2022 Emissions Report

In Process

Release Points

Release Point | Location | Additional Information

Identifier:
EP-002

Type:
Vertical

Description:
Dual Fuel Generator Stack

Status:
Operating

Status Year:

Stack Height:
30.0 FEET

Stack Shape:
(•) Circular ( ) Rectangular

Stack Diameter:
1.25 FEET

Exit Gas Temp:
500 °F

Exit Gas Flow Rate:
4000 SCFM - STANDARD CUBIC FEET PI

Exit Gas Velocity:

Fence Line Distance:
FEET

Related Unit Processes:
EU-002 - Dual Fuel Generator, EU-002 -1 - Diesel Combustion
EU-002 - Dual Fuel Generator, EU-002 -2 - Dual Fuel Combustion

Comments:

2022 Emissions Report

In Process

Emission Units

Emission Unit | Additional Information

Identifier:

EU-002

Type:

160 - Reciprocating IC Engine

Description:

Dual Fuel Generator

Status:

OP - Operating

Status Year:

Operation Start Date:

Design Capacity

Related Unit Processes:

EU-002 -1 - Diesel Combustion

EU-002 -2 - Dual Fuel Combustion

Comments:

Delete | Cancel | Save

2022 Emissions Report

In Process

Unit Processes

Unit Process | Regulatory Programs | Control Approach | Release Point Apportionment | Additional Information

Process Identifier:
EU-002 -1

Emission Unit Identifier:
EU-002 - Dual Fuel Generator

SCC:

Code: 20200401 ~ or ~

- Internal Combustion Engines
- Industrial
- Other Fuels
- Diesel: Large Bore Engine

Description:
Diesel Combustion

Status:
OP - Operating

Status Year:

Related Process Emission:
EU-002 -1 - Diesel Combustion

2022 Emissions Report

In Process

Unit Processes

Unit Process | Regulatory Programs | Control Approach | Release Point Apportionment | Additional Information

Release Point Apportionment:

Release Point	%
EP-002 - Dual Fuel Gen	100

2022 Emissions Report

In Process

Unit Processes

Unit Process | Regulatory Programs | Control Approach | Release Point Apportionment | Additional Information

Process Identifier:
EU-002 -2

Emission Unit Identifier:
EU-002 - Dual Fuel Generator

SCC:

Code: 20200402 ~ or ~

- Internal Combustion Engines
- Industrial
- Other Fuels
- Dual Fuel (Oil/Gas): Large Bore Engine

Description:
Dual Fuel Combustion

Status:
OP - Operating

Status Year:

Related Process Emission:
EU-002 -2 - Dual Fuel Combustion

Comments:

2022 Emissions Report

In Process

Unit Processes

Unit Process | Regulatory Programs | Control Approach | Release Point Apportionment | Additional Information

Release Point Apportionment:

Release Point	%
EP-002 - Dual Fuel Gen	100

2022 Emissions Report

In Process

Process Emissions

Process | Operations | Emissions

Process Identifier:

EU-002 -1 - Diesel Combustion

Emission Unit Identifier:

EU-002 - Dual Fuel Generator

SCC:

20200401

Internal Combustion Engines-Industrial-Other Fuels-Diesel: Large Bore Engine

Process is Reported?:

☑ Uncheck this box if there are no reportable emissions for the reporting year

Annual Throughput:

2100

Throughput Unit of Measure:

E6BTU - MILLION BTUS

Throughput Type:

I - Input

Throughput Material:

44 - Diesel

Supplemental Calculation Parameters:

% Ash	% Sulfur	Heat Content (MMBTU/Unit)

Comments:

15,000 gallons diesel * 0.14 MMBtu/gal = 2,100 MMBtu

Previous | Next | Cancel | Save

2022 Emissions Report

In Process

Process Emissions

Process | **Operations** | Emissions

Average Hours/Day:
2.50

Average Days/Week:
4.00

Average Weeks/Year:
20.00

Actual Hours/Year:
200.0

Seasonal Operations:

December-February	March-May	June-August
25.0 %	25.0 %	25.0 %

September-November
25.0 %

2022 Emissions Report

In Process

Process Emissions

Process | Operations | **Emissions**

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
PM25-PRI	0.05	E6BTU	8 - USEPA EF (post-control)	0.052499999999999
PM10-PRI	0.14	E6BTU	8 - USEPA EF (post-control)	0.146999999999999
SO2	0.505	E6BTU	8 - USEPA EF (post-control)	0.530249999999999
NOX	3.2	E6BTU	8 - USEPA EF (post-control)	3.36
VOC	0.0819	E6BTU	8 - USEPA EF (post-control)	0.085995
CO	0.85	E6BTU	8 - USEPA EF (post-control)	0.892499999999999

Individual pollutant calculations for Diesel Combustion (SCC 20200401):

2022 Emissions Report

In Process

Process Emissions

Process | Operations | Emissions

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
PM25-PRI	0.05	E6BTU	8 - USEPA EF (post-control)	0.052499999999999

Pollutant Code:
PM25-PRI - PM2.5 Primary (Filt + Cond)

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.05

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.052499999999999

Comment:
0.05 lbs PM2.5/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.05 tons PM2.5

PM10-PRI	0.14	E6BTU	8 - USEPA EF (post-control)	0.146999999999999

Pollutant Code:
PM10-PRI - PM10 Primary (Filt + Cond)

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.14

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.146999999999999

Comment:
0.14 lbs PM10/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.17 tons PM10

SO2	0.505	E6BTU	8 - USEPA EF (post-control)	0.530249999999999

Pollutant Code:
SO2 - Sulfur Dioxide

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.505

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.530249999999999

Comment:
SO2 emissions factor is (1.01* % sulfur) lbs/MMBtu. Low sulfur diesel is 0.5% sulfur 1.01 * 0.5 = 0.505 lbs/MMBtu 0.505 lbs SO2/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.53 tons

Individual pollutant calculations for Diesel Combustion (SCC 20200401) continued:

NOX	3.2	E6BTU	8 - USEPA EF (post-control)	3.36

Pollutant Code:
NOX - Nitrogen Oxides

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
3.2

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
3.36

Comment:
3.2 lbs NOx/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 3.36 tons NOx

VOC	0.0819	E6BTU	8 - USEPA EF (post-control)	0.085995

Pollutant Code:
VOC - Volatile Organic Compounds

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.0819

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.085995

Comment:
0.0819 lbs VOC/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.09 tons VOC

CO	0.85	E6BTU	8 - USEPA EF (post-control)	0.892499999999999

Pollutant Code:
CO - Carbon Monoxide

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.85

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.892499999999999

Comment:
0.85 lbs CO/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.89 tons CO

2022 Emissions Report

In Process

Process Emissions

Process | Operations | Emissions

Process Identifier:

EU-002 -2 - Dual Fuel Combustion

Emission Unit Identifier:

EU-002 - Dual Fuel Generator

SCC:

20200402

Internal Combustion Engines-Industrial-Other Fuels-Dual Fuel (Oil/Gas): Large Bore Engine

Process is Reported?:

☑ Uncheck this box if there are no reportable emissions for the reporting year

Annual Throughput:

2100

Throughput Unit of Measure:

E6BTU - MILLION BTUS

Throughput Type:

I - Input

Throughput Material:

827 - Dual Fuel (Gas/Oil)

Supplemental Calculation Parameters:

% Ash	% Sulfur	Heat Content (MMBTU/Unit)

Comments:

1,900,000 cubic feet natural gas * 0.00105 MMBtu/cubic feet = 1,995 MMBtu
750 gallons diesel * 0.140 MMBtu/gallon = 105 MMBtu
Total throughput of 1,995 MMBtu + 105 MMBtu = 2,100 MMBtu

Previous | Next | Cancel | Save

2022 Emissions Report

In Process

Process Emissions

Process | **Operations** | Emissions

Average Hours/Day:
2.50

Average Days/Week:
4.00

Average Weeks/Year:
20.00

Actual Hours/Year:
200.0

Seasonal Operations:

December-February
10.0 %

March-May
30.0 %

June-August
40.0 %

September-November
20.0 %

2022 Emissions Report

In Process

Process Emissions

Process | Operations | **Emissions**

Filter:

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
PM25-PRI	0.0556	E6BTU	8 - USEPA EF (post-control)	0.058379999999999
PM10-PRI	0.0573	E6BTU	8 - USEPA EF (post-control)	0.060164999999999
SO2	0.025	E6BTU	8 - USEPA EF (post-control)	0.026249999999999
NOX	2.7	E6BTU	8 - USEPA EF (post-control)	2.835
VOC	0.2	E6BTU	8 - USEPA EF (post-control)	0.209999999999999
CO	1.16	E6BTU	8 - USEPA EF (post-control)	1.218
Benzene	0.00445	E6BTU	8 - USEPA EF (post-control)	0.0046725
Formaldehyde	0.0054	E6BTU	8 - USEPA EF (post-control)	0.005669999999999
Toluene	0.00523	E6BTU	8 - USEPA EF (post-control)	0.005491499999999

Individual pollutant calculations for Diesel Combustion (SCC 20200402):

2022 Emissions Report

In Process

Process Emissions

Process | Operations | **Emissions**

Pollutant:	Emis. Factor (Lbs/Unit):	Emis. Factor UOM:	Calculation Method:	Estimated Emis. (Tons):
PM25-PRI	0.0556	E6BTU	8 - USEPA EF (post-control)	0.058379999999999

Pollutant Code:
PM25-PRI - PM2.5 Primary (Filt + Cond)

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.0556

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.058379999999999

Comment:
0.0556 lbs PM25/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.06 tons PM 2.5

PM10-PRI	0.0573	E6BTU	8 - USEPA EF (post-control)	0.060164999999999

Pollutant Code:
PM10-PRI - PM10 Primary (Filt + Cond)

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.0573

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.060164999999999

Comment:
0.0573 lbs PM10/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.06 tons PM 10

SO2	0.025	E6BTU	8 - USEPA EF (post-control)	0.026249999999999

Pollutant Code:
SO2 - Sulfur Dioxide

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.025

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.026249999999999

Comment:
EPA emissions factor is (0.05 * % sulfur) lbs/MMBtu. Low sulfur diesel is up to 0.5% sulfur 0.05 * 0.5 = 0.025 lbs/MMBtu 0.025 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.03 tons

Individual pollutant calculations for Diesel Combustion (SCC 20200402) continued:

NOX	2.7	E6BTU	8 - USEPA EF (post-control)	2.835

Pollutant Code:
NOX - Nitrogen Oxides

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
2.7

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
2.835

Comment:
2.7 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 2.84 tons

VOC	0.2	E6BTU	8 - USEPA EF (post-control)	0.209999999999999

Pollutant Code:
VOC - Volatile Organic Compounds

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.2

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.209999999999999

Comment:
0.2 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.21 tons

CO	1.16	E6BTU	8 - USEPA EF (post-control)	1.218

Pollutant Code:
CO - Carbon Monoxide

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
1.16

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
1.218

Comment:
1.16 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 1.22 tons

Individual pollutant calculations for Diesel Combustion (SCC 20200402) continued:

Benzene	0.00445	E6BTU	8 - USEPA EF (post-control)	0.0046725

Pollutant Code:
71432 - Benzene

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.00445

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.0046725

Comment:
0.00445 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.00 tons benzene

Formaldehyde	0.0054	E6BTU	8 - USEPA EF (post-control)	0.005669999999999

Pollutant Code:
50000 - Formaldehyde

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.0054

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.005669999999999

Comment:
0.0054 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.01 tons formaldehyde

Toluene	0.00523	E6BTU	8 - USEPA EF (post-control)	0.005491499999999

Pollutant Code:
108883 - Toluene

Calculation Method:
8 - USEPA EF (post-control)

Emission Factor (Lbs/Unit):
0.00523

Emission Factor Unit:
E6BTU - MILLION BTUS

Estimated Emissions (Tons):
0.005491499999999

Comment:
0.00523 lbs/MMBtu * 2,100 MMBtu * 1 ton/2,000 lbs = 0.01 tons toluene