Facility Name:
Orange County Sanitation District - Plant 1

Facility ARB ID: 100255
Facility Reporting Year: 2019

Confidential Data Indication Set to "No" by Reporter

Certification Statement:

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

Facility Representatives

Designated Representative: Lisa Frigo
Alternate Designated Representative: randa abushaban

Facility Location

Physical Address: 10844 Ellis Avenue
City: Fountain Valley
State / Province: CA
ZIP / Postal Code: 92708
Country:

Latitude: 33.69404
Longitude: -117.93807

County: ORANGE
Air Basin: SOUTH COAST
District: SOUTH COAST AQMD

Mailing Address: 10844 Ellis Avenue
City: Fountain Valley
State / Province: CA
ZIP / Postal Code: 92708
Country:

Payment Information (required if subject to AB 32 Cost of Implementation Fee Regulation)

Responsible Party for Payment:
Responsible Party Email:
Responsible Party Phone:
Billing Address:
City:
State / Province:
ZIP / Postal Code:

Country:

Owners / Operators

Name:	Orange County Sanitation District

Facility or Entity Total GHG Emissions Summary

CO2 equivalent emissions, excluding biogenic (subparts C – AA):	2,384.749756 Metric Tons
Exempt biogenic CO2 emissions (subparts C – AA):	23,074.02799 Metric Tons
CO2 equivalent emissions from fuel supplier categories, excluding biogenic (subparts MM – NN):	0 Metric Tons
Exempt biogenic CO2 emissions from fuel supplier categories (subparts MM – NN):	0 Metric Tons
CO2 emissions from CO2 Suppliers (excluding biogenic) (subpart PP):	0 Metric Tons
Exempt biogenic CO2 emissions from CO2 Suppliers (subpart PP):	0 Metric Tons
CO2 equivalent emissions from electric power entities:	0 Metric Tons
Covered CO2 equivalent emissions:	**2,384.749756 Metric Tons**
De Minimis CO2 equivalent emissions:	0 Metric Tons
Maximum allowable De Minimis emissions:	763.763332 Metric Tons

General Facility Reporting Information

NAICS Codes

Primary:	221320 (Sewage Treatment Facilities)
Second Primary:	
Additional:	

U.S. Parent Companies

Parent Company Name:
ORANGE COUNTY SANITATION DISTRICT (OCSD)

Address:
10844 ELLIS AVENUE, FOUNTAIN VALLEY, CA 92708

Percentage of Ownership Interest: 100%

GHG Report Start Date:	2019-01-01
GHG Report End Date:	2019-12-31
Explanation of any calculation methodology changes during the reporting year:	

EPA e-GGRT Facility IDs

Full or Abbreviated GHG Report: Full

Company or Entity qualifies for Small Business Status:	No

Electricity Purchases/Acquisitions for Reporting Facilities (95104(d))

Electricity Provider's Name:	Southern California Edison (SCE)
Provider's ARB ID:	3005
Purchases/Acquisitions:	45,035.5 MWh

Natural Gas Purchases/Acquisitions for Reporting Facilities [95115(k), 95103 (a)(1)]

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	10471095009
Purchases/Acquisitions:	36,552.7 MMBtu
Was this natural gas received directly from an interstate pipeline?	No
Do you grant CARB staff permission to share confidential annual natural gas fuel purchase data with your identified natural gas fuel supplier?	Yes

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	10261095938
Purchases/Acquisitions:	6,562.1 MMBtu
Was this natural gas received directly from an interstate pipeline?	No
Do you grant CARB staff permission to share confidential annual natural gas fuel purchase data with your identified natural gas fuel supplier?	Yes

Cap-and-Trade Facilities: Increases and Decreases in Facility Emissions [95104 (f)]:

For facilities subject to Cap-and-Trade requirements: Have total facility emissions increased or decreased more than 5% in relation to the previous data year? [Not applicable for fuel suppliers, CO2 suppliers, electric power entities, and abbreviated reporters.]

NA (Not applicable: Reporting as an abbreviated reporter, fuel supplier, CO2 supplier, or electric power entity.)

Note: This section is not subject to the third-party verification requirements

Electricity Generation

Facility has the capacity to generate electricity:	Yes
CEC ID (if applicable):	G0483
EIA ID (if applicable):	50696

FERC QFID (if applicable): 2460
CAISO ID (if applicable): NA
Total Facility Nameplate Generating Capacity: 7.5 MW
Facility Type:
Independently operated and sited cogeneration facility
Facility's Energy Disposition:
Does not provide any generated energy outside of the facility boundary

Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system: 39,853.925 MWh

Reported emissions include emissions from a cogeneration/bigeneration unit: Yes

Parasitic Steam Use: Generated thermal energy used for supporting power production (excluding steam used directly for generating electricity) [95112(a)(5)(B)]: 0 MMBtu

Generated thermal energy for on-site industrial applications not related to electricity generation [95112(a)(5)(C)]: 62,030 MMBtu

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	**Gas Quantity** (Metric Tons)
Methane	1.460774
Exempt Biogenic Carbon dioxide	23,074.02799
Nitrous Oxide	0.283449
Carbon Dioxide	2,266.204269
Total CO2e	25,458.777745

Total Covered CO2e Emissions: 2,384.749756 (Metric Tons)

Emissions shown above that are claimed as De Minimis (CO2e): 0 Metric Tons

Unit Details

Unit Name: Boiler
Configuration Type: Single Unit Using Tiers 1, 2, or 3

Unit Type: OB (Boiler, other)

Unit Description:
Boiler, Hurst Boiler and Welding Company, Model No. S5-250-125W, 10.5MMBTU/Hr

Individual Unit Details

Maximum Rated Heat Input Capacity: 10.5 mmBtu/hr

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity? No

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum of calculated annual exempt biogenic CO2) (metric tons): 485.206478

Annual CO2 emissions from sorbent (metric tons): 0

Fuel-Specific Emissions Information

Fuel:

Biogas (Captured methane) - Biomass-Derived Fuels - Gaseous

Calculation Methodology: Tier 2 (Equation C-2a)
Methodology Start Date: 2014-01-01
Methodology End Date: 2019-12-31
Percentage of Fuel that is Biogenic: 100%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 485.206478 Metric Tons
Total CH4 emissions: 0.029819 Metric Tons
Total N2O emissions: 0.005871 Metric Tons
Total CH4 emissions CO2e: 0.626193 Metric Tons
Total N2O emissions CO2e: 1.819874 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 14,814,546.7 scf
Annual Average High Heat Value: 0.000629 mmBtu/scf
Fuel Specific CO2 Emissions Factor: 52.07 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor: 0.0032 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor: 0.00063 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Fuel: **Natural Gas - Natural Gas**

Calculation Methodology: Tier 2 (Equation C-2a)
Methodology Start Date: 2016-01-01
Methodology End Date: 2019-12-31

Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly
Fuel Emission Details	
Total CO2 emissions:	0.628919 Metric Tons
Total CH4 emissions:	0.000012 Metric Tons
Total N2O emissions:	0.000001 Metric Tons
Total CH4 emissions CO2e:	0.000249 Metric Tons
Total N2O emissions CO2e:	0.000368 Metric Tons
Equation Inputs	
Mass or Volume of Fuel Combusted per Year:	11,405.70007 scf
Annual Average High Heat Value:	0.00104 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Unit Name: GP-Cogen

Configuration Type: Aggregation of Units

Unit Type: OCS (Other combustion source)

Unit Description:

3 Internal Combustion Engines, each a Cooper Bessmer, Model No. LSVB-12-SGC, 3471 HP, 2500 KW Electric Generator, 5008500 BTU/Hr capacity.

Small Unit Aggregation Details

Highest Maximum Rated Heat Input Capacity:	5.0085 mmBtu/hr

Type of Emission Unit for this Group [Note: EGU/EGS must always be separated from other unit types]:

Electricity generating unit/system (EGU/EGS)

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity?	Yes
Is this configuration a Part 75 unit?	No
Nameplate Generating Capacity:	7.5 MW
Prime Mover Technology:	Internal Combustion Engine
Type of Thermal Energy Generation:	Cogeneration Topping Cycle
95112(b)(2): Gross Generation:	42,016.816 MWh
95112(b)(2): Net Generation:	39,853.925 MWh
95112(b)(3): Total Thermal Output (for Cogeneration or Bigeneration):	62,030 MMBtu
95112(b)(8): Other Steam Used for Electricity Generation:	

95112(b)(8): Input Steam to the Steam Turbine (for bottoming cycle cogeneration units only)

95112(b)(8): Output of the Heat Recovery Steam Generator (for bottoming cycle cogeneration units only)

95112(e): Geothermal Steam Utilized:

The source of geothermal generation:

95112(f): Stationary Hydrogen Fuel Cell: Fuel Type and Provider (if not reported elsewhere)

Additional Comments and Information

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum of calculated annual exempt biogenic CO2) (metric tons):	22,588.821512
Annual CO2 emissions from sorbent (metric tons):	0

Fuel-Specific Emissions Information

Fuel:

Biogas (Captured methane) - Biomass-Derived Fuels - Gaseous

Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2017-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	22,588.821512 Metric Tons
Total CH4 emissions:	1.388213 Metric Tons
Total N2O emissions:	0.273304 Metric Tons
Total CH4 emissions CO2e:	29.152464 Metric Tons
Total N2O emissions CO2e:	84.724349 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	691,892,232.9 scf
Annual Average High Heat Value:	0.000627 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	52.07 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.0032 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.00063 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Fuel:	**Natural Gas - Natural Gas**
Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2017-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly
Fuel Emission Details	
Total CO2 emissions:	1,917.790914 Metric Tons
Total CH4 emissions:	0.036171 Metric Tons
Total N2O emissions:	0.003617 Metric Tons
Total CH4 emissions CO2e:	0.759593 Metric Tons
Total N2O emissions CO2e:	1.121304 Metric Tons
Equation Inputs	
Mass or Volume of Fuel Combusted per Year:	34,981,706.73 scf
Annual Average High Heat Value:	0.001034 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Unit Name:

GP-Comfort Heating/Misc NaturalGas Usage

Configuration Type:	Aggregation of Units
Unit Type:	OCS (Other combustion source)

Unit Description:

Natural Gas supply for space heating/comfort heating, water heaters, bunsen burners in the laboratory, flare complex pilots, and hot water tank natural gas pilot.

Small Unit Aggregation Details

Highest Maximum Rated Heat Input Capacity:	1.995 mmBtu/hr
Type of Emission Unit for this Group [Note: EGU/EGS must always be separated from other unit types]:	Other (none of the above)

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity?	No

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum	0

of calculated annual exempt biogenic CO2) (metric tons):	
Annual CO2 emissions from sorbent (metric tons):	0

Fuel-Specific Emissions Information

Fuel:	**Natural Gas - Natural Gas**
Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2014-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	347.784436 Metric Tons
Total CH4 emissions:	0.006559 Metric Tons
Total N2O emissions:	0.000656 Metric Tons
Total CH4 emissions CO2e:	0.137749 Metric Tons
Total N2O emissions CO2e:	0.203344 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	6,356,100 scf
Annual Average High Heat Value:	0.001032 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Time And Date Report Generated: 04/10/2020 16:59

Facility Name:
Orange County Sanitation District - Plant 2

Facility ARB ID: 101280
Facility Reporting Year: 2019

Confidential Data Indication Set to "No" by Reporter

Certification Statement:

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

Facility Representatives

Designated Representative:	Lisa Frigo
Alternate Designated Representative:	randa abushaban

Facility Location

Physical Address:	22212 Brookhurst Street
City:	Huntington Beach
State / Province:	CA
ZIP / Postal Code:	92646
Country:	
Latitude:	33.64029
Longitude:	-117.95921
County:	ORANGE
Air Basin:	SOUTH COAST
District:	SOUTH COAST AQMD
Mailing Address:	10844 Ellis Avenue
City:	Fountain Valley
State / Province:	CA
ZIP / Postal Code:	92708
Country:	

Payment Information (required if subject to AB 32 Cost of Implementation Fee Regulation)

Responsible Party for Payment:
Responsible Party Email:
Responsible Party Phone:
Billing Address:
City:
State / Province:
ZIP / Postal Code:

Country:

Owners / Operators

Name:	Orange County Sanitation District

Facility or Entity Total GHG Emissions Summary

CO2 equivalent emissions, excluding biogenic (subparts C – AA):	3,234.891398 Metric Tons
Exempt biogenic CO2 emissions (subparts C – AA):	31,685.420746 Metric Tons
CO2 equivalent emissions from fuel supplier categories, excluding biogenic (subparts MM – NN):	0 Metric Tons
Exempt biogenic CO2 emissions from fuel supplier categories (subparts MM – NN):	0 Metric Tons
CO2 emissions from CO2 Suppliers (excluding biogenic) (subpart PP):	0 Metric Tons
Exempt biogenic CO2 emissions from CO2 Suppliers (subpart PP):	0 Metric Tons
CO2 equivalent emissions from electric power entities:	0 Metric Tons
Covered CO2 equivalent emissions:	**3,234.891398 Metric Tons**
De Minimis CO2 equivalent emissions:	0 Metric Tons
Maximum allowable De Minimis emissions:	1,047.609364 Metric Tons

General Facility Reporting Information

NAICS Codes

Primary:	221320 (Sewage Treatment Facilities)
Second Primary:	
Additional:	

U.S. Parent Companies

Parent Company Name:	Orange County Sanitation District (OCSD)
Address:	
10844 Ellis Avenue, Fountain Valley,	CA 92708
Percentage of Ownership Interest:	100%

GHG Report Start Date:	2019-01-01
GHG Report End Date:	2019-12-31
Explanation of any calculation methodology changes during the reporting year:	

EPA e-GGRT Facility IDs

Full or Abbreviated GHG Report:	Full
	No

Company or Entity qualifies for Small Business Status:

Electricity Purchases/Acquisitions for Reporting Facilities (95104(d))

Electricity Provider's Name:	Southern California Edison (SCE)
Provider's ARB ID:	3005
Purchases/Acquisitions:	5,221.476 MWh

Natural Gas Purchases/Acquisitions for Reporting Facilities [95115(k), 95103 (a)(1)]

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	09421095002
Purchases/Acquisitions:	1,755.8508 MMBtu
Was this natural gas received directly from an interstate pipeline?	No
Do you grant CARB staff permission to share confidential annual natural gas fuel purchase data with your identified natural gas fuel supplier?	Yes

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	09211095550
Purchases/Acquisitions:	46,084.7 MMBtu
Was this natural gas received directly from an interstate pipeline?	No
Do you grant CARB staff permission to share confidential annual natural gas fuel purchase data with your identified natural gas fuel supplier?	Yes

Cap-and-Trade Facilities: Increases and Decreases in Facility Emissions [95104 (f)]:

For facilities subject to Cap-and-Trade requirements: Have total facility emissions increased or decreased more than 5% in relation to the previous data year? [Not applicable for fuel suppliers, CO2 suppliers, electric power entities, and abbreviated reporters.]

NA (Not applicable: Reporting as an abbreviated reporter, fuel supplier, CO2 supplier, or electric power entity.)

Note: This section is not subject to the third-party verification requirements

Electricity Generation

Facility has the capacity to generate electricity:	Yes
CEC ID (if applicable):	E0025
EIA ID (if applicable):	52099

FERC QFID (if applicable):	2804
CAISO ID (if applicable):	NA
Total Facility Nameplate Generating Capacity:	16 MW
Facility Type:	
Independently operated and sited cogeneration facility	
Facility's Energy Disposition:	None of the above

Disposition of Generated Electricity [95112(a)(4)]

Generated Electricity for Grid Disposition [95112(a)(4)(A)]

Unit, System Or Group Name	Southern California Edison (SCE)
Retail Provider/Marketer Name	Southern California Edison (SCE)
Electricity Provided or Sold (MWh)	1,282.104
Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system:	51,827.179 MWh

Reported emissions include emissions from a cogeneration/bigeneration unit:	Yes
Parasitic Steam Use: Generated thermal energy used for supporting power production (excluding steam used directly for generating electricity) [95112(a)(5)(B)]:	0 MMBtu
Generated thermal energy for on-site industrial applications not related to electricity generation [95112(a)(5)(C)]:	60,217 MMBtu

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	**Gas Quantity** (Metric Tons)
Methane	2.005194
Exempt Biogenic Carbon dioxide	31,685.420746
Nitrous Oxide	0.389159
Carbon Dioxide	3,072.142944
Total CO2e	34,920.312143

Total Covered CO2e Emissions:	3,234.891398 (Metric Tons)
Emissions shown above that are claimed as De Minimis (CO2e):	0 Metric Tons

Unit Details

Unit Name: GP- Boilers (2)
Configuration Type: Aggregation of Units
Unit Type: OCS (Other combustion source)
Unit Description:
Two (2) Boilers, Cleaver Brooks, Model No. CB700-250, 10.21 MMBtu/Hr, Low-Nox Burners and Flue Gas Recirculation (FGR) system.

Small Unit Aggregation Details

Highest Maximum Rated Heat Input Capacity:	10.21 mmBtu/hr
Type of Emission Unit for this Group [Note: EGU/EGS must always be separated from other unit types]:	Boiler

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity?	No

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum of calculated annual exempt biogenic CO2) (metric tons):	480.603979
Annual CO2 emissions from sorbent (metric tons):	0

Fuel-Specific Emissions Information

Fuel:
Biogas (Captured methane) - Biomass-Derived Fuels - Gaseous

Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2014-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	480.603979 Metric Tons
Total CH4 emissions:	0.029536 Metric Tons
Total N2O emissions:	0.005815 Metric Tons
Total CH4 emissions CO2e:	0.620253 Metric Tons
Total N2O emissions CO2e:	1.802611 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	14,650,729 scf
Annual Average High Heat Value:	0.00063 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	52.07 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.0032 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.00063 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Fuel: **Natural Gas - Natural Gas**

Calculation Methodology: Tier 2 (Equation C-2a)
Methodology Start Date: 2014-01-01
Methodology End Date: 2019-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 39.581135 Metric Tons
Total CH4 emissions: 0.000747 Metric Tons
Total N2O emissions: 0.000075 Metric Tons
Total CH4 emissions CO2e: 0.015677 Metric Tons
Total N2O emissions CO2e: 0.023142 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 719,896 scf
Annual Average High Heat Value: 0.001037 mmBtu/scf
Fuel Specific CO2 Emissions Factor: 53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor: 0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor: 0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Unit Name: GP-Cogen
Configuration Type: Aggregation of Units
Unit Type: OCS (Other combustion source)
Unit Description:

Five Internal Combustion Engines, each a Cooper Bessmer, Model No. LSVB-16-SGC, 4166 HP, 3000 KW Electric Generator, 6010200 BTU/Hr capacity. One Coppus Murray steam turbine, 1 MW, Serial No. T-5223, 767 HP, and 6520 RPM.

Small Unit Aggregation Details

Highest Maximum Rated Heat Input Capacity: 6.0102 mmBtu/hr
Type of Emission Unit for this Group [Note: EGU/EGS must always be separated from other unit types]:

Electricity generating unit/system (EGU/EGS)

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity? Yes

Is this configuration a Part 75 unit?	No
Nameplate Generating Capacity:	16 MW
Prime Mover Technology: Internal Combustion Engine	
Type of Thermal Energy Generation: Cogeneration Topping Cycle	
95112(b)(2): Gross Generation:	56,091.62 MWh
95112(b)(2): Net Generation:	53,109.283 MWh
95112(b)(3): Total Thermal Output (for Cogeneration or Bigeneration):	60,217 MMBtu
95112(b)(8): Other Steam Used for Electricity Generation:	
95112(b)(8): Input Steam to the Steam Turbine (for bottoming cycle cogeneration units only)	
95112(b)(8): Output of the Heat Recovery Steam Generator (for bottoming cycle cogeneration units only)	
95112(e): Geothermal Steam Utilized:	
The source of geothermal generation:	
95112(f): Stationary Hydrogen Fuel Cell: Fuel Type and Provider (if not reported elsewhere)	
Additional Comments and Information	

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum of calculated annual exempt biogenic CO2) (metric tons):	31,204.816766
Annual CO2 emissions from sorbent (metric tons):	0

Fuel-Specific Emissions Information

Fuel:

Biogas (Captured methane) - Biomass-Derived Fuels - Gaseous

Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2017-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly
Fuel Emission Details	
Total CO2 emissions:	31,204.816766 Metric Tons
Total CH4 emissions:	1.917715 Metric Tons
Total N2O emissions:	0.37755 Metric Tons
Total CH4 emissions CO2e:	40.272012 Metric Tons
Total N2O emissions CO2e:	117.040536 Metric Tons
Equation Inputs	
	946,739,177.1 scf

Mass or Volume of Fuel Combusted per Year:	
Annual Average High Heat Value:	0.000633 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	52.07 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.0032 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.00063 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Fuel:	**Natural Gas - Natural Gas**
Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2017-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly
Fuel Emission Details	
Total CO2 emissions:	2,939.44791 Metric Tons
Total CH4 emissions:	0.05544 Metric Tons
Total N2O emissions:	0.005544 Metric Tons
Total CH4 emissions CO2e:	1.164248 Metric Tons
Total N2O emissions CO2e:	1.718651 Metric Tons
Equation Inputs	
Mass or Volume of Fuel Combusted per Year:	53,565,565.64 scf
Annual Average High Heat Value:	0.001035 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Unit Name:

GP-Comfort Heating/Misc NaturalGas Usage

Configuration Type:	Aggregation of Units
Unit Type:	OCS (Other combustion source)

Unit Description:
Natural Gas supply for space heating/comfort heating, water heaters, bunsen burners in the laboratory, and flare complex pilot.

Small Unit Aggregation Details

Highest Maximum Rated Heat Input Capacity:	0.95 mmBtu/hr
Type of Emission Unit for this Group [Note: EGU/EGS must always be separated from other unit types]:	Other (none of the above)

Electricity Generation Unit Information

Does this configuration have the capacity to generate electricity?	No

Emission Details: Configuration-Level Summary (User entered values)

Total exempt annual biogenic CO2 mass emissions (must equal the sum of calculated annual exempt biogenic CO2) (metric tons):	0
Annual CO2 emissions from sorbent (metric tons):	0

Fuel-Specific Emissions Information

Fuel:	**Natural Gas - Natural Gas**
Calculation Methodology:	Tier 2 (Equation C-2a)
Methodology Start Date:	2014-01-01
Methodology End Date:	2019-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	93.113899 Metric Tons
Total CH4 emissions:	0.001756 Metric Tons
Total N2O emissions:	0.000176 Metric Tons
Total CH4 emissions CO2e:	0.03688 Metric Tons
Total N2O emissions CO2e:	0.054442 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	1,700,100 scf
Annual Average High Heat Value:	0.001033 mmBtu/scf
Fuel Specific CO2 Emissions Factor:	53.02 kg CO2/MMBtu
Fuel Specific CH4 Emissions Factor:	0.001 kg CH4/MMBtu
Fuel Specific N2O Emissions Factor:	0.0001 kg N2O/MMBtu

HHV Substitute Data Information - Identify each month for which the monthly HHV value is calculated using one or more substitute data values.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
N	N	N	N	N	N	N	N	N	N	N	N

Time And Date Report Generated: 04/10/2020 17:02