Facility Name: Orange County Sanitation District - Plant 1

Facility ARB ID: 100255
Facility Reporting Year: 2021

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:	Sai Lee
Designated Representative:	Tom Meregillano

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):	2,329.770812 Metric Tons
Exempt biogenic CO2 emissions (subparts C – AA):	20,053.433829 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:	**2,329.770812 Metric Tons**
De Minimis CO2 equivalent emissions:	0 Metric Tons
Maximum allowable De Minimis emissions:	671.496139 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:	2021-01-01
GHG Report End Date:	2021-12-31
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:	52,574 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:	29,291.63 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:	10261095938
Purchases/Acquisitions:	13,629.22 MMBtu
Was this natural gas received directly from an interstate pipeline?	No
Do you grant CARB staff permission to share confidential annual natural	No

gas fuel purchase data with your identified natural gas fuel supplier?	

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:	34,068.52 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	52,025 MMBtu

related to electricity generation [95112(a)(5)(C)]:

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	**Gas Quantity** (Metric Tons)
Methane	1.274352
Exempt Biogenic Carbon dioxide	20,053.433829
Nitrous Oxide	0.246824
Carbon Dioxide	2,224.358537
Total CO2e	22,383.204641

Total Covered CO2e Emissions: 2,329.770812 (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): 416.330523

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: 2021-12-31
Percentage of Fuel that is Biogenic: 100%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 416.330523 Metric Tons
Total CH4 emissions: 0.025586 Metric Tons
Total N2O emissions: 0.005037 Metric Tons
Total CH4 emissions CO2e: 0.639647 Metric Tons
Total N2O emissions CO2e: 1.501093 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 12,896,117.6 scf
Annual Average High Heat Value: 0.00062 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: 2021-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details

Total CO2 emissions: 0.581941 Metric Tons
Total CH4 emissions: 0.000011 Metric Tons
Total N2O emissions: 0.000001 Metric Tons
Total CH4 emissions CO2e: 0.000274 Metric Tons

Total N2O emissions CO2e: 0.000327 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year: 10,656.2 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: 36,015,211 MWh

95112(b)(2): Net Generation: 34,068.52 MWh

95112(b)(3): Total Thermal Output (for Cogeneration or Bigeneration): 52,025 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):	19,637.103306
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:	2021-12-31
Percentage of Fuel that is Biogenic:	100%
Frequency of HHV determinations:	Monthly
Fuel Emission Details	
Total CO2 emissions:	19,637.103306 Metric Tons
Total CH4 emissions:	1.206813 Metric Tons
Total N2O emissions:	0.237591 Metric Tons
Total CH4 emissions CO2e:	30.170314 Metric Tons
Total N2O emissions CO2e:	70.802185 Metric Tons
Equation Inputs	
Mass or Volume of Fuel Combusted per Year:	608,272,465.3 scf
Annual Average High Heat Value:	0.00062 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: 2021-12-31
Percentage of Fuel that is Biogenic: 0%
Frequency of HHV determinations: Monthly

Fuel Emission Details
Total CO2 emissions: 1,477.092084 Metric Tons
Total CH4 emissions: 0.027859 Metric Tons
Total N2O emissions: 0.002786 Metric Tons
Total CH4 emissions CO2e: 0.696479 Metric Tons
Total N2O emissions CO2e: 0.830203 Metric Tons

Equation Inputs
Mass or Volume of Fuel Combusted per Year: 27,047,717.55 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-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:	2021-12-31
Percentage of Fuel that is Biogenic:	0%
Frequency of HHV determinations:	Monthly

Fuel Emission Details

Total CO2 emissions:	746.684511 Metric Tons
Total CH4 emissions:	0.014083 Metric Tons
Total N2O emissions:	0.001408 Metric Tons
Total CH4 emissions CO2e:	0.352077 Metric Tons
Total N2O emissions CO2e:	0.419676 Metric Tons

Equation Inputs

Mass or Volume of Fuel Combusted per Year:	13,672,886.06 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

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