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Title: 2023 EPA Greenhouse Gas Report Electronic Submittal

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Intended for: Report
Environmental Regulatory Document

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Memorandum

Environmental Protection & Compliance Division
Compliance Programs Group

To: 2023 EPA Greenhouse Gas Report File
Through: Margie Stockton, EPC-CP, J978 *MBS*
From: Katelyn Mahoney, EPC-CP, J978 *KRM*
Phone: 505-396-0619
Symbol: EPC-DO: 24-073
LA-UR: 24-21833
Date: March 5, 2024

Subject: 2023 EPA Greenhouse Gas Report Electronic Submittal

Los Alamos National Laboratory (LANL) submitted its 2023 EPA Greenhouse Gas Report to the Environmental Protection Agency (EPA) via the online reporting tool, e-GGRT. This report is required by Title 40, Chapter 1, Subchapter C, Part 98 of the Code of Federal Regulations, Mandatory Greenhouse Gas Reporting. The report was submitted on March 5, 2024, and meets the Environmental Protection Agency's deadline of March 31, 2024.

In 2023, the carbon dioxide equivalent increased to 96,234 tons from 77,243 tons in 2022. In 2022, the TA-3 Power Plant combustion turbine engine was sent offsite for repairs and a replacement engine was installed. Subsequently, the turbine was offline for a period of time causing the decrease in emissions for 2022. The increasing trend in emissions is due to the TA-3 combustion turbine operating more often.

Should you have any questions or comments regarding the information provided in this report, please contact Katelyn Mahoney at 505-396-0619 or kmahoney@lanl.gov.

Attachment(s): Attachment 1 2023 EPA Greenhouse Gas Report Electronic Submittal

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ATTACHMENT 1
2023 EPA Greenhouse Gas Report
Electronic Submittal

EPC-DO: 24-073

LA-UR: 24-21833

Date: 3/5/2024

Certification Statement:

The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.

Facility Name:LOS ALAMOS NATIONAL LABORATORY

Facility Identifier:522732

Facility Reporting Year:2023

Facility Location:

Address: 3747 West Jemez Road

City: LOS ALAMOS

State: NM

Postal Code: 87544

Facility Site Details:

CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons):96,234

CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):0

Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons):0

Cogeneration Unit Emissions Indicator:N

GHG Report Start Date:2023-01-01

GHG Report End Date:2023-12-31

Description of Changes to Calculation Methodology:

Plant Code Indicator:N

Primary NAICS Code:928110

Second Primary NAICS Code:

Parent Company Details:

Parent Company Name:US GOVERNMENT

Address:

Percent Ownership Interest:

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	Carbon Dioxide
Gas Quantity	96,135.4 (Metric Tons)
Own Result?	

Gas Name	Biogenic Carbon dioxide
Gas Quantity	0 (Metric Tons)
Own Result?	

Gas Name	Methane
Gas Quantity	1.8 (Metric Tons)
Own Result?	

Gas Name	Nitrous Oxide
Gas Quantity	0.18 (Metric Tons)
Own Result?	

Unit Details:

Unit Name : CP-Boilers

Unit Description :

Common Pipe Details:

Use Ivt Indicator: Y

Maximum Rated Heat Input Capacity: 14.6

Cumulative Maximum Rated Heat Input Capacity: 62.2

Emission Details:

Annual Biogenic CO2 Emissions: 0 (metric tons)

Annual Fossil fuel based CO2 Emissions: 19209.2 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Frequency of HHV determinations : Monthly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
19209.2 (Metric Tons)	0.36 (Metric Tons)	0.036 (Metric Tons)	9.1 (Metric Tons)	10.8 (Metric Tons)

Unit Name : CP-Generators

Unit Description :

Common Pipe Details:

Use Ivt Indicator: Y

Maximum Rated Heat Input Capacity: 3.8

Cumulative Maximum Rated Heat Input Capacity:

Emission Details:

Annual Biogenic CO2 Emissions: 0 (metric tons)

Annual Fossil fuel based CO2 Emissions: 7.7 (metric tons)

Tier Fuel Details:

Fuel : Distillate Fuel Oil No. 2

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
7.7 (Metric Tons)	0.00 (Metric Tons)	0.000 (Metric Tons)	0.0 (Metric Tons)	0.0 (Metric Tons)

Unit Name : Combustion Turbine

Unit Type : SCCT (CT (Turbine, simple cycle combustion))

Unit Description :

Individual Unit Details:

Use Ivt Indicator: Y

Maximum Rated Heat Input Capacity: 296 (mmBtu/hr)

Emission Details:

Annual CO2 mass emissions from sorbent: 0 (Metric Tons)

Annual Biogenic CO2 Emissions: 0 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Frequency of HHV determinations : Monthly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
59054.7 (Metric Tons)	1.11 (Metric Tons)	0.111 (Metric Tons)	27.8 (Metric Tons)	33.2 (Metric Tons)

Unit Name : GP-Power Plant

Unit Description :

Small Unit Aggregation Details:

Use Ivt Indicator: Y

Highest Maximum Rated Heat Input Capacity: 210

Cumulative Maximum Rated Heat Input Capacity: 630

Emission Details:

Annual CO₂ mass emissions from sorbent: 0 (Metric Tons)

Annual Biogenic CO₂ Emissions: 0 (metric tons)

Annual Fossil fuel based CO₂ Emissions: 17706.9 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Frequency of HHV determinations : Monthly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
17706.9 (Metric Tons)	0.33 (Metric Tons)	0.033 (Metric Tons)	8.3 (Metric Tons)	9.9 (Metric Tons)

Fuel : Distillate Fuel Oil No. 2

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)

Unit Name : Asphalt Plant

Unit Type : PRH (Process Heater)

Unit Description :

Individual Unit Details:

Use Ivt Indicator: Y

Maximum Rated Heat Input Capacity: 40 (mmBtu/hr)

Emission Details:

Annual CO₂ mass emissions from sorbent: 0 (Metric Tons)

Annual Biogenic CO2 Emissions: 0 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2023-01-01

Tier Methodology End Date : 2023-12-31

Frequency of HHV determinations : Monthly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
156.9 (Metric Tons)	0.00 (Metric Tons)	0.000 (Metric Tons)	0.1 (Metric Tons)	0.1 (Metric Tons)

e-GGRT Reporting Year Comparison Report

Carbon Dioxide Equivalent (CO₂e) Quantities

RY2023 Version 1 Report Compared to Other Certified Reports

Facility: LOS ALAMOS NATIONAL LABORATORY

Address: 3747 West Jemez Road
LOS ALAMOS, NM 87544

GHGRP ID: 522732

IMPORTANT: This report presents data contained on this annual report: RY2023 Version 1
as compared to data contained on the most recently SUBMITTED AND CERTIFIED annual reports for each
of the other reporting years.

	(mtons CO ₂ e)	(mtons CO ₂ e)	(mtons CO ₂ e)	(mtons CO ₂ e)	(mtons CO ₂ e)	(mtons CO ₂ e)
	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Not certified
	RY2018 v1	RY2019 v1	RY2020 v1	RY2021 v1	RY2022 v1	RY2023 v1
Direct emissions in CO ₂ e (C-II, SS-TT)	51,423.1	47,257.5	53,693.0	91,824.6	77,242.6	96,234.0
Biogenic CO ₂ emissions (C-II, SS-TT)	0.0	0.0	0.0	0.0	0.0	0.0
CO ₂ received for injection (UU)	N/A	N/A	N/A	N/A	N/A	N/A
CO ₂ sequestered (RR)	N/A	N/A	N/A	N/A	N/A	N/A
CO ₂ e from products supplied (LL-QQ)* **	0.0	0.0	0.0	0.0	0.0	0.0

*Negative numbers may result from the quantity of exports exceeding the quantity of imports.

**In some cases the CO₂e quantity from a supplier may be Confidential Business Information (CBI) and will not be published.

e-GGRT Reporting Year Comparison Report
Metric Tons of Greenhouse Gases by Subpart
 RY2023 Version 1 Report Compared to Other Certified Reports

Facility: LOS ALAMOS NATIONAL LABORATORY

Address: 3747 West Jemez Road
 LOS ALAMOS, NM 87544

GHGRP ID: 522732

IMPORTANT: This report presents data contained on this annual report: RY2023 Version 1
 as compared to data contained on the most recently SUBMITTED AND CERTIFIED annual reports for each
 of the other reporting years.

	RY2018 v1	RY2019 v1	RY2020 v1	RY2021 v1	RY2022 v1	RY2023 v1
	(mtons)	(mtons)	(mtons)	(mtons)	(mtons)	(mtons)
	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Not certified

Subpart C						
Biogenic Carbon dioxide	0	0	0	0	0	0
Carbon Dioxide	51,368.8	47,208.7	53,637.4	91,730	77,163.1	96,135.4
Methane	0.98	0.89	1.01	1.72	1.45	1.8
Nitrous Oxide	0.1	0.089	0.102	0.173	0.145	0.18