LA-UR-23-22123

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Title:	2022 Emissions Inventory Report Electronic Submittal
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Los Alamos NATIONAL LABORATORY

Memorandum

Environmental Protection & Compliance Division
Compliance Programs Group

To: File
Through: Margie Stockton, EPC-CP, J978
From: Walt Whetham, EPC-CP, J978 WW
Phone: 505-695-8056
Symbol: EPC-DO: 23-088
LA-UR: 23-22123
Date: March 28, 2023

Subject: 2022 Emissions Inventory Electronic Submittal

Triad National Security, LLC submitted the 2022 Emissions Inventory Report for Los Alamos National Laboratory (LANL) to New Mexico Environmental Department (NMED) via online reporting tool, AEIR. This report is required by Title 20, Chapter 2, Part 73 of the New Mexico Administrative Code (20.2.73 NMAC), Notice of Intent and Emissions Inventory Requirements. The report was submitted on March 28, 2023 and meets New Mexico Environmental Department's deadline of April 1st.

Should you have any questions or comments regarding the information provided in this report, please contact Walt Whetham at (505) 695-8056 or walt@lanl.gov.

Attachment(s): Attachment 1 2022 Emissions Inventory Report Electronic Submittal

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ATTACHMENT 1

2022 Emissions Inventory Report
Electronic Submittal

EPC-DO: 23-088

LA-UR: 23-22123

Date: MAR 2 8 2023

Type	ID	Designation	Description	Status	Complete
Federal Agency	AI -856	2195-R91	Los Alamos National Laboratory	Active 11/23/2021	
Beryllium Work	ACT -2	TA-35-213-1	Beryllium Activity-Target Fabrication Facility - Machining TA-35-213-1	Active 05/10/2000	✓
Beryllium Work	ACT -3	TA-3-141	Beryllium Activity-Technology Facility - Machining TA-3-141	Active 05/10/2000	✓
Beryllium Work	ACT -6	TA-55-PF4 (a)	Beryllium Activity-Plutonium Facility - Machining, weld cutting / dressing, metallography	Active 04/14/2006	✓
Beryllium Work	ACT -41	TA-3-66	Beryllium Activity-Sigma Facility-Electroplating/metallography	Active 05/24/2010	✓
Beryllium Work	ACT -43	TA-35-213-2-3	Beryllium Activity-Target Fabrication Facility - Machining TA-35-213-2-3	Active 05/10/2000	✓
Beryllium Work	ACT -44	TA-35-213-4	Beryllium Activity-Target Fabrication Facility - Be Coating TA-35-213-4	Active 05/10/2000	✓
Boiler	EQPT-11	TA-53-365-BHW-1	Boiler TA-53-365-BHW-1	Active 05/31/2001	✓
Boiler	EQPT-12	TA-53-365-BHW-2	Boiler TA-53-365-BHW-2	Active 05/31/2001	✓
Boiler	EQPT-24	TA-3-22-1 (gas)	Power Plant Boiler (pph, Natural Gas)	Active 07/26/2018	✓
Boiler	EQPT-25	TA-3-22-2 (gas)	Power Plant Boiler (pph, Natural Gas)	Active 07/26/2018	✓
Boiler	EQPT-26	TA-3-22-3 (gas)	Power Plant Boiler (pph, Natural Gas)	Active 07/26/2018	✓
Boiler	EQPT-29	TA-55-6-BHW-1	Sellers Boiler TA-55-6-BHW-1	Active 12/17/2001	✓
Boiler	EQPT-30	TA-55-6-BHW-2	Sellers Boiler TA-55-6-BHW-2	Active 12/17/2001	✓
Boiler	EQPT-53	TA-16-1484-BS-2	Low NOx Boiler TA-16-1484-BS-2	Active 11/27/1996	✓
Boiler	EQPT-90	RLUOB-BHW-1 (gas)	Boiler-CMRR-BHW-1	Active 03/01/2005	✓
Boiler	EQPT-104	RLUOB-BHW-2 (gas)	Boiler-CMRR-BHW-2	Active 03/01/2005	✓
Boiler	EQPT-105	RLUOB-BHW-3 (gas)	Boiler-CMRR-BHW-3	Active 03/01/2005	✓
Boiler	EQPT-106	RLUOB-BHW-4 (gas)	Boiler-CMRR-BHW-4	Active 03/01/2005	✓
Boiler	EQPT-107	B-5	Boiler-CMRR	Active 03/01/2005	✓
Boiler	EQPT-134	TA-16-1484-BS-1	Low NOx Boiler TA-16-1484-BS-1	Active 11/27/1996	✓
Boiler	EQPT-137	TA-3-22-2	Power Plant Boiler (pph, No. 2 fuel oil)	Active 07/26/2018	✓
Boiler	EQPT-138	TA-3-22-3	Power Plant Boiler (pph, No. 2 fuel oil)	Active 07/26/2018	✓
Boiler	EQPT-141	TA-3-22-1	Power Plant Boiler (pph, No. 2 fuel oil)	Active 07/26/2018	✓
Boiler	EQPT-144	Boiler combined emissions	TA-16-1484-Bs-1,2; TA -53-365-BHW-1,2; TA-55-6-BHW-1,2; RLUOB-BHW-1,2,3,4	Active 03/05/2009	✓
Boiler	EQPT-149	RLUOB-BHW-1 (oil)	Boiler-CMRR-BHW-1	Active 03/01/2005	✓
Boiler	EQPT-150	RLUOB-BHW-2 (oil)	Boiler-CMRR-BHW-2	Active 03/01/2005	✓
Boiler	EQPT-151	RLUOB-BHW-3 (oil)	Boiler-CMRR-BHW-3	Active 03/01/2005	✓
Boiler	EQPT-152	RLUOB-BHW-4 (oil)	Boiler-CMRR-BHW-4	Active 03/01/2005	✓
Boiler	EQPT-169	TA-3-22-4&5 (Oil TPY)	Power Plant Boiler (pph, No. 2 fuel oil)	Active 07/26/2018	✓
Boiler	EQPT-170	TA-3-22-4&5 (gas TPY)	Power Plant Boiler (pph, Natural Gas)	Active 07/26/2018	✓
Fugitives	RPNT-34	Facilitywide Open Burning	Fugitives - Open Burning	Active 02/27/2015	✓
Fugitives	RPNT-35	TA-60-EVAP-1	Evaporative Sprayer for basin water	Active 02/03/2017	✓
Fugitives	RPNT-36	TA-60-EVAP-2	Evaporative Sprayer for basin water	Active 02/03/2017	✓
Fugitives	RPNT-37	TA-60-EVAP-3	Evaporative Sprayer for basin water	Active 02/03/2017	✓
Fugitives	RPNT-38	TA-60-EVAP-4	Evaporative Sprayer for basin water	Active 02/03/2017	✓
Fugitives	RPNT-39	TA-60-EVAP-5	Evaporative Sprayer for basin water	Active 02/03/2017	✓
Fugitives	RPNT-41	TA-60-EVAP-6	Evaporative Sprayer for basin water	Active 05/13/2019	✓
Internal combustion engine	EQPT-96	Standby-Generators	Diesel Generators	Active 03/01/2005	✓
Internal combustion engine	EQPT-119	TA-33-G-2	Kohler Diesel Generator TA-33, TA-36, TA-39	Active 04/22/2008	✓
Internal combustion engine	EQPT-120	TA-33-G-3	Kohler Diesel Generator TA-33, TA-36, TA-39	Active 09/18/2006	✓
Internal combustion engine	EQPT-128	RLUOB-GEN 1	Cummins Diesel Powered Generator and Engine - CMRR	Active 12/11/2007	✓
Internal combustion engine	EQPT-135	TA-33-G-4	Caterpillar Diesel Generator TA-33, TA-36, TA-39	Active 04/22/2008	✓
Internal combustion engine	EQPT-143	TA-55-GEN-3	CI-RICE Stationary Generator - Caterpillar 1335 hp	Active 11/30/2010	✓
Internal combustion engine	EQPT-146	TA-33-G-1P	Cummins Portable Diesel Generator	Active 12/12/2013	✓

○	Internal combustion engine	EQPT-147	TA-48-GEN-1	Cummins Diesel Powered Generator and Engine	Active 02/27/2015	✓
○	Internal combustion engine	EQPT-153	RLUOB-GEN 2	Cummins Diesel Powered Generator and Engine - CMRR	Active 12/11/2007	✓
○	Internal combustion engine	EQPT-154	RLUOB-GEN 3	Cummins Diesel Powered Generator and Engine - CMRR	Active 12/11/2007	✓
○	Internal combustion engine	EQPT-155	TA-55-GEN-2	CI-RICE Stationary Generator - Whisper Watt 40.2 hp	Active 02/27/2015	✓
○	Internal combustion engine	EQPT-156	TA-55-GEN-1	CI-RICE Stationary Generator - Whisper Watt 40.2 hp	Active 02/27/2015	✓
○	Internal combustion engine	EQPT-160	TA-50-184-GEN-1	Cummins Diesel Generator and Engine, exempt	Active 07/18/2018	✓
○	Internal combustion engine	EQPT-161	TA-55-GEN-4	Cummins Diesel Generator and Engine, exempt	Active 07/18/2018	✓
○	Internal combustion engine	EQPT-162	TA-55-GEN-5	Cummins Diesel Generator and Engine, exempt	Active 07/18/2018	✓
○	Internal combustion engine	EQPT-171	TA-63-177	Cummins Diesel Powered Generator	Active 01/01/2020	✓
○	Processing	AREA-5	GCP3-2195G	80 TPH, ADM Asphalt Plant - Natural Gas	Active 11/23/2021	✓
○	Research/Testing	ACT -7	LANL-FW-CHEM	R & D Activities - Labwide (031)	Active 05/31/2001	✓
○	Research/Testing	ACT -42	RLUOB-CHEM	Chemical Usage, Bldg. TA-55-400 (lab portion of RLUOB Bldg.)	Active 05/31/2001	✓
○	Shredder	EQPT-89	TA-52-11	Data Disintegrator/industrial Shredder	Active 10/22/2003	✓
○	Stack/Vent	RPNT-40	SSM from TA-3-22-CHP-1	Routine Start up Shut down Maintenance	Active 07/26/2018	✓
○	Turbine	EQPT-166	TA-3-22-CHP-1	Combustion Turbine + Heat recovery steam generator (HRSG)	Active 07/29/2006	✓
○	Turbine	EQPT-177	TA-3-22-CT-1	Combustion Turbine (Siemens)	Active 08/03/2022	✓

Detail | Emissions | Add | Modify | Remove | Export | Total Emissions

Review for Submittal | Request Support from NMED

File Attachments

Please attach calculations following the requirements in the Emissions Inventory Guidance Document.

Attach File to Submittal

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -2
Designation: TA-35-213-1
Description: Beryllium Activity-Target Fabrication Facility - Machining TA-35-213-1
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:	Metal (INPUT)	
Materials Consumed:	0.0	tons

Operating Detail

	Value
Operating Time in Hours per Day:	8
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1820
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Beryllium:	0.0	tons/y	Estimate

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -3
Designation: TA-3-141
Description: Beryllium Activity-Technology Facility - Machining TA-3-141
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:	Metal (INPUT)	
Materials Consumed:	0.0	tons

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Beryllium:	0.0	tons/y	Field measurement

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -6
Designation: TA-55-PF4 (a)
Description: Beryllium Activity-Plutonium Facility - Machining, weld cutting / dressing, metallography
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:	Metal (INPUT)	
Materials Consumed:	0.0	tons

Operating Detail

	Value
Operating Time in Hours per Day:	5
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1820
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Beryllium:	0.0	tons/y	Field measurement

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -41
Designation: TA-3-66
Description: Beryllium Activity-Sigma Facility-Electroplating/metallography
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Abrasive Cleaning of Metal Parts, Polishing

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:	Metal (INPUT)	
Materials Consumed:	0.0	tons

Operating Detail

	Value
Operating Time in Hours per Day:	8
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	2912
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Beryllium:	0.0	tons/y	Estimate

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -43
Designation: TA-35-213-2-3
Description: Beryllium Activity-Target Fabrication Facility - Machining TA-35-213-2-3
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:		
Materials Consumed:		

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -44
Designation: TA-35-213-4
Description: Beryllium Activity-Target Fabrication Facility - Be Coating TA-35-213-4
Type: Beryllium Work
SCC: Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Input Materials Processed:		
Materials Consumed:		

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-11
Designation: TA-53-365-BHW-1
Description: Boiler TA-53-365-BHW-1
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler < 100 Million BTU, except tangential

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	9.01	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	15
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	33
Operating Time in Hours per Year:	3465
Percent of Operation During Winter:	40
Percent of Operation During Spring:	20
Percent of Operation During Summer:	0
Percent of Operation During Fall:	40

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	506.045	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.378	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.008	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.01	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.451	tons/y	EPA emission factors (e.g., AP-42)

Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (2.5 microns or less):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.003	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.009	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.025	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-12
Designation: TA-53-365-BHW-2
Description: Boiler TA-53-365-BHW-2
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler < 100 Million BTU, except tangential

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	9.01	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	15
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	33
Operating Time in Hours per Year:	3465
Percent of Operation During Winter:	40
Percent of Operation During Spring:	20
Percent of Operation During Summer:	0
Percent of Operation During Fall:	40

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	506.045	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.378	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.008	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.01	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.451	tons/y	EPA emission factors (e.g., AP-42)

Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (2.5 microns or less):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.034	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.003	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.009	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.025	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-24
Designation: TA-3-22-1 (gas)
Description: Power Plant Boiler (pph, Natural Gas)
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-25
Designation: TA-3-22-2 (gas)
Description: Power Plant Boiler (pph, Natural Gas)
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	141.625	MM SCF
Fuel Heating Value:	1056.7	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	7941.016	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	2.833	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.005	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.127	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.15	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	4.107	tons/y	Actual stack test

Nitrous Oxide (combustion):	0.015	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.538	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (2.5 microns or less):	0.538	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.538	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.042	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.134	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.389	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity greater than or equal to 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(A), the weighted annual average HHV was calculated using Equation C-2b.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-26
Designation: TA-3-22-3 (gas)
Description: Power Plant Boiler (pph, Natural Gas)
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	186.153	MM SCF
Fuel Heating Value:	1056.7	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	10437.694	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	3.723	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.007	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.168	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.197	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	5.398	tons/y	Actual stack test

Nitrous Oxide (combustion):	0.02	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.707	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (2.5 microns or less):	0.707	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.707	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.056	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.176	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.512	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity greater than or equal to 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(A), the weighted annual average HHV was calculated using Equation C-2b.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-29
Designation: TA-55-6-BHW-1
Description: Sellers Boiler TA-55-6-BHW-1
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler < 100 Million BTU, except tangential

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	10.684	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	15
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	33
Operating Time in Hours per Year:	3465
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	600.056	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.204	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.01	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.011	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.737	tons/y	Actual stack test

Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.076	tons/y	Manufacturer Specification
Particulate Matter (2.5 microns or less):	0.076	tons/y	Manufacturer Specification
Particulate Matter (condensable):	0.076	tons/y	Manufacturer Specification
Sulfur Dioxide:	0.003	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.01	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.032	tons/y	Manufacturer Specification

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-30
Designation: TA-55-6-BHW-2
Description: Sellers Boiler TA-55-6-BHW-2
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler < 100 Million BTU, except tangential

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	10.907	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	15
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	33
Operating Time in Hours per Year:	3465
Percent of Operation During Winter:	40
Percent of Operation During Spring:	10
Percent of Operation During Summer:	10
Percent of Operation During Fall:	40

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	612.581	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.208	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.01	tons/y	EPA emission factors (e.g., AP-42)
Lead:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.012	metric tons/y	40 CFR 98 Subpart C

Nitrogen Dioxide:	0.753	tons/y	Actual stack test
Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.077	tons/y	Manufacturer Specification
Particulate Matter (2.5 microns or less):	0.077	tons/y	Manufacturer Specification
Particulate Matter (condensable):	0.077	tons/y	Manufacturer Specification
Sulfur Dioxide:	0.003	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.01	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.033	tons/y	Manufacturer Specification

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-53
Designation: TA-16-1484-BS-2
Description: Low NOx Boiler TA-16-1484-BS-2
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	8.042	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	451.667	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.149	tons/y	Design calculation
Hexane:	0.007	tons/y	Design calculation
Lead:	0.0	tons/y	Design calculation
Methane (combustion):	0.009	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.149	tons/y	Design calculation

Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.031	tons/y	Design calculation
Particulate Matter (2.5 microns or less):	0.031	tons/y	Design calculation
Particulate Matter (condensable):	0.031	tons/y	Design calculation
Sulfur Dioxide:	0.002	tons/y	Design calculation
Total HAP:	0.008	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.022	tons/y	Design calculation

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-90
Designation: RLUOB-BHW-1 (gas)
Description: Boiler-CMRR-BHW-1
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	1.037	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	58.242	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.02	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.015	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)

Particulate Matter (2.5 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.013	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-104
Designation: RLUOB-BHW-2 (gas)
Description: Boiler-CMRR-BHW-2
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	1.037	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	58.242	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.02	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.015	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)

Particulate Matter (2.5 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.013	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-105
Designation: RLUOB-BHW-3 (gas)
Description: Boiler-CMRR-BHW-3
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	1.037	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	58.242	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.02	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.015	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)

Particulate Matter (2.5 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.013	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-106
Designation: RLUOB-BHW-4 (gas)
Description: Boiler-CMRR-BHW-4
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

This unit has not been built.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-107
Designation: B-5
Description: Boiler-CMRR
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

This unit has not been built.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-134
Designation: TA-16-1484-BS-1
Description: Low NOx Boiler TA-16-1484-BS-1
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Input Materials Processed:	Natural Gas (INPUT)	
Materials Consumed:	8.042	MM SCF
Fuel Heating Value:	1058.5	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	451.667	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.149	tons/y	Design calculation
Hexane:	0.007	tons/y	Design calculation
Lead:	0.0	tons/y	Design calculation
Methane (combustion):	0.009	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.149	tons/y	Design calculation

Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.031	tons/y	Design calculation
Particulate Matter (2.5 microns or less):	0.031	tons/y	Design calculation
Particulate Matter (condensable):	0.031	tons/y	Design calculation
Sulfur Dioxide:	0.002	tons/y	Design calculation
Total HAP:	0.008	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.022	tons/y	Design calculation

Subject Item Comments

This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-137
Designation: TA-3-22-2
Description: Power Plant Boiler (pph, No. 2 fuel oil)
Type: Boiler
SCC: External Combustion, Electric Generation, Distillate Oil, Grade 1 and 2 Oil: Boiler

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-138
Designation: TA-3-22-3
Description: Power Plant Boiler (pph, No. 2 fuel oil)
Type: Boiler
SCC: External Combustion, Electric Generation, Distillate Oil, Grade 1 and 2 Oil: Boiler

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Input Materials Processed:	Diesel (INPUT)	
Materials Consumed:	630.2	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	6.432	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.002	tons/y	EPA emission factors (e.g., AP-42)
Formaldehyde:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Hexane:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.003	tons/y	EPA emission factors (e.g., AP-42)

Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.001	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (2.5 microns or less):	0.0	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.001	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.002	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-141
Designation: TA-3-22-1
Description: Power Plant Boiler (pph, No. 2 fuel oil)
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-144
Designation: Boiler combined emissions
Description: TA-16-1484-Bs-1,2; TA -53-365-BHW-1,2; TA-55-6-BHW-1,2; RLUOB-BHW-1,2,3,4
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

This Facility ID represents the total from the two TA-16 boilers, the two TA-53 boilers, the two TA-55 boilers, and the four RLUOB boilers. However, these emissions are already captured in other facility IDs. In order to avoid counting the emissions twice, NMED asked LANL to enter zeros for this Facility ID.

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-149
Designation: RLUOB-BHW-1 (oil)
Description: Boiler-CMRR-BHW-1
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

The unit did not operate on fuel oil in 2022.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-150
Designation: RLUOB-BHW-2 (oil)
Description: Boiler-CMRR-BHW-2
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

The unit did not operate on fuel oil in 2022.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-151
Designation: RLUOB-BHW-3 (oil)
Description: Boiler-CMRR-BHW-3
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

The unit did not operate on fuel oil in 2022.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-152
Designation: RLUOB-BHW-4 (oil)
Description: Boiler-CMRR-BHW-4
Type: Boiler
SCC: External Combustion, Commercial/Institutional, Natural Gas, < 10 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Unit has not been installed.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-169
Designation: TA-3-22-4&5 (Oil TPY)
Description: Power Plant Boiler (pph, No. 2 fuel oil)
Type: Boiler
SCC: External Combustion, Electric Generation, Distillate Oil, Grade 1 and 2 Oil: Boiler

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Boilers 4 and 5 have not started operating.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-170
Designation: TA-3-22-4&5 (gas TPY)
Description: Power Plant Boiler (pph, Natural Gas)
Type: Boiler
SCC: External Combustion, Electric Generation, Natural Gas, Boiler, >= 100 Million BTU/hr

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Boilers 4 and 5 have not started operating.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-34
Designation: Facilitywide Open Burning
Description: Fugitives - Open Burning
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-35
Designation: TA-60-EVAP-1
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-36
Designation: TA-60-EVAP-2
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	672
Percent of Operation During Winter:	0
Percent of Operation During Spring:	60
Percent of Operation During Summer:	40
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Particulate Matter (10 microns or less):	0.0	tons/y	Design calculation
Particulate Matter (2.5 microns or less):	0.0	tons/y	Design calculation
Particulate Matter (condensable):	64.639	tons/y	Design calculation
Total HAP:	0.0	tons/y	Design calculation

Subject Item Comments

Per Condition A1502 (A)(2) in Permit P100-R2M4, emission rates of particulate matter for the Evaporative Sprayers are not applied toward the facility-wide emission limit caps.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-37
Designation: TA-60-EVAP-3
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-38
Designation: TA-60-EVAP-4
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-39
Designation: TA-60-EVAP-5
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-41
Designation: TA-60-EVAP-6
Description: Evaporative Sprayer for basin water
Type: Fugitives
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-96
Designation: Standby-Generators
Description: Diesel Generators
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	11243.4	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	421
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	117.965	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.702	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.005	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	3.116	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.116	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.116	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.079	tons/y	EPA emission factors (e.g., AP-42)

Total HAP:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.116	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-119
Designation: TA-33-G-2
Description: Kohler Diesel Generator TA-33, TA-36, TA-39
Type: Internal combustion engine
SCC: Internal Combustion Engines, Electric Generation, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	1.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	0.002	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.0	tons/y	Design calculation
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.0	tons/y	Design calculation
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.0	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-120
Designation: TA-33-G-3
Description: Kohler Diesel Generator TA-33, TA-36, TA-39
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	1.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	0.003	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.0	tons/y	Design calculation
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.0	tons/y	Design calculation
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.0	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-128
Designation: RLUOB-GEN 1
Description: Cummins Diesel Powered Generator and Engine - CMRR
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating: Cogeneration

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-135
Designation: TA-33-G-4
Description: Caterpillar Diesel Generator TA-33, TA-36, TA-39
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, 4-cycle Rich Burn

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	32.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	2
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	0.323	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.007	tons/y	Design calculation
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.012	tons/y	Design calculation
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.001	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.001	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.001	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-143
Designation: TA-55-GEN-3
Description: CI-RICE Stationary Generator - Caterpillar 1335 hp
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	290.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	8
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	20
Operating Time in Hours per Year:	19
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	2.951	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.086	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.391	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.012	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.012	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.007	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.012	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-146
Designation: TA-33-G-1P
Description: Cummins Portable Diesel Generator
Type: Internal combustion engine
SCC: Internal Combustion Engines, Electric Generation, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	145.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	26
Operating Time in Hours per Year:	8
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	50
Percent of Operation During Fall:	50

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	1.474	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.009	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.085	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.003	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.003	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.002	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.006	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-147
Designation: TA-48-GEN-1
Description: Cummins Diesel Powered Generator and Engine
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-153
Designation: RLUOB-GEN 2
Description: Cummins Diesel Powered Generator and Engine - CMRR
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating: Cogeneration

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	1886.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	19
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	19.245	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.379	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.306	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.015	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.018	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.008	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.043	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-154
Designation: RLUOB-GEN 3
Description: Cummins Diesel Powered Generator and Engine - CMRR
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating: Cogeneration

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	1544.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	15
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	15.755	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.31	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.001	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.25	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.012	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.015	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.007	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.035	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-155
Designation: TA-55-GEN-2
Description: CI-RICE Stationary Generator - Whisper Watt 40.2 hp
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	5.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	2
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	12
Operating Time in Hours per Year:	3
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	0.049	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.002	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.0	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-156
Designation: TA-55-GEN-1
Description: CI-RICE Stationary Generator - Whisper Watt 40.2 hp
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Natural Gas, Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	5.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	2
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	12
Operating Time in Hours per Year:	3
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	0.049	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.001	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.002	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.0	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.0	tons/y	EPA emission factors (e.g., AP-42)

Volatile Organic Compounds (VOC):	0.0	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-160
Designation: TA-50-184-GEN-1
Description: Cummins Diesel Generator and Engine, exempt
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	1021.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	8
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	92
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	10.412	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.145	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.662	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.021	tons/y	EPA emission factors (e.g., AP-42)
Particulate Matter (condensable):	0.021	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	0.011	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.021	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-161
Designation: TA-55-GEN-4
Description: Cummins Diesel Generator and Engine, exempt
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Unit has not been installed.

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Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-162
Designation: TA-55-GEN-5
Description: Cummins Diesel Generator and Engine, exempt
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	0
Operating Time in Days per Week:	0
Operating Time in Weeks per Year:	0
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	0
Percent of Operation During Spring:	0
Percent of Operation During Summer:	0
Percent of Operation During Fall:	0

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Unit has not been installed.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-171
Designation: TA-63-177
Description: Cummins Diesel Powered Generator
Type: Internal combustion engine
SCC: Internal Combustion Engines, Industrial, Distillate Oil (Diesel), Reciprocating

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Diesel	
Materials Consumed:	509.0	gal
Fuel Heating Value:	138.0	MM BTU/M gal
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.01	percent
Percent Carbon Content:	83.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	4
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	12
Operating Time in Hours per Year:	35
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	5.186	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	0.027	tons/y	EPA emission factors (e.g., AP-42)
Lead:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Methane (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	0.125	tons/y	EPA emission factors (e.g., AP-42)
Nitrous Oxide (combustion):	0.0	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	0.009	tons/y	EPA emission factors (e.g., AP-42)

Particulate Matter (condensable):	0.009	tons/y	EPA emission factors (e.g., AP-42)
Sulfur Dioxide:	0.009	tons/y	EPA emission factors (e.g., AP-42)
Total HAP:	0.0	tons/y	EPA emission factors (e.g., AP-42)
Volatile Organic Compounds (VOC):	0.009	tons/y	EPA emission factors (e.g., AP-42)

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: AREA-5
Designation: GCP3-2195G
Description: 80 TPH, ADM Asphalt Plant - Natural Gas
Type: Processing
SCC: Industrial Processes, Mineral Products, Asphalt Concrete, Drum Mix Plant: Rotary Drum Dryer / Mixer, Natural Gas-Fired

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Input Materials Processed:		
Materials Consumed:		

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -7
Designation: LANL-FW-CHEM
Description: R & D Activities - Labwide (031)
Type: Research/Testing
SCC: Industrial Processes, Photo Equip/Health Care/Labs/Air Condit/SwimPools, Laboratories, Bench Scale Reagents: Research

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

Fuel Type: No Fuel Combusted

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Acetaldehyde; (Ethyl aldehyde):	0.001	tons/y	Material balance
Acetonitrile; (Methyl cyanide):	0.223	tons/y	Material balance
Acetophenone:	0.001	tons/y	Material balance
Acrylamide:	0.0	tons/y	Material balance
Acrylic acid:	0.0	tons/y	Material balance
Acrylonitrile:	0.0	tons/y	Material balance
Ammonia:	0.0	tons/y	Material balance
Aniline:	0.001	tons/y	Material balance
Antimony:	0.0	tons/y	Material balance
Antimony compounds:	0.001	tons/y	Material balance
Arsenic Compounds:	0.0	tons/y	Material balance
Benzene:	0.024	tons/y	Material balance
Benzyl Chloride:	0.0	tons/y	Material balance
Beryllium Compounds:	0.001	tons/y	Material balance

Biphenyl:	0.0	tons/y	Material balance
Bromoform; (Tribromomethane):	0.0	tons/y	Material balance
Butadiene(1,3-):	0.0	tons/y	Material balance
Cadmium:	0.0	tons/y	Material balance
Cadmium compounds:	0.001	tons/y	Material balance
Carbon Disulfide:	0.0	tons/y	Material balance
Carbon tetrachloride; (Tetrachoromethane):	0.002	tons/y	Material balance
Carbonyl sulfide:	0.0	tons/y	Material balance
Catechol (Pyrocatechol):	0.0	tons/y	Material balance
Chlorine:	0.0	tons/y	Material balance
Chloroacetic Acid:	0.0	tons/y	Material balance
Chlorobenzene(Phenyl Chloride):	0.001	tons/y	Material balance
Chloroform; (Trichloromethane):	0.26	tons/y	Material balance
Chromium:	0.0	tons/y	Material balance
Chromium VI compounds:	0.004	tons/y	Material balance
Cobalt Compounds:	0.001	tons/y	Material balance
Cresol(m-); (Methylphenol, 3-):	0.0	tons/y	Material balance
Cumene:	0.0	tons/y	Material balance
Cyanide compounds:	0.033	tons/y	Material balance
Dibutylphthalate; (Di-n-butyl phthalate):	0.0	tons/y	Material balance
Dichloroethane (1,2-); (EDC); (Ethylene dichloride):	0.011	tons/y	Material balance
Dichlorofluoromethane:	0.0	tons/y	Material balance
Diethanolamine:	0.013	tons/y	Material balance
Diethyl Aniline(n,n-):	0.0	tons/y	Material balance
Dimethyl Sulfate:	0.001	tons/y	Material balance
Dimethyl formamide:	0.353	tons/y	Material balance
Dimethylhydrazine(1,1-):	0.0	tons/y	Material balance
Dioxane(1,4-) (1,4-Diethyleneoxide):	0.008	tons/y	Material balance
Epichlorohydrin; (1-Chloro-2,3-epoxypropane):	0.0	tons/y	Material balance
Epoxybutane(1,2-) (1,2-Butylene oxide):	0.001	tons/y	Material balance
Ethyl Acrylate:	0.0	tons/y	Material balance
Ethyl chloride; (Chloroethane):	0.0	tons/y	Material balance
Ethylbenzene:	0.0	tons/y	Material balance
Ethylene Glycol:	0.475	tons/y	Material balance
Ethylene dibromide; (EDB); (1.2-Dibromoethane):	0.0	tons/y	Material balance
Formaldehyde:	0.001	tons/y	Material balance
Glycol Ethers:	0.204	tons/y	Material balance
Hexachlorocyclopentadiene:	0.0	tons/y	Material balance
Hexachloroethane:	0.0	tons/y	Material balance
Hexamethylene-1, 6-diisocyanate:	0.0	tons/y	Material balance
Hexamethylphosphoramide:	0.0	tons/y	Material balance
Hexane:	0.243	tons/y	Material balance
Hydrazine:	0.0	tons/y	Material balance
Hydrochloric acid (HCl):	1.203	tons/y	Material balance
Hydrofluoric Acid; (Hydrogen fluoride):	0.046	tons/y	Material balance
Hydroquinone:	0.0	tons/y	Material balance
Iodomethane (Methyl iodide):	0.001	tons/y	Material balance
Isophorone:	0.0	tons/y	Material balance
Lead Compounds:	0.004	tons/y	Material balance

Maleic anhydride:	0.0	tons/y	Material balance
Manganese:	0.0	tons/y	Material balance
Manganese compounds:	0.003	tons/y	Material balance
Mercury compounds:	0.001	tons/y	Material balance
Methanol; (Methyl alcohol):	0.617	tons/y	Material balance
Methyl Ethyl Ketone; (MEK); (2-Butanone):	0.0	tons/y	Material balance
Methyl Methacrylate:	0.001	tons/y	Material balance
Methyl bromide; (Bromomethane):	0.0	tons/y	Material balance
Methyl chloride; (Chloromethane):	0.0	tons/y	Material balance
Methyl isobutyl ketone; (Hexone); (4-Methyl-2-pentanone):	0.0	tons/y	Material balance
Methyl tert butyl ether:	0.029	tons/y	Material balance
Methylene chloride; (Dichloromethane):	0.737	tons/y	Material balance
Methylenebiphenyl isocyanate; (MDI); (Diphenylmethane diisocyanate):	0.373	tons/y	Material balance
Mineral Fibers:	0.168	tons/y	Material balance
Naphthalene:	0.001	tons/y	Material balance
Nickel:	0.0	tons/y	Material balance
Nickel compounds:	0.074	tons/y	Material balance
Nitrobenzene; (nitro-Benzene):	0.0	tons/y	Material balance
Nitrophenol(4-); (p-Nitrophenol):	0.0	tons/y	Material balance
PCE; (Perchloroethylene); (Tetrachloroethylene); (Tetrachloroethene):	0.007	tons/y	Material balance
Phenol:	0.0	tons/y	Material balance
Phenylenediamine(p-); (Phenylenediamine):	0.0	tons/y	Material balance
Phosphine:	0.0	tons/y	Material balance
Phosphorus:	0.0	tons/y	Material balance
Phthalic anhydride:	0.001	tons/y	Material balance
Polycylic Organic Matter:	0.002	tons/y	Material balance
Propylene Dichloride (1,2-Dichloropropane):	0.0	tons/y	Material balance
Propylene oxide:	0.0	tons/y	Material balance
Selenium:	0.0	tons/y	Material balance
Selenium compounds:	0.0	tons/y	Material balance
Styrene:	0.002	tons/y	Material balance
Styrene oxide(1,2-Epoxyethylbenzene):	0.001	tons/y	Material balance
TCE; (Trichloroethylene); (Trichloroethene):	0.006	tons/y	Material balance
Tetrachloroethane(1,1,2,2-):	0.001	tons/y	Material balance
Titanium tetrachloride:	0.001	tons/y	Material balance
Toluene diisocyanate(2,4-):	0.019	tons/y	Material balance
Toluene; (Methyl benzene):	0.173	tons/y	Material balance
Total HAP:	5.569	tons/y	Material balance
Trichlorobenzene(1,2,4-):	0.006	tons/y	Material balance
Trichloroethane(1,1,1-) (Methyl Chloroform):	0.0	tons/y	Material balance
Trichloroethane(1,1,2-):	0.0	tons/y	Material balance
Triethylamine:	0.007	tons/y	Material balance
Trimethylpentane(2,2,4-):	0.002	tons/y	Material balance
Urethane; (Ethyl carbamate):	0.0	tons/y	Material balance
Vinyl acetate; (Vinyl acetate monomer):	0.0	tons/y	Material balance
Volatile Organic Compounds (VOC):	11.46	tons/y	Material balance
Xylene(m-); (1,3-Dimethylbenzene); (meta-Xylene):	0.004	tons/y	Material balance
Xylene(o-); (1,2-Dimethylbenzene); (ortho-Xylene):	0.005	tons/y	Material balance
Xylene(p-); (1,4-Dimethylbenzene); (para-Xylene):	0.009	tons/y	Material balance

Xylenes (total); (Xylol):	0.2	tons/y	Material balance
bis(2-ethylhexyl) phthalate; (Di-2-ethylhexyl phthalate); (DEHP):	0.0	tons/y	Material balance

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: ACT -42
Designation: RLUOB-CHEM
Description: Chemical Usage, Bldg. TA-55-400 (lab portion of RLUOB Bldg.)
Type: Research/Testing
SCC: Industrial Processes, Photo Equip/Health Care/Labs/Air Condit/SwimPools, Laboratories, Bench Scale Reagents: Research

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

Fuel Type: No Fuel Combusted

Operating Detail

	Value
Operating Time in Hours per Day:	24
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	8760
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Total HAP:	0.013	tons/y	Material balance
Volatile Organic Compounds (VOC):	0.0	tons/y	Material balance

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-89
Designation: TA-52-11
Description: Data Disintegrator/industrial Shredder
Type: Shredder
SCC: Industrial Processes, Pulp and Paper and Wood Products, Miscellaneous Paper Products, Other Not Classified

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

Input Materials Processed: Paper (INPUT)

Operating Detail

	Value
Operating Time in Hours per Day:	7
Operating Time in Days per Week:	5
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	1820
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Particulate Matter (10 microns or less):	0.267	tons/y	Manufacturer Specification
Particulate Matter (2.5 microns or less):	0.178	tons/y	Manufacturer Specification
Particulate Matter (condensable):	0.297	tons/y	Manufacturer Specification

Subject Item Comments

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: RPNT-40
Designation: SSM from TA-3-22-CHP-1
Description: Routine Start up Shut down Maintenance
Type: Stack/Vent
SCC: Industrial Processes, Oil and Gas Production, Fugitive Emissions, Fugitive Emissions

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

Unit has not been installed.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-166
Designation: TA-3-22-CHP-1
Description: Combustion Turbine + Heat recovery steam generator (HRSG)
Type: Turbine
SCC: Internal Combustion Engines, Electric Generation, Natural Gas, Turbine

General Information

Was this equipment active at any time during the year? No

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:		
Materials Consumed:		
Fuel Heating Value:		
Percent Sulfur of Fuel:		percent
Percent Ash of Fuel:		percent
Percent Carbon Content:		percent

Operating Detail

	Value
Operating Time in Hours per Day:	
Operating Time in Days per Week:	
Operating Time in Weeks per Year:	
Operating Time in Hours per Year:	0
Percent of Operation During Winter:	
Percent of Operation During Spring:	
Percent of Operation During Summer:	
Percent of Operation During Fall:	

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method

Subject Item Comments

The unit has not been installed.

Print Close

Facility Annual Emissions - Subject Item Submittal Review

Thursday, March 09, 2023

Agency ID: 856
Facility Name: Los Alamos National Laboratory
Organization Name: U.S. Department of Energy National Nuclear Security Administration
Submittal Status: 2022 Submittal (In Process)

Was this facility active at any time during the year? Yes
Oil & Gas Industry Segment: Not Applicable

Subject Item ID: EQPT-177
Designation: TA-3-22-CT-1
Description: Combustion Turbine (Siemens)
Type: Turbine
SCC: Internal Combustion Engines, Electric Generation, Natural Gas, Turbine

General Information

Was this equipment active at any time during the year? Yes

Supplemental Parameters

	Amount	Unit of Measure
Fuel Type:	Natural Gas	
Materials Consumed:	668.0	MM SCF
Fuel Heating Value:	1052.1	MM BTU/MM SCF
Percent Sulfur of Fuel:	0.001	percent
Percent Ash of Fuel:	0.0	percent
Percent Carbon Content:	65.0	percent

Operating Detail

	Value
Operating Time in Hours per Day:	12
Operating Time in Days per Week:	7
Operating Time in Weeks per Year:	52
Operating Time in Hours per Year:	2920
Percent of Operation During Winter:	25
Percent of Operation During Spring:	25
Percent of Operation During Summer:	25
Percent of Operation During Fall:	25

Actual Pollutants

Pollutant	Amount	Unit of Measure	Calculation Method
Carbon Dioxide (combustion):	37302.117	metric tons/y	40 CFR 98 Subpart C
Carbon Monoxide:	3.508	tons/y	Design calculation
Methane (combustion):	0.703	metric tons/y	40 CFR 98 Subpart C
Nitrogen Dioxide:	16.873	tons/y	Design calculation
Nitrous Oxide (combustion):	0.07	metric tons/y	40 CFR 98 Subpart C
Particulate Matter (10 microns or less):	2.272	tons/y	Design calculation
Particulate Matter (2.5 microns or less):	2.272	tons/y	Design calculation
Particulate Matter (condensable):	2.272	tons/y	EPA emission factors (e.g., AP-42)

Sulfur Dioxide:	1.169	tons/y	Design calculation
Total HAP:	0.436	tons/y	Design calculation
Volatile Organic Compounds (VOC):	0.735	tons/y	Design calculation

Subject Item Comments

This source has a maximum rated heat input capacity greater than or equal to 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(A), the weighted annual average HHV was calculated using Equation C-2b.

Print Close

2022 Emission Inventory | AI856 LANL - Asphalt Batch Plant Emissions Calculations

Year	2022
Type	Asphalt Drum/Burner
NMED ID	EQPT-116
Title V Designation	TA-60-BDM
Description	Asphalt Plant Dryer

Equations for Emissions Calculations

Criteria Pollutatant and HAP Emissions (ton/yr) = Emission Factor (lb/ton) * Annual Asphalt Production (tons/yr) * (1 ton/2000 lb)

Greenhouse Gas Emissions (metric tons/yr) = Emission Factor (kg/mmbtu) * Fuel (scf/yr) * HHV (mmBTU/scf) * metric ton/1000 kg

Pollutant	Emission Factor (lb/ton)	Annual Emissions (tons/year)	Calculation Basis
NOx	0.012	0.0000	(b)
CO	0.434	0.0000	(b)
PM	0.007	0.0000	(b)
PM-10	0.006	0.0000	(c)
PM-2.5	0.006	0.0000	(c)
SOx	0.0046	0.0000	(a)
VOC	0.0082	0.0000	(a)
EthylBenzene	0.0022	0.0000	(d)
Formaldehyde	0.00074	0.0000	(d)
Xylene	0.0027	0.0000	(d)
Greanhouse Gases	**Emission Factor (kg/mmbtu)**	**Annual Emissions (metric tons/year)**	**Calculation Basis**
Carbon Dioxide	53.06	0.00	(e)
Methane	0.001	0.000	(e)
Nitrous Oxide	0.0001	0.000	(e)

High Heat Value
0.0010585 mmBTU/scf

Fuel Use
0 scf/yr

Asphalt Production
0.0 ton/year

References for Emission Factors
(a) AP-42, Sec. 11.1, *Hot Mix Asphalt Plants* , Table 11.1-5 & 11.1-6, Updated 4/2004
(b) Calculated using stack test results performed on May 18, 2009 by TRC Air Mesurements.
(c) PM-10 emission factor is calculated as 64% of the PM emission factor (from stack test), using the same ratio of PM to PM-10 as provided in AP-42 Table 11.1-1. No data provided for PM-2.5, assume same as PM-10.
(d) AP-42, Table 11.1-9, *Hot Mix Asphalt Plants,* Updated 4/2004
(e) 40 CFR Part 98, Subpart C

2022 Emission Inventory | AI856 LANL - Beryllium Emissions Calculations

Year	2022
Type	Beryllium Work
NMED ID	ACT-2
Title V Designation	TA-35-213
Description	Be Target Fabrication Facility - Machining TA-35-213
Emission Calculation Description -	Emissions for the Target Fabrication Facility are from initial compliance testing of that source and calculated based on a conservative assumption of 8 hour work days. Log books were checked to verify that work days were much less than 8 hours.
2022 Emissions =	< 0.018 grams

Year	2022
Type	Beryllium Work
NMED ID	ACT-3
Title V Designation	TA-3-141
Description	Be Test Facility - Machining TA-3-141
Emission Calculation Description -	Emission values shown for the Beryllium Test Facility are from actual stack emission measurements which are submitted to NMED quarterly.
2022 Emissions =	0.016 grams

Year	2022
Type	Beryllium Work
NMED ID	ACT-6
Title V Designation	TA-55-PF-4
Description	Plutonium Facility Beryllium machining, weld cutting/dressing and metallography
Emission Calculation Description -	Emissions for the Plutonium Facility are calculated based on permitted throughputs. Log books were checked to verify that throughputs were much less than permitted values. The Plutonium Facility foundry operations did not operate during 2022.
2022 Emissions =	< 2.91 grams

Year	2022
Type	Beryllium Work
NMED ID	ACT-41
Title V Designation	TA-3-66
Description	Sigma Facility - electroplating,metallography, and chemical milling
Emission Calculation Description -	Emission Factors for the Sigma Facility are based on currently permitted similar processes (see Sections 4 and 6 of Sep 1997 application for permit 634-M2, and permit 1081-M1-R3).
2022 Emissions =	0.012 grams

2022 Emission Inventory | AI856 LANL - Boilers Emissions Calculations

Year	2022
Type	Boilers except those at the power plant
NMED ID	multiple (see emission table below)
Title V Designation	EQPT 11, EQPT 12, EQPT 29, EQPT 30, EQPT 53, EQPT 90, EQPT 104, EQPT 105, EQPT 134
Description	Boilers located at various locations not including the power plant

Emission Factors (lb/MMscf)

Pollutant	Small Uncontrolled Boilers[a]	TA-16 Low NOx Boilers[d]	TA-55-6 Boilers[c]	RLUOB Boilers
NOx	100	37.08	138	29.9
SOx	0.6	0.6	0.6	0.6
PM[b]	7.6	7.6	14.2	4.9
PM-10[b]	7.6	7.6	14.2	4.9
PM-2.5[b]	7.6	7.6	14.2	4.9
CO	84	37.08	38.2	38.1
VOC	5.5	5.5	5.98	25.8
Formaldehyde[e]	0.075	0.075	0.075	0.075
Hexane[e]	1.8	1.8	1.8	1.8
Greanhouse Gases[f]	**(kg/mmbtu)**			
Carbon Dioxide	53.06			
Methane	0.001			
Nitrous Oxide	0.0001			

References for Emission Factors
(a) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers.
(b) Emission factors for natural gas of PM-10 and PM-2.5 are roughly equal to those of PM, Natural Gas Combustion, Table 1.4-2.
(c) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers for SOx. Stack test on 3/00 for NOx. Otherwise, Emission factors from Sellers Engineering Co.
(d) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers; Emission factors for NOx and CO from Sellers Engineering Co (low-NOx boilers).
(e) All HAP emission factors from AP-42 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 1.4-4.
(f) 40 CFR Part 98, Subpart C
(g) This source has a maximum rated heat input capacity less than 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(B), the arithmetic average HHV was used for calculations.

High Heat Value (mmBTU/scf)[g]
0.0010585

2022 Natural Gas Use

Boiler ID	TA-16-1484 BS-1	TA-16-1484 BS-2	TA-53-365 BHW-1	TA-53-365 BHW-2	TA-55-6 BHW-1	TA-55-6 BHW-2	B-1 CMRR	B-2 CMRR	B-3 CMRR
NG Use (MMscf/yr)	8.042	8.042	9.010	9.010	10.684	10.907	1.037	1.037	1.037

Equations for Emissions Calculations

Annual Emissions (tons/year) = Emission Factor (lb/MMscf) * Annual natural gas consumption (MMscf/year) * (1 ton/2000 lb)

Greenhouse Gas Emissions (metric tons/yr) = Emission Factor (kg/mmbtu) * Fuel (scf/yr) * HHV (mmBTU/scf) * metric ton/1000 kg

2022 Boiler Emissions for Annual EI Reporting

Pollutant	EQPT-134 TA-16-1484-BS-1 (tons/yr)	EQPT-53 TA-16-1484-BS-2 (tons/yr)	EQPT-11 TA-53-365-BHW-1 (tons/yr)	EQPT-12 TA-53-365-BHW-2 (tons/yr)	EQPT-29 TA-55-6-BHW-1 (tons/yr)	EQPT-30 TA-55-6-BHW-2 (tons/yr)	EQPT-90 RLUOB-BHW-1 (tons/yr)	EQPT-104 RLUOB-BHW-2 (tons/yr)	EQPT-105 RLUOB-BHW-3 (tons/yr)
NOx	0.149	0.149	0.451	0.451	0.737	0.753	0.015	0.015	0.015
SOx	0.002	0.002	0.003	0.003	0.003	0.003	0.000	0.000	0.000
PM	0.031	0.031	0.034	0.034	0.076	0.077	0.003	0.003	0.003
PM-10	0.031	0.031	0.034	0.034	0.076	0.077	0.003	0.003	0.003
PM-2.5	0.031	0.031	0.034	0.034	0.076	0.077	0.003	0.003	0.003
CO	0.149	0.149	0.378	0.378	0.204	0.208	0.020	0.020	0.020
VOC	0.022	0.022	0.025	0.025	0.032	0.033	0.013	0.013	0.013
Formaldehyde	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hexane	0.007	0.007	0.008	0.008	0.010	0.010	0.001	0.001	0.001
Greanhouse Gases	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**	**(metric tons/year)**
Carbon Dioxide	451.67	451.67	506.04	506.04	600.06	612.58	58.24	58.24	58.24
Methane	0.0085	0.0085	0.0095	0.0095	0.0113	0.0115	0.0011	0.0011	0.0011
Nitrous Oxide	8.51E-04	8.51E-04	9.54E-04	9.54E-04	1.13E-03	1.15E-03	1.10E-04	1.10E-04	1.10E-04

2022 Emission Inventory | AI856 LANL - Degreaser

Year	2022
Type	Parts Washer
NMED ID	EQPT-21
Title V Designation	TA-55-DG-1
Description	Degreaser - Ultrasonic Cold batch TA-55-4

Solvent Trichloroethylene

Degreaser Emissions January-June 2022 (lbs)	
Jan-22	13.845
Feb-22	5.538
Mar-22	5.538
Apr-22	5.538
May-22	8.307
Jun-22	0.000
Total lbs:	**38.77**
Total tons:	**0.0194**

Degreaser Emissions July-December 2022 (lbs)	
Jul-22	8.307
Aug-22	2.769
Sep-22	0.000
Oct-22	8.307
Nov-22	11.076
Dec-22	2.769
Total lbs:	**33.23**
Total tons:	**0.017**

Total lbs 2022:	**71.99**
Total tons 2022:	**0.036**

2022 Emission Inventory | AI856 LANL - Internal Combustion Engine

Year	2022
Type	Internal Combustion Engine
NMED ID	EQPT-119, EQPT-120, EQPT-128, EQPT-135, EQPT-143, EQPT-146, EQPT-147, EQPT-153, EQPT-154, EQPT-155, EQPT-156, EQPT-160, EQPT-161, EQPT-162, EQPT-171
Title V Designation	Four TA-33-Generators; Three RLUOB Generators; Three TA-55 Generators; One TA-48 Generator
Description	Multiple generators located at TA-33; 3 generators located at TA-55 CMRR; 5 generators TA-55, 1 at TA-50, 1 at TA-48, and 1 at TA-63-177

EMISSION FACTORS (EF)	NOx lb/kw-hr	CO lb/kw-hr	SOx lb/kw-hr	PM lb/kw-hr	PM_{10} lb/kw-hr	VOC lb/kw-hr	Calculation Basis
TA-33-G-1P	2.01E-02	2.01E-03	5.36E-04	6.17E-04	6.17E-04	1.48E-03	(a)
TA-33-G-2	4.17E-02	1.21E-02	2.87E-03	2.87E-03	2.87E-03	3.31E-03	(b)
TA-33-G-3	4.17E-02	1.21E-02	2.87E-03	2.87E-03	2.87E-03	3.31E-03	(b)
TA-33-G-4	4.17E-02	2.51E-02	2.87E-03	2.87E-03	2.87E-03	3.31E-03	(b)
RLUOB-GEN-1	2.03E-02	2.51E-02	5.29E-04	1.19E-03	9.92E-04	2.87E-03	(c)
RLUOB-GEN-2	2.03E-02	2.51E-02	5.29E-04	1.19E-03	9.92E-04	2.87E-03	(c)
RLUOB-GEN-3	2.03E-02	2.51E-02	5.29E-04	1.19E-03	9.92E-04	2.87E-03	(c)
TA-48-GEN-1	8.82E-03	7.72E-03	6.61E-06	4.41E-04	3.00E-03	8.82E-03	(d)
TA-55-GEN-1	4.20E-02	9.00E-03	3.00E-03	3.00E-03	3.00E-03	3.00E-03	(e)
TA-55-GEN-2	4.20E-02	9.00E-03	3.00E-03	3.00E-03	3.00E-03	3.00E-03	(e)
TA-55-GEN-3	3.20E-02	7.00E-03	5.40E-04	1.00E-03	1.00E-03	1.00E-03	(e)
TA-50-184-GEN-1	3.20E-02	7.00E-03	5.40E-04	1.00E-03	1.00E-03	1.00E-03	(e)
TA-55-GEN-4	3.20E-02	7.00E-03	5.40E-04	1.00E-03	1.00E-03	1.00E-03	(e)
TA-55-GEN-5	3.20E-02	7.00E-03	5.40E-04	1.00E-03	1.00E-03	1.00E-03	(e)
TA-63-177	4.20E-02	9.00E-03	3.00E-03	3.00E-03	3.00E-03	3.00E-03	(e)

Greanhouse Gases Emission Factors[f]	(kg/mmBTU)
Carbon Dioxide (CO2)	73.96
Methane (CH4)	0.003
Nitrous Oxide (N2O)	0.0006

High Heat Value
0.138 (mmBTU/gal)

The size limit for determining large vs. small diesel fired generator. This information was taken from the operating permit application.
447 kw

References for Emission Factors
(a) TA-33-G-1P NOx, CO, PM, VOC emission rates are from manufacturer's data; the values were given in gm/HP-hr; The following conversion factors were used to obtain lb/kW-hr; 453.6 g/lb and 1.341 hp-hr/kWh to convert emission factor units to lb/kWh; total HC was used as VOC; actual VOC would be much lower; SO2 from Table 3.4-1 AP-42 based on 0.05% S in fuel
(b) TA-33 G2, G3, G4 CO emission rate are from EPA Tier 1 nonroad standards; all others from AP-42, Section 3.3 (see TV permit renewal app calcs from 2013)
(c) RLUOB-GEN-1, GEN-2, GEN-3 emission rates for NOx, CO, PM and VOC from applicable Tier 1 standards (see TV renewal app 2013); Emission factors for SOx and PM10 from AP-42
(d) TA-48 NOx, CO, VOC and PM factors from Tier 3 engine standards (see TV renewal app); EF for SOx, PM10 and HAPs from AP-42.
(e) Emission factors for generators at TA-55 are from AP-42. Emission factors for small diesel fired engines were taken from AP-42 (fifth edition) Tables 3.3-1 and 3.3-2. Large generators emission factors were taken from AP-42 (fifth edition) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.
(f) 40 CFR Part 98, Subpart C

Equations for Emissions Calculations

Emission Rate in tons/year = EF (lb/kW-hour) * Equip. Rating (kW-hr) * Number of hours (hour/year) / (1 ton/2000 lb)

GHG Emissions for FO Use (metric tons/yr) = EF (kg/mmbtu) * Fuel (gal/yr) * HHV (mmBTU/gal) * metric ton/1000 kg

2022 Generator Emissions for Annual EI Reporting

Permit ID	NMED ID	kW rating	Total (hrs/year)	Fuel Use (gal/yr)	NOx (tons/yr)	CO (tons/yr)	SOx (tons/yr)	PM (tons/yr)	PM_{10} (tons/yr)	VOC (tons/yr)	CO2 (metric tons/yr)	CH4 (metric tons/yr)	N2O (metric tons/yr)
TA-33-G-1P	EQPT-146	1111.5	7.6	144.40	0.085	0.008	0.002	0.003	0.003	0.006	1.47	5.98E-05	1.20E-05
TA-33-G-2	EQPT-119	25	0.1	0.17	0.000	0.000	0.000	0.000	0.000	0.000	0.00	7.04E-08	1.41E-08
TA-33-G-3	EQPT-120	25	0.2	0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.00	1.41E-07	2.82E-08
TA-33-G-4	EQPT-135	281.25	2.0	31.60	0.012	0.007	0.001	0.001	0.001	0.001	0.32	1.31E-05	2.62E-06
RLUOB-Gen-1	EQPT-128	1656.1	0.0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00E+00	0.00E+00
RLUOB-Gen-2	EQPT-153	1656.1	18.2	1885.52	0.306	0.379	0.008	0.018	0.015	0.043	19.24	7.81E-04	1.56E-04
RLUOB-Gen-3	EQPT-154	1656.1	14.9	1543.64	0.250	0.310	0.007	0.015	0.012	0.035	15.76	6.39E-04	1.28E-04
TA-48-Gen-1	EQPT-147	186	0.0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00E+00	0.00E+00
TA-55-Gen-1	EQPT-156	40.2	2.8	4.76	0.002	0.001	0.000	0.000	0.000	0.000	0.05	1.97E-06	3.94E-07
TA-55-Gen-2	EQPT-155	40.2	2.8	4.76	0.002	0.001	0.000	0.000	0.000	0.000	0.05	1.97E-06	3.94E-07
TA-55-Gen-3	EQPT-143	1335	18.3	289.14	0.391	0.086	0.007	0.012	0.012	0.012	2.95	1.20E-04	2.39E-05
TA-50-184-GEN-1	EQPT-160	450	91.9	1020.09	0.662	0.145	0.011	0.021	0.021	0.021	10.41	4.22E-04	8.45E-05
TA-55-GEN-4	EQPT-161	450	0.0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00E+00	0.00E+00
TA-55-GEN-5	EQPT-162	450	0.0	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.00E+00	0.00E+00
TA-63-177	EQPT-171	175	34.1	508.09	0.125	0.027	0.009	0.009	0.009	0.009	5.19	2.10E-04	4.21E-05

2022 Emission Inventory | AI856 LANL - Data Disintegrator

Year 2022
Type Shredder
NMED ID 89
Title V Designation TA-52-11
Description Data Disintegrator/Industrial Shredder

Emission Factors

Pollutant	Percent Material in Exhaust [b]	Percent in Exhaust [e]	Control [d] Efficiency (Cyclone)	Control [d] Efficiency (Baghouse)
PM 2.5	15%	15%	0%	95.0%
PM 10	15%	90%	75%	95.0%
TSP	15%	100%	75%	95.0%

Total Boxes Shredded [c]
7,039

Average Box Weight [a]
45 lb

References for Emission Factors				
(a) Estimated maximum box weight is 45 pounds. Information provided by shredding operations. Full box weight of tightly packed paper.	**(b)** Emission Factor (percentage of material shredded that will enter into the exhaust) obtained from the manufacturer of the air handling system, AGET Manufacturing Co. 15% is also listed in the construction permit application.	**(c)** Information provided by the shredding operations personnel.	**(d)** Information on control equipment efficiencies was provided by the manufacturer (SEM) of the Data Disintegrator. Those values not given were extrapolated using manufacturer data. Efficiencies of 75% for the Cyclone and 95% for the bag house are listed in the construction permit application. (see cyclone efficiency tab for more info.)	**(e)** Manufacturer provided info that the dust into the exhaust would be in the size range of 5-20 um. Conservative assumption that 15% is PM2.5, and 90% is PM10.

Equation for Emissions Calculations

Emission Rate = Boxes Shredded * Average Box Weight * Percent Material in Exhaust * Percent in Exhaust * (1 - Cyclone Control Efficiency) * (1 - Baghouse Control Efficiency)

2022 TA-52-11 Data Disintegrator Emissions for Annual EI Reporting

Pollutant	Amount Processed (pounds)	PM-2.5 Emissions (pounds)	PM-2.5 Emissions (tons)	PM-10 Emissions (pounds)	PM-10 Emissions (tons)	TSP Emissions (pounds)	TSP Emissions (tons)
CY Annual Total	316,755	356.3	0.178	534.5	0.267	593.9	0.297

2022 Emission Inventory | AI856 LANL - Power Plant Boilers

Year 2022
Type Boilers - Power Plant
NMED ID EQPT-24; EQPT-25; EQPT-26 (pph, Natural Gas); EQPT-137, EQPT-138, EQPT-141 (pph; No. 2 fuel oil)
Designation TA-3-22-1; TA3-22-2; TA-3-22-3
Description Power Plant Boiler (pph, Natural Gas), Power Plant Boiler (pph, No. 2 fuel oil)

Pollutant	Emission Factor (EF)	
	Natural [a] Gas (lb/MMscf)	Fuel Oil [f] (lbs/ 1000 gal)
Nox [c]	58	8.64
SOx [g]	0.6	7.4
PM [d]	7.6	3.3
PM-10 [d]	7.6	2.3
PM-2.5 [d]	7.6	1.55
CO [e]	40	5.0
VOC	5.5	0.2
Formaldehyde	0.075	0.048
Hexane	1.8	-
Greanhouse Gases [h]	(kg/mmbtu)	(kg/gal)
Carbon Dioxide	53.06	73.96
Methane	0.001	0.003
Nitrous Oxide	0.0001	0.0006
High Heat Values		
Natural Gas [i]	0.00105674 mmBtu/scf	
Fuel Oil	0.138 mmBtu/gal	

References for Emission Factors

(a) AP-42, 7/98, Section. 1.4, *Natural Gas Combustion* , Tables 1.4-1, 1.4-2

(b) Fuel usage obtained from utilities on a monthly basis

(c) Average of source tests conducted on all 3 boilers September 2002 burning natural gas after FGR installed. Assumed FGR resulted in similar Nox reduction for oil.

(d) All PM from natural gas is assumed <1µ, so PM-10, PM-2.5 and total PM have equal EFs, AP-42, Natural Gas Combustion, Table 1.4-2. The PM emission factor for fuel oil is the sum of filterable and condensable PM.

(e) AP-42, 1/95, Section. 1.4, Natural Gas Combustion, Table 1.4-2. Consistent with previous stack tests.

(f) AP-42, 9/98, Section. 1.3, *Fuel Oil Combustion* , Table 1.3-1 with Errata, Table 1.3-3, and Table 1.3-6.

(g) Boilers>100 MMBtu/hr: SOx Emission Factor (SO_2 {142S} + SO_3 {5.7S}) = 147.7 * S (from AP-42, Table 1.3-1 w/Errata) (S = weight % sulfur in oil)(Sulfur content per analysis on oil in tanks in August 01', no new oil delivered in 02'/03')

(h) 40 CFR Part 98, Subpart C

(i) This source has a maximum rated heat input capacity greater than or equal to 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(A), the weighted annual average HHV was calculated using Equation C-2b.

Boiler ID	Boiler TA-3-22-1		Boiler TA-3-22-2		Boiler TA-3-22-3		Boiler TA-3-22-4&5	
	EQPT-24	EQPT-141	EQPT-25	EQPT-137	EQPT-26	EQPT-138	EQPT-170	EQPT-169
Type of fuel	Natural Gas	#2 Fuel Oil	Natural Gas	#2 Fuel Oil	Natural Gas	#2 Fuel Oil	Natural Gas	#2 Fuel Oil
Units	mscf	gallons	mscf	gallons	mscf	gallons	mscf	gallons
Annual Use	0	0	141,625	0	186,153	630	0	0

Equations for Emissions Calculations

Criteria Pollutants Emissions for NG Use (ton/year) = Fuel (MSCF/year) / 1 MMscf/1000 Mscf * EF (lb/MMscf) * (1 ton/2000 lb)

Criteria Pollutants Emissions for FO Use (ton/year) = Fuel (gal/year) * EF (lb/1000 gal) * (1 ton/2000 lb)

GHG Emissions for NG Use (metric tons/yr) = EF (kg/mmbtu) * Fuel (Mscf/yr)/1 MMscf/1000 Mscf * HHV (mmBTU/scf) * metric ton/1000 kg

GHG Emissions for FO Use (metric tons/yr) = EF (kg/mmbtu) * Fuel (gal/yr) * HHV (mmBTU/gal) * metric ton/1000 kg

2022 Boiler Emissions for Annual EI Reporting

Pollutant	Boiler TA-3-22-1		Boiler TA-3-22-2		Boiler TA-3-22-3		Boiler TA-3-22-4&5	
	EQPT-24	EQPT-141	EQPT-25	EQPT-137	EQPT-26	EQPT-138	EQPT-170	EQPT-169
	Annual Emissions Natural Gas (tons/yr)	Annual Emissions Fuel Oil (tons/yr)	Annual Emissions Natural Gas (tons/yr)	Annual Emissions Fuel Oil (tons/yr)	Annual Emissions Natural Gas (tons/yr)	Annual Emissions Fuel Oil (tons/yr)	Annual Emissions Natural Gas (tons/yr)	Annual Emissions Fuel Oil (tons/yr)
NOx [c]	0.000	0.000	4.107	0.000	5.398	0.003	0.000	0.000
SOx [g]	0.000	0.000	0.042	0.000	0.056	0.002	0.000	0.000
PM [d]	0.000	0.000	0.538	0.000	0.707	0.001	0.000	0.000
PM-10 [d]	0.000	0.000	0.538	0.000	0.707	0.001	0.000	0.000
PM-2.5 [d]	0.000	0.000	0.538	0.000	0.707	0.000	0.000	0.000
CO [e]	0.000	0.000	2.833	0.000	3.723	0.002	0.000	0.000
VOC	0.000	0.000	0.389	0.000	0.512	0.000	0.000	0.000
Formaldehyde	0.000	0.000	0.005	0.000	0.007	0.000	0.000	0.000
Hexane	0.000	0.000	0.127	0.000	0.168	0.000	0.000	0.000
Greanhouse Gases [h]	(metric tons/year)	(metric tons/year)	(metric tons/year)	(metric tons/year)	(metric tons/year)	(metric tons/year)	(metric tons/year)	(metric tons/year)
Carbon Dioxide	0.00	0.00	7,941.02	0.00	10,437.69	6.43	0.00	0.00
Methane	0.00	0.00	0.15	0.00	0.20	0.00	0.00	0.00
Nitrous Oxide	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00

2022 Emission Inventory | AI856 LANL - Power Plant Combustion Turbine

Year	2022
Type	Turbine
NMED ID	EQPT-177
Title V Designation	TA-3-22-CT-1
Description	Combustion Turbine

Equations for Emissions Calculations

Annual Emissions (tons/year) = Annual Gas Use (MMscf) * EF (lb/MMscf) * (1 ton/2000 lb)

Greenhouse Gas Emissions (metric tons/yr) = EF (kg/mmbtu) * Fuel (MMscf/yr) * (1,000,000 scf/1 MMscf) * HHV (mmBTU/scf) * metric ton/1000 kg

Pollutant	Emission Factors (lb/MMscf)	Annual Emissions (tons/year)	Calculation Basis
NOx	50.5	16.873	(a)
SOx	3.5	1.169	(b)
PM	6.8	2.272	(c)
PM_{10}	6.8	2.272	(c)
$PM_{2.5}$	6.8	2.272	(c)
CO	10.5	3.508	(a)
VOC	2.2	0.735	(d)
Acetaldehyde	4.12E-02	0.014	(e)
Cadmium	7.11E-02	0.024	(f)
Ethylbenzene	3.30E-02	0.011	(e)
Formaldehyde	7.31E-01	0.244	(e)
Manganese	8.24E-02	0.028	(f)
Nickel	1.18E-01	0.040	(f)
Propylene Oxide	2.99E-02	0.010	(e)
Toluene	1.34E-01	0.045	(e)
Xylenes (isomers)	6.59E-02	0.022	(e)
Greanhouse Gases	**Emission Factor (kg/mmbtu)**	**Annual Emissions (metric tons/year)**	**Calculation Basis**
Carbon Dioxide	53.06	37,302.093	(g)
Methane	0.001	0.7030	(g)
Nitrous Oxide	0.0001	0.0703	(g)

Annual Gas Use
668.229 MMscf

High Heat Value [(h)]
0.0010521 mmBTU/scf

References for Emission Factors

(a) Values are from the initial compliance test (TRC - October 22, 2007). Test shows average NOx as 11.29 lbs/hr and CO as 2.35 lbs/hr. These were divided by the gas flow rate of 0.223620 MMscf/hr to get 50.48 lb/MMscf (rounded to 50.5) for NOx and 10.5 lb/MMscf for CO.The SCFH value (fuel flow rate) from the compliance test report (223620 SCFH or 223.6 MSCFH).

(b) The SOx emission factor was taken from AP-42 Table 3.1-2a. The default value is used when percent sulfur is unknown (0.0034 lb/mmbtu). This is equivilant to converting the 2 grains per 100 scf to percent. The 0.0034 lb/mmbtu was converted to lb/mmscf by multiplying by 1030 btu/scf (the heat value of natural gas), to provide 3.5 lb/mmscf.

(c) PM and PM10 were calculated by taking the AP-42, Table 3.1-2a, EF of 6.6E-3 lb/MMBtu and multiplying it by 1030 BTU/scf to get 6.8 lb/MMscf.

(d) The VOC emission factor was taken from AP-42 Table 3.1-2a. The factor, 2.1E-03 lb/mmbtu, was converted to lb/mmscf by multiplying by 1030 giving 2.2 lbs/mmscf.

(e) Emission factor from AP-42, table 3.1-3 (lb/mmbtu). This was multiplied by 1030 Btu/scf to provide the lb./mmscf factor.

(f) Emission factors from EPA FIRE database (SCC: 20300202 & 20220201). These values were also converted from lb/mmbtu to lb/mmscf.

(g) 40 CFR Part 98, Subpart C

(h) This source has a maximum rated heat input capacity greater than or equal to 100 mmBtu/hr. Per 40 CFR Part 98.33 Paragraph (a)(2)(ii)(A), the weighted annual average HHV was calculated using Equation C-2b.

2022 Emission Inventory | AI856 LANL - Evaporative Sprayers

Year 2022
Type Fugitives
NMED ID RPNT-35, RPNT-36, RPNT-37, RPNT-38, RPNT-39, RPNT-41
Title V Designation TA-60-EVAP-1, TA-60-EVAP-2, TA-60-EVAP-3,TA-60-EVAP-4, TA-60-EVAP-5, TA-60-EVAP-6
Description Water Spray Evaporators

Emission Factors

HAPs	PPM [(a)]	Weight Fraction
Total PCB	3.94E-07	3.94E-13
Chloroform	0.0007	6.95E-10
Chloromethane	0.0044	4.43E-09
Bromoform	0.0005	5.10E-10
Cyanide	0.0054	5.37E-09
Manganese	0.0025	2.49E-09
Mercury	0.00014	1.37E-10
Nickel	0.021	2.05E-08

References for Emission Factors

(a) Values from pond sampling laboratory results for GC Semivolatile Herbicide, GC Semivolatile Pesticide, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals and Radiochemistry, GEL Laboratories. Emission factors from either the 2015, 2018 or 2022 analysis were used depending on what HAP was sampled for and what HAP was detected.

(b) Water Density = 8.34 lb/gallon

(c) Max Pump Rate Per Sprayer = 7.51 gallons/min.

(d) Evaporation Rate = 42.5 Percent

Particulate Analytical Data

	PPM	Weight Fraction	
Pond TDS	120450.00	0.12	
SMI Model 120F (Sprayers 1-5)		PM10	0%
		PM2.5	0%
SMI Model 420B (Sprayer 6)		PM10	0.44%
		PM2.5	0%

(e) Values from pond sampling laboratory results for GC Semivolatile Herbicide, GC Semivolatile Pesticide, GC/MS Semivolatile, GC/MS Volatile, General Chemistry, Metals and Radiochemistry, GEL Laboratories. Emission factors from 2022 sampling event.

2022 Hours of Operation

TA-60-EVAP-1	TA-60-EVAP-2	TA-60-EVAP-3	TA-60-EVAP-4	TA-60-EVAP-5	TA-60-EVAP-6
0	672	0	0	0	0

Equation for Emissions Calculations

Annual Emissions (tons/yr) = Water Density (lb/gal) * Max Pump Rate (g/min) * (60 min/hr) * Hours of Operation (hr) * Evaporation Rate/100 * Weight Fraction * (1 ton/2000 lb)

Particicular Matter (lbs/hr) = Annual Emissions (tons/yr) *(1 ton/2000 lb) * (8760 hrs/yr)

2022 Evaporative Sprayers Emissions for Annual EI Reporting

Pollutant	RPNT-35 TA-60-EVAP-1 (tons/yr)		RPNT-36 TA-60-EVAP-2 (tons/yr)		RPNT-37 TA-60-EVAP-3 (tons/yr)		RPNT-38 TA-60-EVAP-4 (tons/yr)		RPNT-39 TA-60-EVAP-5 (tons/yr)		RPNT-41 TA-60-EVAP-6 (tons/yr)	
Total PCB	0.00E+00		2.11E-10		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Chloroform	0.00E+00		3.73E-07		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Chloromethane	0.00E+00		2.38E-06		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Bromoform	0.00E+00		2.74E-07		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Cyanide	0.00E+00		2.88E-06		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Manganese	0.00E+00		1.34E-06		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Mercury	0.00E+00		7.36E-08		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Nickel	0.00E+00		1.10E-05		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
Particulate Matter	**(tons/yr)**	**(lbs/hr)**	**(tons/yr)**	**(lbs/hr)**	**(tons/yr)**	**(lbs/hr)**	**(tons/yr)**	**(lbs/hr)**	**(tons/yr)**	**(lbs/hr)**	**(tons/yr)**	**(lbs/hr)**
TSP	0.00	0.00	64.64	14.76	0	0	0	0	0	0	0	0
PM10	0	0	0	0	0	0	0	0	0	0	0	0
PM2.5	0	0	0	0	0	0	0	0	0	0	0	0