies were calculated to understand their impact of them as a percentage of the GHG statement. The pre-defined materiality threshold is 5% of the total inventory. |
| Verification Team | Mr. Rishan Sampath<br>MSc, Environmental Management, University of Colombo, Sri Lanka,<br>BSc, Biotechnology, University of Colombo, Sri Lanka<br>Auditor in ISO14001, ISO 14064 |

## 4 Reporting period

This GHG report is relevant to the monitoring period starting 1st January 2022 to 31st December 2022.

# 5 Organizational boundaries

This report is based on the GHG inventory of MC Containers' production facility located in Vinkkelitie 7, 03250 Ojakkala, Finland.

# 6 Verification Process

## 6.1 Verification and Analysis Process

The scope of the verification was defined during the verification planning stage and all the utility documents were verified which were submitted through an online platform.

## 6.2 Conflict of Interest (COI) Determination

Verifiers first self-assess the potential for a conflict of interest between the verification team and the MC Containers. An impartiality risk analysis was performed in order to ensure whether or not a COI exists between the verifiers and the responsible parties. Accordingly, SIC concurred with the determination that there is no pre-existing relationship between participants and therefore the potential for COI is low.

# 7 Boundary and Data Selection

The GHG emissions have been consolidated through the operational control approach and are reported in terms of tonnes of carbon dioxide equivalent (MT $CO_2e$). Under the reporting boundaries, The MC Containers has reported operation-related emissions for three GHGs. They are carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$). The activities that lead to emit other gases have not been occurred in the reporting period. Reporting boundaries covered in the assessment are as follows;

***Direct Emissions***

Stationary fuel oil combustion for process

***Indirect Emissions***

Emissions from purchased electricity

# 8 Data Calculations

Scope 1 and 2 emission comparison was done using the emission factors from IPCC Guideline 2006; Emission Factor from Cross-sector Tools developed by GHG protocol, 2017, and country-specific grid emission factor database published by International Energy Agency (IEA) for 2020.

# 9 GHG Emissions

Total GHG emissions resulting from operations of the production site of MC Containers for the monitoring period is 19.12 tonnes of Carbon Dioxide Equivalent ($CO_2e$). This includes the following:

- Direct GHG emissions resulting from fuel purchased, fuel usage for production, and refrigerant leakage.
- Energy indirect GHG emissions resulting from purchased electricity

### 9.1 Direct emissions by source

Emissions arising from direct energy use is 9.50 tonnes of $CO_2e$ equivalent. A fuel-wise breakdown is available below.

| Emission Source | MT $CO_2e$ |
|---|---|
| Stationary furnace oil combustion for process | 3.26 |
| Stationary Diesel combustion for heating | 3.68 |
| Stationary Petrol combustion for heating | 0.80 |
| Refrigerant Leakages from cooling / heating systems | 1.76 |

### 9.2 Direct GHG emissions by source and individual GHG types

| Emission Source | kg $CO_2e$ | kg $CO_2$ | kg $CH_4$ | kg $N_2O$ | kg HFC |
|---|---|---|---|---|---|
| Total Direct GHG emissions (After rounded up to the highest value) | **9,498.92** | 7,693.62 | 28.76 | 16.33 | 1,760.20 |
| Furnace Oil Combustion | **3,258.53** | 3,240.15 | 11.72 | 6.66 | |
| Diesel combustion | **3,680.39** | 3,658.71 | 13.83 | 7.85 | |
| Petrol combustion | **799.80** | 794.76 | 3.21 | 1.82 | |
| Refrigerant Leakage | **1760.20** | 0 | 0 | 0 | 1760.20 |

### 9.3 Energy Indirect Emissions by Source

Energy indirect GHG emissions for the monitoring period is 9.62 tonnes of $CO_2e$. This includes electricity purchased through the national grid.

| Emission Source | kg $CO_2e$ |
|---|---|
| Purchased electricity | 9,616.93 |

### 9.4 Direct and Indirect Emissions

| Type of emissions | Emissions (Tonnes $CO_2$ e) |
|---|---|
| **Direct Emission** | 9.50 |
| **Indirect Emission** | 9.62 |
| **Total** | **19.12** |

## 10 GHG removals

There were no identified GHG removal sources for the reporting period.

## 11 Excluded Sources and Sinks

Only direct emissions and energy indirect GHG emissions (Scope 01 and 02) are considered for this report. A data collection system for other upstream and downstream indirect emissions (Scope 03) is not yet established, and no data is currently available under these categories for the reporting period. Therefore, other indirect emissions sources (Scope 03) are not included.

## 12 Method of Quantification and Reasoning

| Emissions source | Method of quantification | Unit of activity measurement | Method of collecting activity data |
|---|---|---|---|
| Purchased Electricity | Activity data multiplied by the emissions factor | kWh | The monthly utility bill provided by the service provider indicates the kWh used by the facility. |
| Furnace oil for production | Activity data multiplied by the emissions factor | Liters | Fuel purchase records were obtained through the finance department ERP |
| Diesel for heating | Activity data multiplied by the emissions factor | Liters | Fuel purchase records were obtained through the finance department ERP |
| Petrol for heating | Activity data multiplied by the emissions factor | Liters | Fuel purchase records were obtained through the finance department ERP |
| Refrigerant for heating/ cooling system | Activity data multiplied by the emissions factor | Kilograms | Refrigerant purchase records were obtained through the finance department ERP |

### 12.1 Measurement vs. Purchases – Conservative Approach

The fuel usage indicated in the verification report relates to the total amount of each type of fuel purchased during the monitoring period. The actual consumption indicated by the measuring equipment is lesser than the total purchases.

It was identified that most measurement equipment used in the facilities was not calibrated. Therefore, to avoid measurement bias, the purchase records for each type of fuel and refrigerant were used to form the emissions inventory.

# 13 Reference to the Emissions Factors Used

## 13.1 Grid Emissions Factor for Purchased Electricity

Grid Emission Factors were obtained from International Energy Database (2020 update).

## 13.2 Stationary Combustion Emission Factors

The following emissions factors were used to calculate GHG emissions arising from direct energy use.

Stationary Combustion Emission Factors

| fuel | unit | source | Factor per unit | | | GWP | | | Kg $CO_2e$ per unit |
|---|---|---|---|---|---|---|---|---|---|
| | | | $CO_2$ | CH4 | $N_2O$ | $CO_2$ | CH4 | $N_2O$ | |
| Furnace Oil | L | Cross-Sector tools-GHG Protocol, 2017 | 2.9393424 | 0.00037976 | 2.28E-05 | 1 | 28 | 265 | 2.956 |
| Diesel | L | Cross-Sector tools-GHG Protocol, 2017 | 2.676492 | 0.0003612 | 0.000021672 | 1 | 28 | 265 | 2.692 |
| Petrol | L | Cross-Sector tools-GHG Protocol, 2017 | 2.2717926 | 0.00032782 | 1.97E-05 | 1 | 28 | 265 | 2.286 |

## 13.3 Refrigeration Emission Factors

The following Global Warming Potential Factors were extracted from IPCC 5th Assessment Report, 2014 (AR)were used when calculating emissions arising from refrigerant leakages.

| GWP of Refrigerants | |
|---|---|
| Refrigerant | GWP |
| R22 | 1760 |

# 14 Description of Uncertainty, Accuracy, and Conservative Approach

Wherever the purchases were made in bulk (furnace oil) it was assumed that the total quantity that was purchased was used by the organization within the monitoring period, regardless of the remaining quantities. This approach was used to overcome the

uncertainties in measurement methods and measurement equipment used by the organization.

The emission factors for quantifying emission from fossil fuel combustion are derived from the IPCC guideline published in 2006 and Emission Factors from Cross-sector Tools developed by GHG protocol in 2017. The factors containing these sources are formulated based on the physical and chemical properties of the fuel, standard operating conditions of the internal combustion engines, and other environmental factors. In the context of the current GHG inventory, fuel-burning conditions of vehicles and types of machinery could significantly deviate from the standard technological and environmental conditions. Accordingly, the uncertainty of emission factors given in IPCC-GL, 2006 for the fossil fuel combustion of stationary and mobile sources could be ranging from ± 2% to 5%. In lowering this uncertainty, default emission factors provided in IPPC guidelines were used in the calculation.

Thus, the latest published emissions factors were used to calculate the fuel emissions factors for the current GHG inventory.  Assessment of GHG Data & Information

Fuel purchased records were checked to verify the accuracy of fuel consumption of stationary combustion of furnace oil. Activity data of electricity consumption resulting in indirect GHG emissions of the organization was examined during the assessment. Utility bills for electricity were available during the assessment for inspection. issued by the respective utility service provider.

## 15 GHG Emission Mitigation Plans & Strategies

In order to reduce the GHG emissions associated with the operations, MC Containers has implemented the following sustainability initiatives.

### 15.1 Initiatives for Energy Efficiency

The production facility was established in 2021 under the high energy savings guidelines. Energy efficiency in lighting systems is improved through the use of LED bulbs. Heating is done by new energy-efficient air source heat pumps.

## 16 Verification Opinion

SIC has verified the organization-level GHG statement of Vihti Depot facility of MC Containers for the period 1st January 2022 to 31st December 2022. The management of MC Containers is responsible for the preparation and fair presentation of the GHG statement specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

The responsibility of the SIC is to express an opinion on the GHG statement based on verifications conducted. Evidence-gathering procedures of SIC included utility bills to confirm the accuracy of source data in calculations.

The verified GHG Statement of 1st January 2021 to 31st December 2021 comprises the following

Direct GHG Emissions: 9.50 tonnes of $CO_2$ equivalent
Indirect GHG Emissions: 9.62 tonnes of $CO_2$ equivalent
**Total GHG Emission, 2022: 19.12 tonnes of $CO_2$ equivalent**

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Rishan

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