Data Intake Processing and Verification Report

Background Information

- **Original Dataset Name:** CarbonTracker-CH4 2025
- **GHG Center Dataset Title:** CarbonTracker-CH_4 Isotopic Methane Inverse Fluxes
- **Dataset Provider:** NOAA
- **Date Obtained:** January 2026
- **Location Obtained From:** https://doi.org/10.25925/hxks-v755
    - "Fluxes" data only (https://gml.noaa.gov/aftp/products/carbontracker/ch4/CT-CH4-2025/fluxes/)
- **Data Location in GHG Center:** ct-ch4-monthgrid-v2025
- **Data POC(s):** Dr. Lori Bruhwiler, Dr. Youmi Oh, Dr. Sourish Basu, John Mund
- **Dataset File Type(s):** NetCDF
- **Projection (if different from WGS84):** NA

Data Transfer Confirmation

An SHA-256 checksum is used to detect high-level errors within data transmissions. Results from individual checksum file comparisons of pre-transfer and post-transfer shows all files were transferred successfully and no individual files had any transfer issues.

Data Intake Process

- https://us-ghg-center.github.io/ghgc-docs/data_workflow/ct-ch4-monthgrid-v2025_Data_Flow.html

Yearly Dataset Statistics

- Statistics for CH_4 emissions in 2015:

CH_4 Emissions	Data	Minimum (g CH_4/m^2/year)	Maximum (g CH_4/m^2/year)	Mean (g CH_4/m^2/year)	Standard Deviation
Fossil	Original Data	0.0	483.074	0.230	3.164
	Transformed Data	0.0	483.074	0.230	3.164
Microbial	Original Data	0.0	1200.903	0.647	5.726
	Transformed Data	0.0	1200.903	0.647	5.726

Pyrogenic	Original Data	0.0	1325.669	0.052	2.516
	Transformed Data	0.0	1325.669	0.052	2.516
Total	Original Data	0.0	1327.230	0.930	7.152
	Transformed Data	0.0	1327.230	0.930	7.152

- Statistics for CH_4 emissions in 2023:

CH_4 Emissions	Data	Minimum (g CH_4/m^2/year)	Maximum (g CH_4/m^2/year)	Mean (g CH_4/m^2/year)	Standard Deviation
Fossil	Original Data	0.0	571.877	0.206	3.400
	Transformed Data	0.0	571.877	0.206	3.400
Microbial	Original Data	0.0	1447.121	0.717	6.331
	Transformed Data	0.0	1447.121	0.717	6.331
Pyrogenic	Original Data	0.0	498.396	0.050	1.565
	Transformed Data	0.0	498.396	0.050	1.565
Total	Original Data	0.0	1447.654	0.973	7.470
	Transformed Data	0.0	1447.654	0.973	7.470

- All values are in the expected range

Summary

- We are confident that the transformation and display of data in the US GHG Center accurately represents the source data
- Link to the transformation code
- Link to the dataset Tutorial
- Link to the US GHG Center data catalog page

Report Completed on: 11/19/2024; updated on 2/4/2026 to reflect a version update

MSFC POC for questions: Jeanné le Roux, Siddharth Chaudhary