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Title:	2022 EPA Greenhouse Gas Report Electronic Submittal
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Intended for:	Environmental Regulatory Document
Issued:	2023-03-31 (rev.1)

Los Alamos
NATIONAL LABORATORY

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Memorandum

Environmental Protection & Compliance Division
Compliance Programs Group

To: 2022 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: 23-084
LA-UR: 23-22104
Date: March 7, 2023

Subject: 2022 EPA Greenhouse Gas Report Electronic Submittal

Los Alamos National Laboratory (LANL) submitted its 2022 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 7, 2023, and meets the Environmental Protection Agency's deadline of March 31, 2023.

In 2021, the carbon dioxide equivalent increased from previous years to 91,824.6 tons and in 2022 it decreased to 77,242.6 tons, which is still higher than the previous 5 years. In 2022 the turbine's 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. Plans for future years call for continuing to maximize operation of the combustion turbine and emissions are expected to return to 2021 levels or higher in the coming years.

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 2022 EPA Greenhouse Gas Report Electronic Submittal

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ATTACHMENT 1

2022 EPA Greenhouse Gas Report
Electronic Submittal

EPC-DO: 23-084

LA-UR: 23-22104

Date: March 7, 2023

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:2022
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):77,242.6
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:2022-01-01
GHG Report End Date:2022-12-31
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	77,163.1 (Metric Tons)
Own Result?	

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

Gas Name	Methane
Gas Quantity	1.45 (Metric Tons)
Own Result?	

Gas Name	Nitrous Oxide
Gas Quantity	0.145 (Metric Tons)
Own Result?	

Unit Details:

Unit Name : CP-Boilers
Unit Type : OCS (Other combustion source)
Unit Description :

Other Unit Name :

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: 21474.1 (metric tons)

Tier Fuel Details:

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

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

Tier Methodology Start Date : 2022-01-01

Tier Methodology End Date : 2022-12-31

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
21474.1 (Metric Tons)	0.40 (Metric Tons)	0.040 (Metric Tons)	10.1 (Metric Tons)	12.1 (Metric Tons)

Unit Name : CP-Generators

Unit Type : OCS (Other combustion source)

Unit Description :

Other Unit Name :

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: 1.8 (metric tons)

Tier Fuel Details:

Fuel : Distillate Fuel Oil No. 2

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2022-01-01

Tier Methodology End Date : 2022-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
1.8 (Metric Tons)	0.00 (Metric Tons)	0.000 (Metric Tons)	0 (Metric Tons)	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 CO_2 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 : 2022-01-01
Tier Methodology End Date : 2022-12-31
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
37302.1 (Metric Tons)	0.70 (Metric Tons)	0.070 (Metric Tons)	17.6 (Metric Tons)	20.9 (Metric Tons)

Unit Name : GP-Power Plant
Unit Type : OCS (Other combustion source)
Unit Description :
Other Unit Name :

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 CO_2 mass emissions from sorbent: 0 (Metric Tons)
Annual Biogenic CO2 Emissions: 0 (metric tons)
Annual Fossil fuel based CO2 Emissions: 18385.1 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)
Tier Name : Tier 2 (Equation C-2a)
Tier Methodology Start Date : 2022-01-01
Tier Methodology End Date : 2022-12-31
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
18378.7 (Metric Tons)	0.35 (Metric Tons)	0.035 (Metric Tons)	8.7 (Metric Tons)	10.3 (Metric Tons)

Fuel : Distillate Fuel Oil No. 2
Tier Name : Tier 1 (Equation C-1)
Tier Methodology Start Date : 2022-01-01
Tier Methodology End Date : 2022-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
6.4 (Metric Tons)	0.00 (Metric Tons)	0.000 (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: 25 (mmBtu/hr)

Emission Details:

Annual CO_2 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 : 2022-01-01
Tier Methodology End Date : 2022-12-31
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
0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)	0 (Metric Tons)

e-GGRT Reporting Year Comparison Report
Carbon Dioxide Equivalent (CO2e) Quantities

RY2022 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: RY2022 Version 1 as compared to data contained on the most recently SUBMITTED AND CERTIFIED annual reports for each of the other reporting years.

	(mtons CO2e)	(mtons CO2e)	(mtons CO2e)	(mtons CO2e)	(mtons CO2e)	(mtons CO2e)
	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Complete, certified and sent	Ready for review
	RY2017 v1	RY2018 v1	RY2019 v1	RY2020 v1	RY2021 v1	RY2022 v1
Direct emissions in CO2e (C-II, SS-TT)	42,558.5	51,423.1	47,257.5	53,693.0	91,824.6	77,242.6
Biogenic CO2 emissions (C-II, SS-TT)	0.0	0.0	0.0	0.0	0.0	0.0
CO2 received for injection (UU)	N/A	N/A	N/A	N/A	N/A	N/A
CO2 sequestered (RR)	N/A	N/A	N/A	N/A	N/A	N/A
CO2e 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
RY2022 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: RY2022 Version 1

as compared to data contained on the most recently SUBMITTED AND CERTIFIED annual reports for each of the other reporting years.

	RY2017 v1	RY2018 v1	RY2019 v1	RY2020 v1	RY2021 v1	RY2022 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	Ready for review
Subpart C						
Biogenic Carbon dioxide	0	0	0	0	0	0
Carbon Dioxide	42,513.8	51,368.8	47,208.7	53,637.4	91,730	77,163.1
Methane	0.81	0.98	0.89	1.01	1.72	1.45
Nitrous Oxide	0.082	0.1	0.089	0.102	0.173	0.145