

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	Docket No. R-2020-3017206
v.	:	
	:	
Philadelphia Gas Works	:	

ES Hearing Exhibit 6

Philadelphia Gas Works
Case Name: R-2020 BRC Rate Case TBA
Docket No(s): BRC 2020 Rate Case

Response to Discovery Request: CAC-02-CAC-02-1
Date of Response: 7/6/2020
Response Provided By: Gregory Stunder

Question:

Please provide all reports, presentations, and analyses provided to the PGW leadership or to the Philadelphia Facilities Management Corporation (“PFMC”) concerning the current and projected inventory of GHGs from PGW’s operations, including from the combustion of gas delivered by PGW, and from methane estimated to be escaping from PGW’s distribution system prior to combustion.

Attachments: 0

Response:

A GHG inventory is currently under development.

Philadelphia Gas Works
Case Name: R-2020 BRC Rate Case TBA
Docket No(s): BRC 2020 Rate Case

Response to Discovery Request: CAC-02-CAC-02-2
Date of Response: 7/6/2020
Response Provided By: Daniel M. Furtek and Gregory Stunder

Question:

Please provide all reports, presentations, and analyses provided to the PGW leadership or to the Philadelphia Facilities Management Corporation (“PFMC”) concerning the amount of methane leaking from different parts of PGW’s distribution network, and whether any system components or sectors have been designated as high hazard.

Attachments: 1

2019 PGW Subpart W eGGRT Report.pdf

Response:

Attached is PGW’s most recent report for methane emissions related to its distribution system calculated in accordance with USEPA Greenhouse Gas Reporting Program (GHGRP) Subpart W guidance. There is not a “high hazard” designation for natural gas distribution systems.

Facility Name: Philadelphia Gas Works - Corporate**Facility Identifier:****Facility Reporting Year:** 2019**Facility Location:**

Address: 800 West Montgomery Avenue

City: Philadelphia

State: PA

Postal Code: 19122

Facility Site Details:**CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons):**
275,048.2**CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):****Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons):** 0**Cogeneration Unit Emissions Indicator:** NA**GHG Report Start Date:** 2019-01-01**GHG Report End Date:** 2019-12-31**Description of Changes to Calculation Methodology:****Plant Code Indicator:** N**Primary NAICS Code:** 221210**Second Primary NAICS Code:****Parent Company Details:****Parent Company Name:** PHILADELPHIA GAS WORKS**Address:** 800 West Montgomery Avenue, Philadelphia, PA 19122**Percent Ownership Interest:** 100

Subpart W: Petroleum and Natural Gas Systems

Gas Information Details

Gas Name	Carbon Dioxide
Gas Quantity	1,865.2 (Metric Tons)
Own Result?	

Gas Name	Methane
Gas Quantity	10,927.32 (Metric Tons)
Own Result?	

Gas Name	Nitrous Oxide
Gas Quantity	0 (Metric Tons)
Own Result?	

SubpartWSummaryDetails:

Industry Segment Number	8
Industry Segment Name	Natural gas distribution [98.230(a)(8
Total Reported CO2 Emissions (mt CO2)	1865.2
Total CO2e Emissions (mt CO2e)	275048.2
Total Reported CH4 Emissions (mt CH4)	10927.32
Total Reported N2O Emissions (mt N2O)	0.000

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SubpartWSourceReportingFormRowDetails:

Source Reporting Form	Onshore Production [98.236(aa)(1)]
Required for Selected Industry Segment	No
Source Reporting Form	Facility Overview [98.236(aa)(2-11)]
Required for Selected Industry Segment	Yes
Source Reporting Form	Natural Gas Pneumatic Devices [98.236(b)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Natural Gas Driven Pneumatic Pumps [98.236(c)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Acid Gas Removal Units [98.236(d)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Dehydrators [98.236(e)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Well Venting for Liquids Unloading [98.236(f)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Completions and Workovers with Hydraulic Fracturing [98.236(g)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Completions and Workovers without Hydraulic Fracturing [98.236(h)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Blowdown Vent Stacks [98.236(i)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Source Reporting Form	Atmospheric Storage Tanks [98.236(j)]
Required for Selected Industry Segment	No

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Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Transmission Storage Tanks [98.236(k)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Well Testing [98.236(l)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Associated Gas Venting and Flaring [98.236(m)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Flare Stacks [98.236(n)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Centrifugal Compressors [98.236(o)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Reciprocating Compressors [98.236(p)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
Source Reporting Form	Equipment Leaks Surveys and Population Counts [98.236(q,r)]
Required for Selected Industry Segment	Yes
Total Reported CO2 Emissions (mt CO2)	329.2
Total Reported CH4 Emissions (mt CH4)	10927.32
Source Reporting Form	Offshore Petroleum and Natural Gas Production [98.236(s)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000
	Enhanced Oil Recovery Injection

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Source Reporting Form	Pumps [98.236(w)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Enhanced Oil Recovery Hydrocarbon Liquids [98.236(x)]
Required for Selected Industry Segment	No
Total Reported CO2 Emissions (mt CO2)	0.0
Source Reporting Form	Combustion Equipment at Onshore Petroleum and Natural Gas Production Facilities, Onshore Petroleum and Natural Gas Gathering and Boosting Facilities, and Natural Gas Distribution Facilities [98.236(z)]
Required for Selected Industry Segment	Yes
Total Reported CO2 Emissions (mt CO2)	1536.0
Total Reported CH4 Emissions (mt CH4)	0.00
Total Reported N2O Emissions (mt N2O)	0.000

FacilityOverviewDetails:

FacilityOverviewNaturalGasDistributionRowDetails:

Quantity of natural gas received at all custody transfer stations in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(i)]	79831017
Quantity of natural gas withdrawn from in-system storage in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(ii)]	10806018
Quantity of natural gas added to in-system storage in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(iii)]	10686890
Quantity of natural gas delivered to end users (thousand standard cubic feet) [98.236(aa)(9)(iv)]	75256120
Quantity of natural gas transferred to third parties such as other LDCs or pipelines (thousand standard cubic feet) [98.236(aa)(9)(v)]	0
Quantity of natural gas consumed by the LDC for operational purposes (thousand standard cubic feet) [98.236(aa)(9)(vi)]	1153601
Estimated quantity of gas stolen in the calendar year (thousand standard cubic feet) [98.236(aa)(9)(vii)]	46777.3

OtherEmissionsFromEquipmentLeaksDetails:

mt CO2	329.2
mt CH4	10927.32
Did this facility use leak surveys to calculate emissions from equipment leaks in accordance with 98.232 [per 98.236(q)]?	Yes
Did this facility use population counts to calculate	

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emissions from equipment leaks in accordance with 98.232 [per 98.236(r)]?	Yes
Were missing data procedures used for any parameters to calculate GHG emissions? [98.235]	No
Number of complete equipment leak surveys performed during the calendar year [98.236(q)(1)(i)]	1
For Natural gas distribution facilities conducting multi-year surveys, number of years in the leak survey cycle [98.236(q)(1)(ii)]	0
Optical gas imaging instrument as specified in §60.18 [98.234(a)(1)]	Yes
Method 21 [98.234(a)(2)]	Yes
Infrared laser beam illuminated instrument [98.234(a)(3)]	No
Acoustic leak detection device [98.234(a)(5)]	No
Optical gas imaging instrument as specified in §60.5397a [98.234(a)(6)]	Yes
Method 21 as specified in §60.5397a [98.234(a)(7)]	Yes
Total number of above grade T-D transfer stations surveyed in the calendar year [98.236(q)(3)(i)]	9
Number of meter/regulator runs at above grade T-D transfer stations surveyed in the calendar year, CountMR,y [98.236(q)(3)(ii)]	22
Average time meter/regulator runs surveyed in calendar year were operational, Average of calendar year Tw,y (hours) [98.236(q)(3)(iii)]	8760
Number of above grade T-D transfer stations surveyed in current leak survey cycle [98.236(q)(3)(iv)]	9
Number of meter/regulator runs at above grade T-D transfer stations surveyed in current leak survey cycle, Sum of CountMR,y [98.236(q)(3)(v)]	22
Average time that meter/regulator runs surveyed in the current leak survey cycle were operational, Average of current survey Tw,y (hours) [98.236(q)(3)(vi)]	8760
Meter/regulator run CO2 emission factor based on all surveyed T-D transfer stations in current leak cycle, Average of current survey EFS,MR,i (standard cubic feet per operational hour of all meter/regulator runs) [98.236(q)(3)(vii)]	0.00168
Meter/regulator run CH4 emission factor based on all surveyed T-D transfer stations in current leak cycle, Average of current survey EFS,MR,i (standard cubic feet per operational hour of all meter/regulator runs) [98.236(q)(3)(viii)]	0.15277
Does the facility perform equipment leak surveys across a multiple year leak survey cycle (Yes/No) [98.236(q)(3)(ix)]	No
Number of above grade T-D transfer stations at the facility [98.236(r)(2)(i)]	9
Number of above grade metering-regulating stations that are not T-D transfer stations [98.236(r)(2)(ii)]	6
Total number of meter/regulator runs at above grade metering-regulating stations that are not above grade T-D	6

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transfer stations, CountMR [98.236(r)(2)(iii)]	
Average estimated time that each meter/regulator run at above grade metering-regulating stations that are not above grade T-D transfer stations was operational in the calendar year, Tw,avg (hours) [98.236(r)(2)(iv)]	8760
Annual CO2 emissions from above grade metering-regulating stations that are not above grade T-D transfer stations (mt CO2) [98.236(r)(2)(v)(A)]	0
Annual CH4 emissions from above grade metering-regulating stations that are not above grade T-D transfer stations (mt CH4) [98.236(r)(2)(v)(B)]	0.15

GasDistributionEmissionsFactorsRowDetails:

Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Connector
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	1
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	8760
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0.28
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Block Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	3
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	8760
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0.28
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Control Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Pressure Relief Valve
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0

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Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Orifice Meter
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Regulator
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0
Component Type [98.236(q)(2)(i)]	Transmission-Distribution Transfer Station Components, Gas Service - Open-ended line
Total number of surveyed component type identified as leaking, xp [98.236(q)(2)(ii)]	0
Average time the surveyed components are assumed to be leaking and operational, Tp,z (hours) [98.236(q)(2)(iii)]	0
CO2 Emissions (surveyed components identified as leaking only) (mt CO2) [98.236(q)(2)(iv)]	0
CH4 Emissions (surveyed components identified as leaking only) (mt CH4) [98.236(q)(2)(v)]	0

GasDistributionTDEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade T-D Station, Gas Service Inlet Pressure > 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	0
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0

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Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade T-D Station, Gas Service Inlet Pressure 100 to 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	0
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade T-D Station, Gas Service Inlet Pressure < 100 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	0
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0

GasDistributionMREstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade M-R Station, Gas Service Inlet Pressure > 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	0
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade M-R Station, Gas Service Inlet Pressure 100 to 300 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	7
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0.24
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Below Grade M-R Station, Gas Service Inlet Pressure < 100 psig
Total number of emission source type, Counte [98.236(r)(1)(ii)]	185
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0.1
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	3.11

MainGasDistributionEstimatingEmissionsRowDetails:

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Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Mains, Gas Service - Unprotected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	474
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	30.2
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	1002.92
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Mains, Gas Service - Protected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	518
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0.9
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	30.49
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Mains, Gas Service - Plastic
Total number of emission source type, Counte [98.236(r)(1)(ii)]	613
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	3.5
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	116.5
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Mains, Gas Service - Cast Iron
Total number of emission source type, Counte [98.236(r)(1)(ii)]	1436
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	198.3
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	6581.52

ServicesGasDistributionEstimatingEmissionsRowDetails:

Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Services, Gas Service - Unprotected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	95589
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	92.1
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	3054.69
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Services, Gas Service - Protected Steel
Total number of emission source type, Counte [98.236(r)(1)(ii)]	

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(1)(ii)]	22859
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	2.3
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	76.89
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Services, Gas Service - Plastic
Total number of emission source type, Counte [98.236(r)(1)(ii)]	357942
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	1.8
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	60.2
Emission Source Type (Eq. W-32A) [98.232] [98.233(r)(1)]	Distribution Services, Gas Service - Copper
Total number of emission source type, Counte [98.236(r)(1)(ii)]	10
Average estimated time that the emission source type was operational in the calendar year, Te (hours) [98.236(r)(1)(iii)]	8760
CO2 Emissions (mt CO2) [98.236(r)(1)(iv)]	0
CH4 Emissions (mt CH4) [98.236(r)(1)(v)]	0.05

CombustionEmissionsDetails:

mt CO2	1536.0
mt CH4	0.00
mt N2O	0.000
Did the Facility have combustion units subject to reporting under 98.232?	Yes
Were missing data procedures used for any parameters to calculate GHG emissions? [98.235]	No
Are there external fuel combustion units with a rated heat capacity less than or equal to 5 mmBtu/hr? [98.236(z)(1)(i)]	Yes
Are there internal fuel combustion units that are not compressor-drivers, with a rated heat capacity less than or equal to 1 mmBtu/hr? [98.236(z)(1)(i)]	No
Total number of combustion units meeting 98.236(z)(1) descriptions	7
Are there external fuel combustion units with a rated heat capacity greater than 5 mmBtu/hr? [98.236(z)(2)(i)]	Yes
Are there internal fuel combustion units that are not compressor-drivers, with a rated heat capacity greater than 1 mmBtu/hr? [98.236(z)(2)(i)]	No
Are there Internal fuel combustion units of any heat capacity that are compressor-drivers? [98.236(z)(2)(i)]	No

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LargeCombustionUnitEmissionsRowDetails:

Type of combustion unit [98.236(z)(2)(i)]	External fuel combustion units with a rated heat capacity greater than 5 mmBtu/hr
Type of fuel combusted [98.236(z)(2)(ii)]	Natural gas (pipeline quality)
Quantity of fuel combusted in calendar year [98.236(z)(2)(iii)]	8788
Unit of measure [98.236(z)(2)(iii)]	thousand standard cubic feet
CO2 Emissions (mt CO2) [98.236(z)(2)(iv)]	483
CH4 Emissions (mt CH4) [98.236(z)(2)(v)]	0
N2O Emissions (mt N2O) [98.236(z)(2)(vi)]	0
Type of combustion unit [98.236(z)(2)(i)]	External fuel combustion units with a rated heat capacity greater than 5 mmBtu/hr
Type of fuel combusted [98.236(z)(2)(ii)]	Natural gas (pipeline quality)
Quantity of fuel combusted in calendar year [98.236(z)(2)(iii)]	19149
Unit of measure [98.236(z)(2)(iii)]	thousand standard cubic feet
CO2 Emissions (mt CO2) [98.236(z)(2)(iv)]	1053
CH4 Emissions (mt CH4) [98.236(z)(2)(v)]	0
N2O Emissions (mt N2O) [98.236(z)(2)(vi)]	0

Philadelphia Gas Works
Case Name: R-2020 BRC Rate Case TBA
Docket No(s): BRC 2020 Rate Case

Response to Discovery Request: CAC-02-CAC-02-3
Date of Response: 7/6/2020
Response Provided By: Daniel M. Furtek

Question:

Please provide all reports, presentations, and analyses provided to the PGW leadership or to the Philadelphia Facilities Management Corporation (“PFMC”) concerning what steps PGW has taken, or procedures put in place to identify the largest methane leaking parts of PGW’s distribution network.

Attachments: 0

Response:

PGW has reviewed processes that proffer to quantify methane leak sizes but the Company does not find the currently available processes reliable.

VERIFICATION

I, Gregory Stunder, hereby state that I am the Vice President – Regulatory and Legislative Affairs for Philadelphia Gas Works (“PGW”), I am authorized to make this verification on its behalf, and that the facts set forth in the attached discovery responses which I am sponsoring are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

July 6, 2020

Dated



Gregory Stunder
Vice President – Regulatory and Legislative Affairs
Philadelphia Gas Works

VERIFICATION

I, Daniel M. Furtek, hereby state that I am the Vice President – Resource Management and Technology for Philadelphia Gas Works (“PGW”), I am authorized to make this verification on its behalf, and that the facts set forth in the attached discovery responses which I am sponsoring are true and correct to the best of my knowledge, information and belief. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

July 6, 2020

Dated



Daniel M. Furtek
Vice President – Resource Management and
Technology
Philadelphia Gas Works