

Facility Name: UNIV OF IOWA MAIN PWR PLANT

Facility Identifier:

Facility Reporting Year: 2016

Facility Location:

Address: 207 BURLINGTON ST W

City: IOWA CITY

State: IA

Postal Code: 52242

Facility Site Details:

CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons): 151234.4

CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):

Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons): 49565.5

Cogeneration Unit Emissions Indicator: Y

GHG Report Start Date: 2016-01-01

GHG Report End Date: 2016-12-31

Description of Changes to Calculation Methodology: Reporting GP-UI-3 annual usage in therm instead of scf. Records from utility list Therms but previously had to subtract other gas usage that was in scf; so converted. Have identified specific accounts in Therm and am able to subtract the gas usage in therms. Prefer to report in given units when available.

Part 75 Biogenic Emissions Indication:

Plant Code Indicator: Y

Primary NAICS Code: 611310

Second Primary NAICS Code:

Parent Company Details:

Parent Company Name: THE UNIVERSITY OF IOWA

Address: 350 University Services Building, Iowa City, IA 52242

Percent Ownership Interest: 100

Subpart C: General Stationary Fuel Combustion

Gas Information Details

Gas Name	Other Gas Name	Other Gas GHG Group	Gas Quantity	Own Result?
Biogenic Carbon dioxide			49565.5 (Metric Tons)	
Methane			22.55 (Metric Tons)	
Nitrous Oxide			3.185 (Metric Tons)	
Carbon Dioxide			149721.5 (Metric Tons)	

Unit Details:

Unit Name : EU-7

Unit Type : CFB (Boiler, circulating fluidized bed)

Unit Description :

Individual Unit Details:

Use Ivt Indicator: N

Maximum Rated Heat Input Capacity: 223 (mmBtu/hr)

Emission Details:

Total amount of sorbent used during the reporting year: 4192 (Short Tons)

Molecular weight of the sorbent: 100 (kg / kg-mole)

The ratio ("R") used in Equation C-11: 1 (moles CO2 released / mole acid gas removed)

Annual CO₂ mass emissions from sorbent: 1678.5 (Metric Tons)

Annual Biogenic CO₂ Emissions: 46058.6 (metric tons)

Tier Fuel Details:

Fuel : Bituminous

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2016-01-01
Tier Methodology End Date : 2016-12-31
Frequency of HHV determinations : Weekly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
52868.0 (Metric Tons)	6.23 (Metric Tons)	0.907 (Metric Tons)	155.9 (Metric Tons)	270.2 (Metric Tons)

Equation C2a/C9a Inputs :

Fuel Quantity : 26441 (short tons/year)
Use Default High Heat Value : false
Use Default CH4 Emission Factor : true

Equation C2b Inputs :

	Fuel Combusted	High Heat Value
January	1783 (short tons/month)	21.22 (mmBtu/short ton)
February	2492 (short tons/month)	21.65 (mmBtu/short ton)
March	2382 (short tons/month)	21.19 (mmBtu/short ton)
April	1526 (short tons/month)	21.57 (mmBtu/short ton)
May	1979 (short tons/month)	21.6 (mmBtu/short ton)
June	2823 (short tons/month)	20.87 (mmBtu/short ton)
July	2998 (short tons/month)	21.26 (mmBtu/short ton)
August	2032 (short tons/month)	21.31 (mmBtu/short ton)
September	1830 (short tons/month)	20.94 (mmBtu/short ton)
October	729 (short tons/month)	21.85 (mmBtu/short ton)
November	2492 (short tons/month)	22.11 (mmBtu/short ton)
December	3373 (short tons/month)	21.79 (mmBtu/short ton)

Fuel : Wood and Wood Residuals (dry basis)
Tier Name : Tier 1 (Equation C-1)
Tier Methodology Start Date : 2016-01-01
Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
3677.7 (Metric Tons)	0.28 (Metric Tons)	0.141 (Metric Tons)	7.1 (Metric Tons)	42.1 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 2243 (short tons/year)

Fuel : Agricultural Byproducts
Tier Name : Tier 1 (Equation C-1)
Tier Methodology Start Date : 2016-01-01
Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
42381.0 (Metric Tons)	11.48 (Metric Tons)	1.506 (Metric Tons)	286.9 (Metric Tons)	448.9 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 43472 (short tons/year)

Unit Name : GP-UI-1

Unit Type : OCS (Other combustion source)

Unit Description :

Other Unit Name :

Small Unit Aggregation Details:

Use Iv Indicator: N

Highest Maximum Rated Heat Input Capacity: 218

Emission Details:

Annual CO₂ mass emissions from sorbent: 0 (Metric Tons)

Annual Biogenic CO₂ Emissions: 0 (metric tons)

Annual Fossil fuel based CO₂ Emissions: 64450.7 (metric tons)

Tier Fuel Details:

Fuel : Natural Gas (Weighted U.S. Average)

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2016-01-01

Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
66263.1 (Metric Tons)	1.25 (Metric Tons)	0.125 (Metric Tons)	31.2 (Metric Tons)	37.2 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 1217187464 (scf/year)

Unit Name : EU-6

Unit Type : S (Stoker Boiler)

Unit Description :

Individual Unit Details:

Use Iv Indicator: N

Maximum Rated Heat Input Capacity: 206.3 (mmBtu/hr)

Emission Details:

Annual CO₂ mass emissions from sorbent: 0 (Metric Tons)

Annual Biogenic CO₂ Emissions: 3506.9 (metric tons)

Tier Fuel Details:

Fuel : Bituminous

Tier Name : Tier 2 (Equation C-2a)

Tier Methodology Start Date : 2016-01-01

Tier Methodology End Date : 2016-12-31

Frequency of HHV determinations : Weekly

Tier 2 Monthly HHV Details :

January	February	March	April	May	June	July	August	September	October	November	December
N	N	N	N	N	N	N	N	N	N	N	N

Fuel Emission Details :

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
21776.8 (Metric Tons)	2.57 (Metric Tons)	0.374 (Metric Tons)	64.2 (Metric Tons)	111.3 (Metric Tons)

Equation C2a/C9a Inputs :

Fuel Quantity : 11028.3 (short tons/year)

Use Default High Heat Value : false

Use Default CH₄ Emission Factor : true

Equation C2b Inputs :

	Fuel Combusted	High Heat Value
January	1894 (short tons/month)	22.52 (mmBtu/short ton)
February	1037 (short tons/month)	21.1 (mmBtu/short ton)
March	619 (short tons/month)	21.1 (mmBtu/short ton)
April	405 (short tons/month)	21.47 (mmBtu/short ton)
May	907 (short tons/month)	20.97 (mmBtu/short ton)
June	1386 (short tons/month)	21.28 (mmBtu/short ton)
July	1415 (short tons/month)	21.38 (mmBtu/short ton)
August	1364 (short tons/month)	18.88 (mmBtu/short ton)
September	1073 (short tons/month)	22.75 (mmBtu/short ton)
October	671 (short tons/month)	20.01 (mmBtu/short ton)
November	257 (short tons/month)	18.69 (mmBtu/short ton)
December	0 (short tons/month)	0 (mmBtu/short ton)

Fuel : Plastics

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2016-01-01

Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
5169.3 (Metric Tons)	()	()	()	()

Equation C1/C8 Inputs :

Fuel Quantity : 1813.8 (short tons/year)

Fuel : Wood and Wood Residuals (dry basis)

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2016-01-01

Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
1275.0 (Metric Tons)	0.10 (Metric Tons)	0.049 (Metric Tons)	2.4 (Metric Tons)	14.6 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 777.6 (short tons/year)

Fuel : Agricultural Byproducts

Tier Name : Tier 1 (Equation C-1)

Tier Methodology Start Date : 2016-01-01

Tier Methodology End Date : 2016-12-31

Fuel Emission Details :

Total CO2 emissions	Total CH4 emissions	Total N2O emissions	Total CH4 emissions CO2e	Total N2O emissions CO2e
2231.9 (Metric Tons)	0.60 (Metric Tons)	0.079 (Metric Tons)	15.1 (Metric Tons)	23.6 (Metric Tons)

Equation C1/C8 Inputs :

Fuel Quantity : 2289.31 (short tons/year)

Unit Name : GP-UI-3

Unit Type : OCS (Other combustion source)

Unit Description :

Other Unit Name :

Small Unit Aggregation Details:**Use IvT Indicator:** N**Highest Maximum Rated Heat Input Capacity:** 1.9**Emission Details:****Annual CO₂ mass emissions from sorbent:** 0 (Metric Tons)**Annual Biogenic CO₂ Emissions:** 0 (metric tons)**Annual Fossil fuel based CO₂ Emissions:** 1925.7 (metric tons)**Tier Fuel Details:****Fuel :** Natural Gas (Weighted U.S. Average)**Tier Name :** Tier 1 (Equation C-1a, natural gas billing in therms)**Tier Methodology Start Date :** 2016-01-01**Tier Methodology End Date :** 2016-12-31**Fuel Emission Details :**

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
1925.7 (Metric Tons)	0.04 (Metric Tons)	0.004 (Metric Tons)	0.9 (Metric Tons)	1.1 (Metric Tons)

Equation C1a/C8a Inputs :**Natural Gas Usage :** 362935 (therms/year)**Unit Name :** GP-UI-4**Unit Type :** OCS (Other combustion source)**Unit Description :****Other Unit Name :****Small Unit Aggregation Details:****Use IvT Indicator:** N**Highest Maximum Rated Heat Input Capacity:** 2.2**Emission Details:****Annual CO₂ mass emissions from sorbent:** 0 (Metric Tons)**Annual Biogenic CO₂ Emissions:** 0 (metric tons)**Annual Fossil fuel based CO₂ Emissions:** 40.0 (metric tons)**Tier Fuel Details:****Fuel :** Propane**Tier Name :** Tier 1 (Equation C-1)**Tier Methodology Start Date :** 2016-01-01**Tier Methodology End Date :** 2016-12-31**Fuel Emission Details :**

Total CO ₂ emissions	Total CH ₄ emissions	Total N ₂ O emissions	Total CH ₄ emissions CO ₂ e	Total N ₂ O emissions CO ₂ e
40.0 (Metric Tons)	()	()	0 (Metric Tons)	()

Equation C1/C8 Inputs :**Fuel Quantity :** 6987.0 (gallons/year)