Autoclave & Incineration Emission Factors - April 2025

Stericycle Is Now Part of WM

Together, we're creating communities that are safe, healthy, and thriving.

In November 2024, WM, North America's leading provider of comprehensive environmental solutions, completed its acquisition of Stericycle, a leader in compliance-based solutions. As part of WM, Stericycle is expected to benefit from a range of synergies, including leveraging WM's expertise in logistics, technology-enabled cost optimization, and its leading waste disposal network, among others.

Estimating Scope 3 Emissions from Medical Waste Treatment

These emission factors can be used to estimate a customer's Scope 3 Category 5 'Waste Generated in Operations' emissions for waste treated through autoclaving or incineration by Stericycle. This guidance is intended to help our customers in North America (excluding Puerto Rico) to estimate their Scope 3 GHG emissions associated with autoclaving and incineration of medical waste.

Methodology

All emission factors derived in this methodology should be regarded as estimates, based on the averages from Stericycle's North American Regulated Waste and Compliance Services (RWCS) businesses only.

Greenhouse gas (GHG) emission factors were calculated based on Scope 1 emissions, Scope 2 emissions and Scope 3 emissions categories 3, 4, 5 and 9 from Stericycle's corporate GHG inventory prepared for years 2021 to 2023. Stericycle's Scope 1 emissions, Scope 2 emissions and Scope 3 category 5 emissions have been verified by a third-party auditor for limited assurance. Emission factors were calculated by dividing the emissions associated with each treatment method by the volume of waste processed using that method. In cases where multiple processes occurred at a facility, emissions were allocated between each process. Emissions not directly associated with waste management activities (such as those from corporate operations), were excluded from this analysis.

Estimated Emission Factors¹

Medical Waste Treatment Type	MT CO2e/MT of treated waste
Autoclave	0.549
Incineration	1.744

Legal Notice: These emission factors and related methodology are for informational purposes only and should be considered estimates only that are subject to change, including due to changes in the Company's data and methodology, which changes the Company has no duty to communicate or provide. WM Healthcare Solutions does not warrant the accuracy or completeness of these calculations. Individual customers' actual results could vary, and therefore this information should not be used for legal or regulatory reporting, compliance, or certifications. These results are specific to allocated emissions from activities used to manage waste to its end-of-life only and does not include any offset emissions from end-of-life options with potential lower lifecycle emission impacts (i.e. processes with energy or material recovery).



WM Healthcare Solutions

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Scope 1 Boundaries

Transportation: GHG emissions from fuel combustion in fleet vehicles transporting regulated medical waste are derived from fuel invoice data and mileage, with estimates based on the total fuel consumption and total mileage averaged across the North America (NA) customer base.

Facility Fuels: GHG emissions from fuel consumption at facilities and transfer stations are calculated based on energy invoice data. This calculation is based on average facility fuel usage for each treatment type across facilities in NA.

Incinerated Waste: GHG emissions from waste combustion are calculated based on the NA average. Emissions from incinerated waste emissions are derived from stack testing data at each incinerator, which is performed regularly in accordance with each facility permit. Biogenic CO_2 (from biological sources) are reported separately from Scope 1 emissions, in accordance with the <u>GHG Protocol</u> and are therefore excluded from the incineration emission factor.

Scope 2 Boundaries

Electricity: GHG emissions from electricity consumption at facility operations and transfer stations are calculated using utility invoice data. The Scope 2 market-based emissions are determined using utility-specific emission factors when available and default to regional grid emission factors when utility-specific data is not available.

Scope 3 Boundaries

Fuel- and energy- related activities: Upstream emissions from fuel consumption is based on average usage in each treatment type. This includes upstream GHG emissions from the production and delivery of diesel, natural gas, as well as and transmission and distribution losses of electricity used in Stericycle vehicles and facilities.

Upstream Transportation and Distribution: GHG emissions from third-party transportation to or between Stericycle's facilities are based on planned miles from third-party waste transportation related to Stericycle's RWCS business. The emission factor is calculated using a blended average third-party freight utilization across all NA customers.

Waste generated in operations: GHG emissions from the management and disposal of waste within operations. The autoclave emission factor assumes that waste is ultimately sent to a landfill, while the incineration emission factor accounts for emissions associated with disposing of ash in a landfill.

Downstream Transportation and Distribution: GHG emissions from third-party transportation of waste from Stericycle's facilities to a third-party location based on planned miles for waste transportation related to Stericycle's RWCS business. The emission factor is calculated from a blended average third-party freight utilization across all NA customers.

