Facility Name:
Orange County Sanitation District - Plant 1

Facility ARB ID: 100255
Facility Reporting Year: 2018

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

Alternate Designated Representative: randa abushaban
Agent: Corey Luth
Agent: Joseph Steirer
Designated Representative: Lisa Frigo

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):	3,576.803664 Metric Tons
Exempt biogenic CO2 emissions (subparts C – AA):	23,225.220432 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:	**3,576.803664 Metric Tons**
De Minimis CO2 equivalent emissions:	0 Metric Tons
Maximum allowable De Minimis emissions:	804.060723 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:	2018-01-01
GHG Report End Date:	2018-12-31
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:	41,164.8 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:	10261095938
Purchases/Acquisitions:	11,031.1 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?	No

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	10471095009
Purchases/Acquisitions:	51,843.9 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?	No

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:	43,091.133 MWh
Reported emissions include emissions from a cogeneration/bigeneration unit:	Yes
Parasitic Steam Use: Generated	0 MMBtu

thermal energy used for supporting power production (excluding steam used directly for generating electricity) [95112(a)(5)(B)]:

Generated thermal energy for on-site industrial applications not related to electricity generation [95112(a)(5)(C)]: 67,382 MMBtu

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	**Gas Quantity** (Metric Tons)
Methane	1.492512
Exempt Biogenic Carbon dioxide	23,225.220432
Nitrous Oxide	0.287523
Carbon Dioxide	3,456.328744
Total CO2e	26,802.024096

Total Covered CO2e Emissions: 3,576.803664 (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): 308.776805

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: 2018-12-31

Percentage of Fuel that is Biogenic: 100%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 308.776805 Metric Tons
Total CH4 emissions: 0.018976 Metric Tons
Total N2O emissions: 0.003736 Metric Tons
Total CH4 emissions CO2e: 0.398498 Metric Tons
Total N2O emissions CO2e: 1.158135 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 9,382,963.203 scf
Annual Average High Heat Value: 0.000632 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: 2018-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 0.188527 Metric Tons
Total CH4 emissions: 0.000004 Metric Tons
Total N2O emissions: 0 Metric Tons
Total CH4 emissions CO2e: 0.000075 Metric Tons
Total N2O emissions CO2e: 0.00011 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 3,452.2 scf
Annual Average High Heat Value: 0.00103 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:	44,690.77 MWh
95112(b)(2): Net Generation:	43,091.133 MWh
95112(b)(3): Total Thermal Output (for Cogeneration or Bigeneration):	49,426.1 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):	22,916.443627
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:	2018-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	22,916.443627 Metric Tons
Total CH4 emissions:	1.408347 Metric Tons
Total N2O emissions:	0.277268 Metric Tons

Total CH4 emissions CO2e: 29.575283 Metric Tons
Total N2O emissions CO2e: 85.953168 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 696,374,027.5 scf
Annual Average High Heat Value: 0.000632 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: 2018-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 2,871.371694 Metric Tons
Total CH4 emissions: 0.054156 Metric Tons
Total N2O emissions: 0.005416 Metric Tons
Total CH4 emissions CO2e: 1.137284 Metric Tons
Total N2O emissions CO2e: 1.678848 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 52,630,114.71 scf
Annual Average High Heat Value: 0.001029 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 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:	2018-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	584.768523 Metric Tons
Total CH4 emissions:	0.011029 Metric Tons
Total N2O emissions:	0.001103 Metric Tons
Total CH4 emissions CO2e:	0.231613 Metric Tons
Total N2O emissions CO2e:	0.341905 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	10,728,800 scf
Annual Average High Heat Value:	0.001028 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: 04/09/2019 16:51

Facility Name:
Orange County Sanitation District - Plant 2

Facility ARB ID: 101280
Facility Reporting Year: 2018

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

Agent:	Sean Gildea
Agent:	Corey Luth
Alternate Designated Representative:	randa abushaban
Agent:	Joseph Steirer
Designated Representative:	Lisa Rothbart

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):	2,956.178854 Metric Tons
Exempt biogenic CO2 emissions (subparts C – AA):	28,396.22036 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:	**2,956.178854 Metric Tons**
De Minimis CO2 equivalent emissions:	0 Metric Tons
Maximum allowable De Minimis emissions:	940.571976 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:	2018-01-01
GHG Report End Date:	2018-12-31
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:	9,847.3 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:	09211095550
Purchases/Acquisitions:	1,225.5 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?	No

Natural Gas Supplier Name:	Southern California Gas Company (SCG)
Supplier's ARB ID:	5002
Customer Number:	09421095002
Purchases/Acquisitions:	46,371.9 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?	No

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)	669.6
Generated electricity used for other	49,199.4 MWh

on-site industrial processes that are not in support of or a part of the power generation system:

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)]: 65,488 MMBtu

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	**Gas Quantity** (Metric Tons)
Methane	1.798114
Exempt Biogenic Carbon dioxide	28,396.22036
Nitrous Oxide	0.348869
Carbon Dioxide	2,810.269051
Total CO2e	31,352.399214

Total Covered CO2e Emissions: 2,956.178854 (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):	316.89916
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:	2018-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	316.89916 Metric Tons
Total CH4 emissions:	0.019475 Metric Tons
Total N2O emissions:	0.003834 Metric Tons
Total CH4 emissions CO2e:	0.408981 Metric Tons
Total N2O emissions CO2e:	1.1886 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	9,706,574 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:	2014-01-01
Methodology End Date:	2018-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	128.751033 Metric Tons
Total CH4 emissions:	0.002428 Metric Tons
Total N2O emissions:	0.000243 Metric Tons
Total CH4 emissions CO2e:	0.050995 Metric Tons
Total N2O emissions CO2e:	0.075279 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	2,359,911 scf
Annual Average High Heat Value:	0.001029 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:	52,035.7 MWh
95112(b)(2): Net Generation:	49,199.4 MWh
95112(b)(3): Total Thermal Output (for Cogeneration or Bigeneration):	65,488 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):	28,079.321199
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:	2018-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	28,079.321199 Metric Tons
Total CH4 emissions:	1.725635 Metric Tons
Total N2O emissions:	0.339734 Metric Tons
Total CH4 emissions CO2e:	36.23834 Metric Tons
Total N2O emissions CO2e:	105.317677 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	857,330,712 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:	2017-01-01
Methodology End Date:	2018-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	2,616.554033 Metric Tons
Total CH4 emissions:	0.04935 Metric Tons
Total N2O emissions:	0.004935 Metric Tons
Total CH4 emissions CO2e:	1.036357 Metric Tons
Total N2O emissions CO2e:	1.52986 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	47,959,495.88 scf
Annual Average High Heat Value:	0.001029 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: 2018-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 64.963985 Metric Tons
Total CH4 emissions: 0.001225 Metric Tons
Total N2O emissions: 0.000123 Metric Tons
Total CH4 emissions CO2e: 0.025731 Metric Tons
Total N2O emissions CO2e: 0.037983 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 1,191,900 scf
Annual Average High Heat Value: 0.001028 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: 04/09/2019 11:12