ISLAND ENERGY

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February 8, 2021

CERTIFIED MAIL No. 7015 0640 0002 5911 5886
RETURN RECEIPT REQUESTED

Ms. Marianne Rossio
Manager
Clean Air Branch
2827 Waimano Home Road #130
Pearl City, Hawaii 96782

IES Downstream, LLC
CSP 0863-01-C and 0863-02-C
GHG Emission Reduction Plan Rev 2

Dear Ms. Rossio:

IES Downstream, LLC (IES) is hereby submitting its updated Greenhouse Gas Emission Reduction Plan (GHGERP) Rev 2 for its equipment located at 91-480 Malakole Street, Kapolei, Hawaii as further described below. This plan is being submitted to meet the requirements of §11-60.1-204(a) and revises the GHGERP that was submitted by Chevron on June 30, 2015.

IES transferred certain Kapolei Refinery operating units to Par Refining Hawaii, Inc. (Par) on December 19, 2018 at 11:59 pm; Par now operates the transferred refining units under CSP Nos. 0088-01-C, 0088-02-C and 0088-03-C. CSP 0088-01-C was amended to separate certain assets retained by IES and these assets' permitting obligations were addressed in a new permit for IES: CSP 0863-01-C. However, CSP 0863-01-C did not include process units that were being retained by IES (FCCU, part of Alky, and Dimersol) and further modification was recently completed to Par's CSP 0088-01-C to remove these IES retained process units that were omitted from the initial CSP 0863-01-C application. The permit CSP 0863-02-C for these process units was issued on December 18, 2020.

The transaction described above required a modification to the IES GHG Emission Reduction Plan. The original plan proposed 2009 as the baseline year and this update splits the baseline GHG emissions between both IES and Par in alignment with equipment ownership relative to CSP 0088-01-C, 0088-02-C, and 0088-03-C for Par and CSP 0863-01-C and 0863-02-C for IES. IES' new baseline will include the emissions for CSP 0863-01-C and CSP 0863-02-C. This update (Rev 2) to the Rev 1 GHG Emission Reduction Plan issued in August 2019 is intended to provide additional clarification to the baseline year calculations and also the equipment split between IES and Par West. It also reflects the most recent change in equipment ownership between IES and Par West related to Par's acquisition of Boilers 1,2, & 3 in January 2021, transferring the baseline emissions from Boilers 1,2,& 3 to Par West's GHG Baseline.

Should you have any questions or require further information, please contact Gail Godenzi, Environmental and Process Engineer, at (808) 682-3113.

I certify as the company official having supervisory responsibility for the persons who prepared this document that this information is true, accurate, and complete to the best of my knowledge, information and belief.

Sincerely,

Mark Dangler

gng

Attachments and CD w/Attachments

Greenhouse Gas Emission Reduction Plan

ISLAND ENERGY

IES Downstream, LLC
91-480 Malakole Street
Kapolei, HI 96707

Covered Source Permit Nos. 0863-01-C and 0863-02-C

January 2021

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Table of Contents

1.0 Introduction

A Greenhouse Gas ("GHG") Emission Reduction Plan ("the GHG Plan" or "the Plan") was submitted by Chevron on June 30, 2015 for the Hawaii Refinery to comply with requirements of the Hawaii Greenhouse Gas Emissions law[1] (the Act) and implement regulations of the Hawaii Department of Health ("DOH").[2] On November 1, 2016, IES Downstream, LLC ("IES") acquired the Hawaii Refinery and assumed responsibility of the GHG Plan. The GHG rule[3] sets forth the regulatory program for meeting the statutory statewide GHG limit that is equal to or below the 1990 statewide GHG emission levels for each facility that emits more than 100,000 tons per year of GHG emissions. The GHG rule generally requires each regulated source to propose a GHG Plan that would cap the source's direct GHG emissions to 16% of that source's 2010 direct GHG emissions. In meeting the GHG limit, the regulation provides flexibility to the Director of the Department of Health, Clean Air Branch ("Director" or "CAB") to set the facility-wide GHG emissions cap for an individual source by varying from the established regulatory structure in two ways: 1) by granting a request to use an alternate emission baseline; and 2) establishing an alternate GHG emission cap based on a finding that the presumptively required 16% reduction is not attainable.

The GHG rule is premised on an assumption that the GHG covered sources reducing their direct GHG levels by 16% from 2010 emission levels will be adequate to return the State of Hawaii to 1990 GHG levels. Although the ultimate goal of the Act is to reduce statewide GHG emissions to 1990 emission levels, the Kapolei Refinery has actually achieved reductions in GHG emissions to less than its estimated 1990 levels and, as a prudent operator, continues to seek these as part of our business. Unlike other sources of GHGs within the state and the selected industries subject to the current GHG rule that have seen growth, and thus increases in GHG emissions since 1990, the Kapolei Refinery has not experienced sustained increases in capacity and have decreased GHG emissions over this same period of time.

This updated GHG Plan is being submitted by IES to meet the requirements of §11-60.1-204(a). The IES Downstream, LLC – Kapolei Terminal and Kapolei Process Units, formerly known as the IES Kapolei Refinery ("Kapolei Refinery"), and further formerly known as the Chevron Hawaii Refinery, is located within the Campbell Industrial Park at 91-480 Malakole Street, Kapolei, Hawaii. The facility currently operates under two Covered Source Permits (CSP) Nos. 0863-01-C (Terminal), and 0863-02-C (Process Units) issued by the Hawaii Department of Health.

The Kapolei Refinery began operation in 1960 with capacity of processing up to 58,000 barrels of crude oil per day. The Kapolei Refinery did not operate at this rated capacity in recent history but rather set its operations based on market demands. The facility consisted of numerous

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[1] HRS §§ 342B *et seq.*, enacted by Act 234, 2007 Hawaii Session Laws.
[2] HAR § 11-60.1-204, "Greenhouse gas emission reduction plan." Hereinafter, the "GHG rule."
[3] HAR §11-60.1-201, Purpose.

operational units, including crude vacuum and distillation units, fluid catalytic cracker, dimersol, hydrogen manufacturing, alkylation, and isomerization units. The Kapolei Refinery operated utilities including boilers, cogeneration units, effluent treatment plant, and tank fields for storage, blending, and shipping capability in support of its operations.

IES transferred certain Kapolei Refinery operating units to Par Refining Hawaii, Inc. (Par) on December 19, 2018 at 11:59 pm; Par ("Par West") now operates the transferred refining units under CSP Nos. 0088-01-C, 0088-02-C and 0088-03-C. CSP 0088-01-C was initially amended to separate certain assets retained by IES and these assets' permitting obligations were addressed in a new permit for IES: CSP 0863-01-C. However, CSP 0863-01-C did not include refining units that were being retained by IES (FCCU, part of Alky, and Dimersol) and further modification was recently completed to amend CSP 0088-01-C to remove these IES retained process units that were omitted from the initial CSP 0863-01-C application. The permit CSP 0863-02-C for these process units was issued on December 18, 2020.

The transaction described above requires a modification to the IES GHG Emission Reduction Plan. The original plan proposed 2009 as the baseline year and this update splits the baseline GHG emissions between both IES and Par West in alignment with equipment/permit ownership, CSP 0088-01-C, 0088-02-C, and 0088-03-C for Par and CSP 0863-01-C and 0863-02-C for IES. IES' new baseline will include the emissions for CSP 0863-01-C and CSP 0863-02-C. This update (Rev 2) to the Rev 1 GHG Emission Reduction Plan issued in August 2019 is intended to provide additional clarification to the baseline year calculations and also the equipment split between IES and Par West. It also reflects the most recent change in equipment ownership between IES and Par West related to Par's acquisition of Boilers 1,2, & 3 in January 2021, transferring the baseline emissions from Boilers 1,2,& 3 to Par West's GHG Baseline.

This plan consists of 6 sections. Section 2 presents the proposed baseline emissions year for the Kapolei Refinery and splits the baseline emissions between Par owned facility (hereinafter referred to as the "Par West") and the IES Terminal and IES Process Units (hereinafter referred to as the "IES Facility"). Section 3, discusses the proposed IES Facility 2020 facility-wide direct GHG Emissions cap. Section 4 discusses the IES Facility GHG Control Assessment, Section 5 discusses the IES Facility Proposed Control Strategy, and Section 6 discusses Partnering the IES Terminal and IES Process Units. Appendices of this plan contain past submittals to DOH CAB with detailed calculations and analysis supporting the baseline selection.

2.0 Request for Alternate Baseline Annual Emission Year

Section 11-60.1-204(d)(1) generally requires regulated sources to use 2010 to compute the GHG baseline emissions. This paragraph, however, also allows an owner or operator to propose an alternate GHG emission baseline and includes several potential methodologies to support computation of an acceptable alternative. These alternatives allow an owner or operator to use emissions from the years 2006-2010 in various formulations, if the owner or operator documents that 2010 is "not representative of normal source operations."

2.1 PROPOSED ALTERNATE BASELINE YEAR

Per §11-60.1-204(d)(1)(A)(i), the GHG Plan submitted on June 30, 2015, requested that the Director approve an alternative baseline year of 2009 based on the criteria that it is the most representative year during the five-year period between 2006 and 2010 calendar years. Direct GHG emission estimates for the proposed 2009 baseline year are 577,945 metric tons (tonnes) per year of carbon dioxide equivalent (CO_2e). Table 1. GHG Annual Emission Summary indicates the direct GHG emissions estimated for the 1990 calendar year as well as the calculated 2009 and 2010 calendar years. The 1990, 2009, and 2010 calendar years were calculated using the methodologies as required by the GHG Reporting Rule in 40 CFR Part 98; however, estimates were used for some operational data that was unavailable for the 1990 calendar year.

Table 1. GHG Annual Emission Summary

Calendar Year	Direct emissions reported per year of CO_2e
1990 (est)	613,900 MT (*676,709 T*)
2009 (Baseline year)	577,945 MT (*637,075 T*)
2010	529,651 MT (*583,840 T*)

To provide context for the Refinery's request to use alternative baseline year, the table above also shows that the refinery had already taken significant measures to reduce energy consumption and CO2e emissions well below the levels that had been established back in 1990, which was the stated purposed of both the Act and the GHG regulation.

2.2 JUSTIFICATION

Follow up documentation to support the selection of 2009 as the baseline year was requested by DOH CAB on February 10, 2016 resulting in two response letters submitted by Chevron on October 28, 2016, one with Confidential Business Information (CBI) and the other with non-CBI information. The CBI letter explained the criteria used for determining normal source operations in which process unit shutdown periods and utilization-related data were analyzed to determine the most representative year during the five-year period ending in 2010. They presented three alternatives for consideration to be used as the baseline with 2009 emissions as the most recent representative year. The non-confidential content of the CBI response is summarized in section 2.2.1 through 2.2.4. The non-CBI letter provided additional data and information about GHG emission calculations for the 2006-2010 calendar years and is summarized in section 2.3 and Appendix A.

2.2.1 Unit Downtime

Kapolei Refinery GHG emissions occur from the processing of crude oil to produce high value products that are distributed in commerce for fuels. GHG emissions from normal operations are generated from the following sources:

1. Combustion of fuels supplying heat to the Kapolei Refinery processes (account for approximately 60% of total GHG emissions from the Kapolei Refinery)
2. Coke combustion in the Fluid Catalytic Cracking (FCC) Unit (account for approximately 35% of total GHG emissions from the Kapolei Refinery)
3. Hydrogen Plant
4. Crude Storage
5. Fugitives (piping)
6. (Emissions from) Flaring Events
7. Acid Gas Production (<5% of total GHG emissions from the Kapolei Refinery).

Normal source operations are characterized by crude and process unit throughputs (utilization) and continuous operation that allow the Kapolei Refinery to meet the fuel market demands.

Factors that can impact normal operations include:

1. Unit downtime, whether planned or unplanned, including crude supply interruptions and turnaround years;
2. External factors that reduce utilization, including widespread economic downturns impacting fuel market demands;
3. Periods of malfunction resulting in excess emissions, including force majeure events.

At the Kapolei Refinery, planned maintenance is required for each unit. Short-term shutdowns to service equipment in each process unit occur regularly during the year and typically only last hours. Approximately every five years the units have scheduled long-term shutdowns that can last weeks or months, which all occur in a "turnaround (TA) year". A TA year differs on average

12% of CO2e GHG emissions from the year before it and can vary up to 19%. TA years are not considered representative of normal operation due to this impact.

2.2.2 Refinery Utilization

A second quantitative marker of "normal source operations" is refinery utilization. Utilization can be described in several ways including crude throughput, process unit feed rates, product output, and Complexity Weighted Barrels (CWB) throughput.

Throughput is typically measured in barrels or barrels per day. For benchmarking comparison of multiple facilities in the refining industry, California Air Resources Board has standardized on Complexity Weighted Barrels, CWB, as a refinery's throughput measurement in their Regulation for the Mandatory Reporting of Greenhouse Emissions. [4]

In determining the CWB throughput, the actual crude and individual process unit throughputs, in barrels, are weighted by factors that equalize the number and complexity differences in process units found at different facilities. For the same crude throughput, a refinery with more processing will have a higher CWB.

CWB is correlated with GHG emissions, because more processing generally leads to higher GHG emissions. Thus, CWB is a throughput measurement normalized for the complexity of the Kapolei Refinery that is a reasonable metric for discussing GHG emissions.

2.2.3 Procedures for Determining Alternative Baseline Year

2.2.3.1 HAR §11-60.1-204 (d)(1)(A)(i)

HAR §11-60.1-204 (d)(1)(A)(i) allows a facility to determine alternative facility-wide GHG emissions (less biogenic CO2) based on the most recent representative year during the five-year period ending 2010. The Kapolei Refinery considers representative operation to be periods with (1) no significant process unit shutdowns and (2) a CWB throughput that reflects normal fuel markets and falls within the normal operating window.

No significant process unit shutdowns are a measure of normal operation because during extended periods of shutdown or shutdowns of the large process units such as the Crude Unit or the Fluid Catalytic Cracker, the emissions are low to zero, and do not represent emissions when the units are operating. Refinery CWB throughput is determined by the fuel markets that the Kapolei Refinery supplies and relates to Actual GHG emissions because firing rates of Kapolei Refinery heaters and boilers are determined by the feed to the process units.

2009

The 2009 calendar year meets the criteria of normal operation, as no significant shutdowns occurred and Kapolei Refinery CWB throughput was within the normal range.

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[4] Title 17, California Code of Regulations, Section 95100 et seq, (MRR)

2008
2008 was a turnaround year, in which the Kapolei Refinery executed a planned refinery-wide shutdown that lasted 31 days (8% of the year) at the Crude Unit and 41 days (11% of the year) for the FCCU. The CWB throughput for the year was significantly impacted by this downtime. The combined influence of these two criteria makes the 2008 calendar year non-representative of normal operation.

2007
The 2007 calendar year meets the criteria of normal operation, as no significant shutdowns occurred and Kapolei Refinery CWB throughput was within the normal range.

2006
In calendar year 2006, two external events occurred that resulted in significant unit downtime and had impact on the Kapolei Refinery CWB throughput. On February 21, 2006, a refinery-wide shutdown unexpectedly occurred as a result of an island-wide power outage. The FCC downtime was extended in order to internally inspect equipment. On October 15, 2006, a second refinery-wide shutdown occurred as a result of an island-wide power outage following an earthquake off the island of Hawaii. These two events resulted in 30 days of FCC downtime, or 8% of the year. It also resulted in a 1% overall downtime for the Crude Unit. This significant downtime also lowered the Kapolei Refinery CWB. The combined influence of these two events makes the 2006 calendar year non-representative of normal operation.

Table 2. below summarizes the evaluation of the 2006-2010 calendar years.

Table 2. Normal Operation Analyses Summary

Year	Direct Actual GHG Emissions	Kapolei Refinery Operation Impacted by Shutdowns	Kapolei Refinery Throughput	Representative Year?
2010	529,651 MT *(583,840 T)*	Kapolei Refinery Actual GHG emissions reduced due to an unplanned FCC shutdown	Kapolei Refinery Actual GHG emissions reduced due to lower refinery throughput	No
2009	577,945 MT *(637,075 T)*	No impact	No impact	Yes
2008	522,593 MT *(576,060 T)*	Planned Kapolei Refinery turnaround (TA)	Not estimated due to impact from TA	No
2007	569,048 MT *(627,268 T)*	No impact	No impact	Yes
2006	536,124 MT *(590,976 T)*	Kapolei Refinery Actual GHG	No impact	No

		emissions reduced due to an unplanned refinery-wide shutdown		

2.2.3.2 HAR §11-60.1-204 (d)(1)(A)(ii)

The next method allowed by HAR §11-60.1-204 (d)(1)(A)(ii) is to average facility-wide Actual GHG emissions (less biogenic CO2) over any consecutive two-year period during the five-year period ending in 2010. As described in the previous section, there are no representative consecutive two-year periods; therefore, this method is not feasible.

However, averaging the two years with Actual GHG emissions representative of normal operation, 2009 and 2007, does reflect emissions that could be considered representative. The average Actual GHG emissions for 2007 and 2009 are 573,496 tonnes CO2e.

2.2.3.3 HAR §11-60.1-204 (d)(1)(A)(iii)

The third method allowed by HAR §11-60.1-204 (d)(1)(A)(iii) is to average facility-wide GHG emissions (less biogenic CO2) for the five-year period ending in 2010. As described in the previous section, the five-year period ending in 2010 includes three years that are not representative of normal operation for GHG emissions; therefore, this method is not feasible.

2.2.3.4 HAR §11-60.1-204 (d)(1)(A)(iv)

The fourth method allowed by HAR §11-60.1-204 (d)(1)(A)(iv) is to utilize comparable methods as approved by the director. As noted in the regulation, the director will not consider the use of periods greater than five years from 2010, except for extreme cases such as where an affected source may not have been fully operational for an extended period of time.

A comparable method for determining an alternative baseline year, is to adjust the actual emissions of a non-representative year to reflect expected emissions from restored operation. Chevron adjusted the 2010 calendar year emissions to include the GHG emissions for the FCC shutdown days and unrealized refinery throughput (adjusted to mean CWB value). Data showed that 2010 GHG CO2e emissions would have been at most 2.5% greater than years 2007 and 2009 emissions and 2010 CWB varied from 2% and 4% of years 2007 and 2009 throughput which had throughput within normal the range.

2.2.4 Baseline Year Determination Conclusion

Following HAR §11-60.1-204 (d)(1)(A)(i-iv), the procedures set forth to evaluate alternative baseline year emissions, the Kapolei Refinery has determined the following:

1. Calendar year 2009 Actual GHG emissions are the most recent representative of normal operations. These emissions are 577,945 tonnes CO2e per year.

2. The average of Actual GHG emissions for calendar years 2009 and 2007 is the second most representative baseline emissions. These emissions are 573,497 tonnes CO2e per year.

3. The adjusted 2010 calendar year Actual GHG emissions estimated to remove the impacts of downtime and lost CWB throughput could be considered feasible and is the third most representative baseline emissions. These emissions are ~0.3% greater than 2009 emissions.

2.2.5 Additional documentation requested

In meetings with DOH, Chevron shared that calculations of GHG emissions had been performed in 3 different tools from 2006-2015. SANGEA (2006-2009); CGERS (2010-2014); ESS (2015). In the non-CBI letter submitted on October 28, 2106, Chevron reviewed the different calculation methodologies used for Kapolei Refinery GHG emissions from 2006 to 2010. They also used the input data from those years and recalculated emissions using current GHG calculation methods in a demonstration workbook. Emissions differed from between 1% to 7-10% due to differences in averaging and summing data, changes in GWP conversion factors for CO2e, changes in emission factors for fuel combustion, and a difference in FCC Unit coke combustion methodology in 2006-2007. Appendix A contains a copy of the non-CBI letter with details on the methodology and calculations in the demonstration workbook.

A follow up email from DOH was sent to IES on April 4, 2018, in response to the non-CBI letter from Chevron. The email identified items of interest related to the calculation of the proposed GHG Plan baseline and SLEIS reporting, where DOH used SLEIS data to validate the GHG emissions calculations provided by Chevron for calendar years 2006 to 2010. Of interest to HDOH were calculation differences between the FCC CO2 emission calculations and differences between fuel throughputs, higher heating values (HHV) and annual heats associated with fuel oil, fuel gas, and whole straight run combustion for the proposed 2009 baseline year. IES concluded that these differences were attributed to differences in averaging and summing data, data gathering methods, and the use of the default Natural Gas HHV for fuel gas calculations. IES provided a written emailed response along with a copy their 2016 and 2017 GHG calculation worksheets and fuel oil, fuel gas, and whole straight run analysis worksheets in an email to DOH on August 31, 2018. The emailed response sent to DOH is included in Appendix B.

After careful review of all the data, the January 2021 Rev 2 GHG Emission Reduction Plan proposes to use the most conservative approach to the numbers for the baseline year request.

2.2.6 Conclusion

Based on detailed reviews of historical operation, 2006-2010 GHG input data, and computational comparisons with SLEIS data done in cooperation with DOH CAB, 2009 is the most recent representative year for the Kapolei Refinery facility-wide baseline annual emission rate during the five-year period ending 2010 with emissions of 577,945 tonnes of CO2e per year.

2.3 BASELINE EMISSION SPLIT

IES proposes to split the Kapolei Refinery 2009 baseline emissions, which contain equipment transferred to Par in CSP 0088-01-C, in alignment with IES Terminal (CSP 0863-01-C) and IES Terminal (CSP 0863-01-C). The breakdown of emissions is listed in Table 3.

Table 3. Baseline Emission Split

		Jan-21		Jan-21	
		Par West Refinery	IES Terminal + Process Units	IES Terminal	IES Process Units
	Permit Number	0088-01-C	0863-01-C and 0863-02-C	0863-01-C	0863-02-C
	Baseline Year	2009	2009	2009	2009
Subpart C	Fuel Oil Combustion	193,346			
	Fuel Gas Combustion	100,767	3,223		3,223
	WSR Combustion	44,986			
	Total Subpart C	339,099	3,223		3,223
Subpart P	**Hydrogen Mfg**	7,247	-		-
Subpart Y	FCC Coke Combustion	-	226,349		226,349
	Flare P1	1,017	-		-
	Flare P2 (Crude/Sweet)	117	-		-
	Acid Plant	485	-		-
	Fugitive Venting (Columns)	308	55		55
	Loading Vent (Crude Receipts)	-	45	45	
	Total Subpart Y	1,927	226,449	45	226,404
	Totals	**348,273**	**229,672**	**45**	**229,627**
		577,945		**229,672**	

The permitted equipment in the 2009 Baseline Emission between Par West Refinery and IES Terminal & IES Process Units as shown in Table 4.

Table 4. Split of Permitted Equipment in 2009 Proposed Baseline Year Emissions

	2009 CSP 0088-01-C (unless noted)	
	Refinery	**Terminal**
Subpart C	**Fuel Oil Combustion**	**Fuel Oil Combustion**
	F-5103 - Crude Atm Furnace	
	F-5153 - Crude Vac Furnace	
	F-5201 - Boiler	
	F-5202 - Boiler	
	F-5203 - Boiler	
	Fuel Gas Combustion	**Fuel Gas Combustion**
	F-5103 - Crude Atm Furnace	F-5300 - FCC Furnace
	F-5153 - Crude Vac Furnace	F-5310 - FCC Startup Air Heater
	F-5700 - Hydrogen Furnace	
	F-5930 - Isomerization Furnace	
	F-5950 - Isomerization Furnace	
	F-5600 - Hydrogenation Furnace	
	F-6200 - Acid Plant Combustion Chamber	
	F-6260 - Acid Plant Pre-heater	
	F-6701 - Cogen	
	F-6702 - Cogen	
	F-6703 - Cogen	
	F-6704 - Cogen (CSP 0088-02-C)	
	F-5201 - Boiler	
	F-5202 - Boiler	
	F-5203 - Boiler	
	WSR Combustion	**WSR Combustion**

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	TG-6701 - Cogen	
	TG-6702 - Cogen	
	TG-6703 - Cogen	
	TG-6704 - Cogen (CSP 0088-02-C)	
Subpart P	Hydrogen Mfg Plant	
Subpart Y		FCC Coke Combustion
	Flare P1	
	Flare P2 (Crude/Sweet)	
	Acid Plant	
	Fugitive Venting (Columns)	**Fugitive Venting (Columns)**
	C-5100 - Crude Unit	C-6660 - Dimersol Unit
	C-5150 - Crude Unit	C-5850 - Alkylation Unit
	C-5170 - Crude Unit	C-5860 - Alkylation Unit
	C-5830 - Alkylation Unit	C-5330 - FCC Unit
	C-5840 - Alkylation Unit	C-5340 - FCC Unit
	C-5940 - Isomerization Unit	C-5350 - FCC Unit
	C-6101 - Amine/Acid Unit	C-5405 - FCC Unit
		C-5400 - FCC Unit
		C-5410 - FCC Unit
		C-5420 - FCC Unit
		C-5450 - FCC Unit
		Loading Vent (Crude Receipts)

The post-transfer split of currently permitted equipment in Par Refinery CSP Nos. 0088-01-C, and IES Terminal CSP No. 0863-01-C and CSP No. 0863-02-C are shown in Table 5.

Table 5. Post-transfer Split of Permitted Equipment as of January 2021

	2021		
	CSP 0088-01-C (unless noted)	CSP 0863-01-C	CSP 0863-02-C
	Par West Refinery	IES Terminal	IES Process Units
Subpart C	**Fuel Oil Combustion**	**Fuel Oil Combustion**	**Fuel Oil Combustion**
	F-5103 - Crude Atm Furnace		
	F-5153 - Crude Vac Furnace		
	F-5201 - Boiler		
	F-5202 - Boiler		
	F-5203 - Boiler		
	Fuel Gas Combustion	**Fuel Gas Combustion**	**Fuel Gas Combustion**
	F-5103 - Crude Atm Furnace		F-5300 - FCC Furnace
	F-5153 - Crude Vac Furnace		F-5310 - FCC Startup Air Heater
	F-5700 - Hydrogen Furnace		
	F-5930 - Isomerization Furnace		
	F-5950 - Isomerization Furnace		
	F-5600 - Hydrogenation Furnace		
	F-6200 - Acid Plant CC		
	F-6260 - Acid Plant Pre-heater		
	F-6701 - Cogen		
	F-6702 - Cogen		
	F-6703 - Cogen		
	F-6704 - Cogen (CSP 0088-02-C)		
	F-5201 - Boiler		
	F-5202 - Boiler		
	F-5203 - Boiler		
	WSR Combustion	**WSR Combustion**	**WSR Combustion**
	TG-6701 - Cogen		
	TG-6702 - Cogen		
	TG-6703 - Cogen		

	TG-6704 - Cogen (CSP 0088-02-C)		
	Diesel		
	F-5205 – Boiler (CSP 0088-02-C)		
	F-5206 – Boiler (CSP 0088-02-C)		
	Black Start Generator (CSP 0088-03-C)		
	RICE-110 (CSP 0088-03-C)		
	Rice-1233 (CSP 0088-03-C)		
	RICE-1522 (CSP 0088-03-C)		
	CatOx		
	Catalytic Oxidizer		
Subpart P	Hydrogen Mfg Plant		
Subpart Y			FCC Coke Combustion
	Flare P1		
	Flare P2 (Crude/Sweet)		
	Acid Plant		
	Fugitive Venting (Columns)		Fugitive Venting (Columns)
	C-5100 - Crude Unit		C-6660 - Dimersol Unit
	C-5150 - Crude Unit		C-5850 - Alkylation Unit
	C-5170 - Crude Unit		C-5860 - Alkylation Unit
	C-5830 - Alkylation Unit		C-5330 - FCC Unit
	C-5840 - Alkylation Unit		C-5340 - FCC Unit
	C-5940 - Isomerization Unit		C-5350 - FCC Unit
	C-6101 - Amine/Acid Unit		C-5405 - FCC Unit
			C-5400 - FCC Unit
			C-5410 - FCC Unit
			C-5420 - FCC Unit
			C-5450 - FCC Unit
		Loading Vent (Crude Receipts)	

3.0 2020 Direct GHG Emissions Cap – IES Downstream, LLC

Per §11-60.1-204(d)(2), the regulation requires a 16% reduction from the proposed IES Terminal and Process units 2009 baseline year emission split of 229,672 tonnes per year CO2e. This equates to a reduction of 36,748 total tonnes per year of CO2e and a combined emissions cap of 192,924 tonnes per year CO2e.

IES proposes a cap of **192,924** tonnes ***(212,660 T)*** per year CO2e for its combined operations under CSP 0863-01-C and 0863-02-C operating permits to meet the State's 16% emission reduction requirement. IES is requesting to partner the two facilities into one combine facility-wide GHG emission caps. See section 6.0.

4.0 GHG Control Assessment

Per §11-60.1-204(d)(2), the GHG rule requires each affected source to conduct a GHG control assessment. IES has reviewed the available control measures identified in §11-60.1-204(d)(3), and developed a control strategy based on the available control measures but, have not included it in the updated GHG plan because IES can attain a 16% reduction in emissions.

5.0 Proposed Control Strategy

Per §11-60.1-204(d), the regulation requires each affected source to propose a control strategy to include a listing of identified control measures that can be implemented in order to meet the required or proposed alternate 2020 facility-wide GHG emissions cap. IES has conducted a GHG control assessment of these control measures. IES control strategy is as follows:

> §11-60.1-204(d)(3)
> (E) Restrictive Operation: Process Unit Turndown: Reduce output from certain process units

The above Control strategy of Unit Turndown of the Process units (CSP 0863-02-C) will allow for a 16% reduction from the proposed combined facility 2009 baseline year and has been deemed technically feasible. This equates to a reduction of **36,748** tonnes per year CO2e and an emissions cap of **192,924** tonnes per year CO2e.

6.0 Partnering of CSP 0863-01-C and CSP 0863-02-C

Pursuant to the provisions of the GHG Rule §11-60.1-204(d)(6)(A), the regulation allows facilities to propose to combine their facility-wide GHG emission caps to leverage emission reductions among partnering facilities in meeting the combined GHG emission caps. IES plans to partner the IES Terminal facilities and IES Process Units to achieve the State's GHG emission reduction target. The combined emissions cap will be made part of the permit for each partnering facility in accordance with HAR §11-60.1-204(d)(6)(C).

Table 6. Reflects the individual facility and combined partnering baseline and annual GHG emissions limits.

Table 6. Individual and Combined CO2e Baseline and Caps

		IES Terminal 0863-01-C	IES Process Units 0863-02-C	
		2009	**2009**	
Subpart C	Fuel Oil Combustion			
	Fuel Gas Combustion		3,223	
	WSR Combustion			
	Total Subpart C		3,223	
Subpart P	**Hydrogen Mfg**		-	
Subpart Y	FCC Coke Combustion		226,349	
	Flare P1		-	
	Flare P2 (Crude/Sweet)		-	
	Acid Plant		-	
	Fugitive Venting (Columns)		55	
	Loading Vent (Crude Receipts)	45		
	Total Subpart Y	45	226,404	
	Individual Baselines, CO2e Tonnes	**45**	**229,627**	
	Total Baseline, Tonnes	**229,672**		
	Proposed Cap - 84%, Tonnes	38	192,887	192,924
	CO2e Reduction, Metric Tonnes	7	36,741	36,748

ISLAND ENERGY

Appendix A

October 28, 2016 Chevron Response in Request for Additional Information

Chevron

Jon Mauer
Refinery Manager

Chevron Products Company
Hawaii Refinery
91-480 Malakole Street
Kapolei HI 96707-1807
Tel 808-682-5711
Fax 808-682-2324
JonMauer@chevron.com

October 28, 2016

CERTIFIED MAIL No. 7016 0750 0001 1527 8811
RETURN RECEIPT REQUESTED

Ms. Catherine Lopez
Acting Manager, Clean Air Branch
Environmental Management Division
919 Ala Moana Boulevard
Honolulu, Hawaii 96814

Chevron Hawaii Refinery
Response to Item 2(d) in Request for Additional Information
GHG Emission Reduction Plan

Dear Ms. Lopez:

The Chevron Products Company is hereby submitting additional information as requested by the Clean Air Branch (CAB) staff for evaluation of the Refinery's Greenhouse Gas Emission Reduction Plan (GHGERP), submitted June 30, 2015. This submittal provides the information requested in item 2(d) from the CAB letter dated February 10, 2016. This information is submitted to meet the requirements of §11-60.1-204(a).

The following attachments are provided in this submittal:

Attachment I	Refinery GHGERP submitted June 30, 2015
Attachment II	CAB letter Requesting Additional Information, dated February 10, 2016
Attachment III	Refinery Preliminary Recommendation Plan, dated June 30, 2016
Attachment IV	Compact Disc (CD) containing GHG Calculations 2006-2010.xlsx
Attachment V	Printout of Excel File on CD

If you should have questions or require further information, please contact Anna Chung at (808) 682-3366.

I certify, as the company official having supervisory responsibility for the persons who acting under my direct instructions made the verification, that this knowledge is true, and accurate, and complete to the best of their knowledge, information, and belief.

Sincerely,

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Attachments

Chevron Hawaii Refinery
GHGERP Additional Information, Item 2(d) in CAB February 10, 2016 Letter
GHG Emissions for Calendar Years 2006-2010
October 31, 2016

1.0 Introduction

The Chevron Hawaii Refinery (referred to here as the Refinery) submitted the GHG Emission Reduction Plan, as required by HAR §11-60.1-204(a), on June 30, 2015 (Attachment I). The Department of Health (DOH) Clean Air Branch (CAB) requested additional information in the February 10, 2016 letter (Attachment II), and over the next several months, the Refinery provided information and communicated with CAB staff to clarify the information requested. The Refinery provided a preliminary recommendation to provide the remaining information in a letter dated June 30, 2016 (Attachment III).

The additional information on GHG emission calculations for the 2006-2010 calendar years, requested in item 2(d) in CAB's February letter, is provided in this submittal. The summary of the calculation methodologies is included below. A compact disk (CD) is included as Attachment IV which contains the detailed calculations. Attachment V contains a printout of the detailed calculations.

2.0 GHG Emissions

2.1 Calculation Methodology

Refinery GHG emissions occur from the processing of crude oil to produce high value products that are distributed in commerce for fuels. Greenhouse gases generated at the refinery include carbon dioxide (CO2), nitrous oxide (N2O), and methane (CH4). These emissions are reported as both mass emission rates and the CO2 equivalent (CO2e) emission rates. CO2e emissions are computed by multiplying the mass amount of emissions (tpy) for each of the greenhouse gases by each of the gases' associated global warming potential values published at 40 CFR Part 98, Subpart A, Table A-1, and summing the resultant values of each gas to compute a tpy CO2 equivalent (CO2e).

Three greenhouse gases included in the HAR §11-60.1-1 definition are not generated (hydroflurocarbons, perflurocarbons, and sulfur hexafluoride), and therefore are not included in the further GHG discussion and calculations. In addition, there are no biogenic CO2 emissions at the refinery, or indirect GHG emissions (GHG emissions generated by a different facility), in accordance with HAR §11-60.1-202 definition of the facility-wide GHG emissions cap.

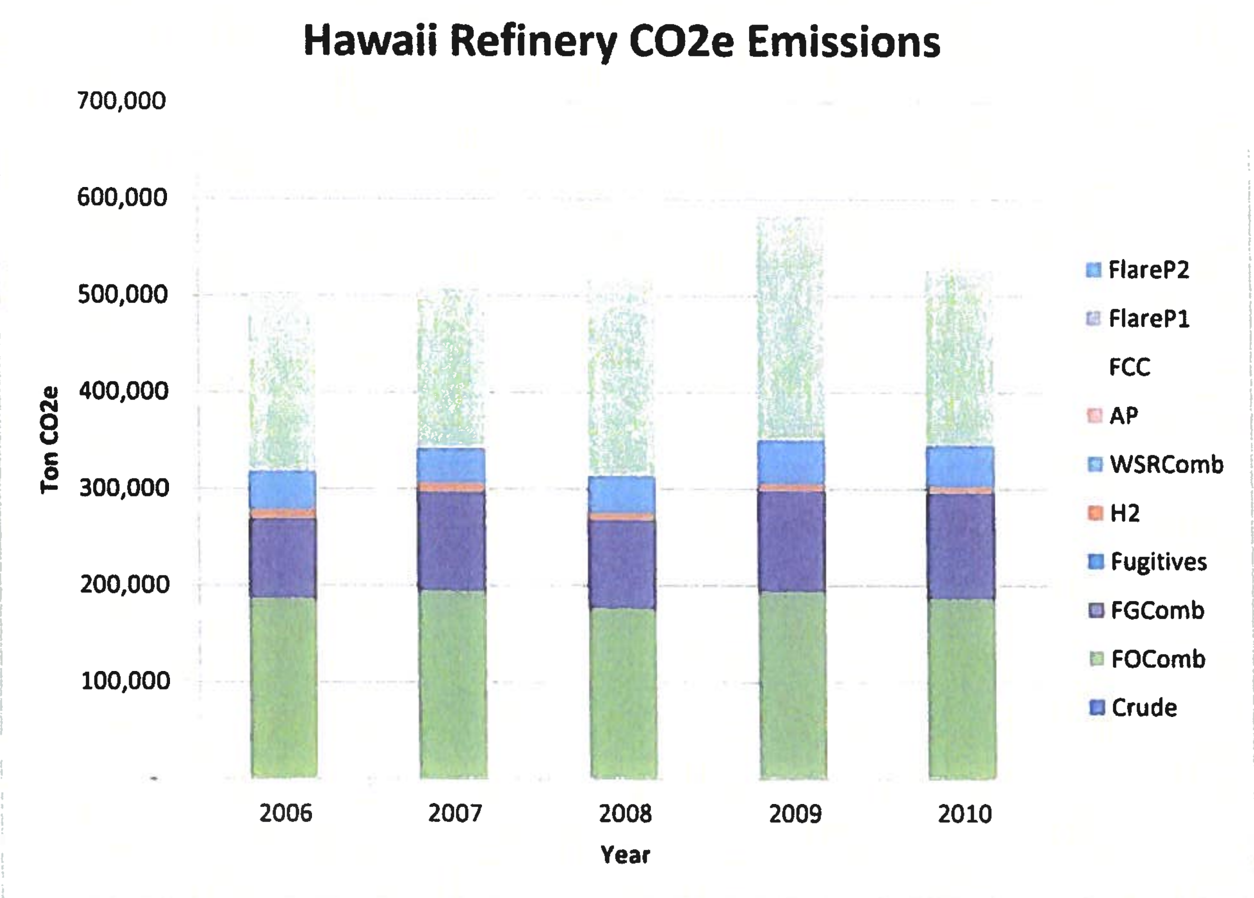
Refinery GHG emissions can be categorized by the type of emissions source:

1. Combustion of liquid and gaseous fuels in stationary sources including process heaters, boilers, cogeneration units
2. Coke combustion in the Fluid Catalytic Cracking Unit
3. Remaining sources, including:
    a. Hydrogen Manufacturing
    b. Crude Storage
    c. Fugitives
    d. Flaring
    e. Acid Gas Processing

Chevron Hawaii Refinery
GHGERP Additional Information, Item 2(d) in CAB February 10, 2016 Letter
GHG Emissions for Calendar Years 2006-2010
October 31, 2016

As shown in Figure 1, the Refinery's GHG Emissions are primarily a result of fuels combustion and the FCC Unit coke combustion. Fuels combustion includes combustion of Fuel Oil (FO), Fuel Gas (FG), and Whole Straight Run (WSR).

Figure 1. GHG Emissions Breakdown



Combustion Emissions from Fuel Oil, Fuel Gas and Whole Straight Run Fuels: FOComb, FGComb, and WSRComb
Coke Combustion Emissions from Fluid Catalytic Cracking (FCC) Unit: FCC
Hydrogen Manufacturing Vent Emissions: H2
Crude Storage Emissions: Crude
Fugitive Emissions from Process Piping: Fugitives
Flaring Emissions: Flare P2 and Flare P1
Acid Gas Processing Emissions: AP

Chevron Hawaii Refinery
GHGERP Additional Information, Item 2(d) in CAB February 10, 2016 Letter
GHG Emissions for Calendar Years 2006-2010
October 31, 2016

The GHG emission calculation methodologies in the attached Excel workbook (Attachment IV) follow the methods prescribed in the following 40 CFR 98 sections:

- Subpart A – General Provisions
- Subpart C – General Stationary Fuel Combustion Sources
- Subpart P – Hydrogen Production
- Subpart Y – Petroleum Refineries

These calculation methodologies are the basis for current regulatory compliance for estimating and reporting GHG emissions, and are summarized in Table 1 below.

The GHG emissions results from the workbook for the years 2008 through 2010 are a demonstration of current GHG calculation methods. The demonstration workbook introduces minor differences (approximately 1%) from the actual GHG emissions due to differences in averaging and summing data, changes in GWP conversion factors for CO2e, and changes in emission factors for fuel combustion. The demonstration workbook utilizes current (2015) emission factors and GWP factors, and sums and averages on a monthly basis.

For the reporting years 2006-2007, the demonstration workbook GHG emissions are 7-10% different from the actual emissions calculated at the time utilizing standardized emissions methodologies[1]. These differences are due to the same issues described above, and also due to a different methodology for FCC Unit coke combustion emissions. For 2006 and 2007, the emissions for the FCC Unit are calculated by a different methodology from later years due to the lack of reliable CO2 analyzer data for those periods. This methodology calculates GHG emissions from emission factors and average coke burn rate.

[1] American Petroleum Institute, Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, Releases 2001, 2004, 2009.

Table 1. Refinery GHG Emission Calculation Methodologies

GHG Emissions Source	CO_2	CH_4	N_2O	Methodology	Equations	Input Data
Liquid Fuel Combustion (FO Comb and WSR Comb)[2]	X	X	X	Subpart C Tier 2	Equations: C-2a C-2b C-9a	Fuel Volume HHV
Gaseous Fuel Combustion (FGComb)[2]	X	X	X	Subpart C Tier 3	Equations: C-5 C-8	Carbon Content Molecular Wt Fuel Flow Rate
FCC Coke Combustion (FCC)[2]	X	X	X	Subpart Y Tier 4	Equations: Y-6 Y-7a Y-7b Y-9 Y-10	Analyzer data Inlet Air Carbon Fraction in Coke Burned
Hydrogen Production (H2)[2]	X			Subpart P	Equations: P-1	Carbon Content Molecular Wt Fuel Flow Rate
Flaring (Flare P1 and Flare P2)[2]	X	X	X	Subpart Y	Equations: Y-3 Y-4 Y-5	Molecular Fraction of Carbon HHV Manual Samples
Acid Gas Processing (AP)[2]	X			Subpart Y	Equations: Y-12	Volumetric Flow rate
Fugitives (Fugitives)[2]		X		Subpart Y	Equations: Y-21	Equipment type Number of units
Crude Storage (Crude)[2]		X		Subpart Y	Equations: Y-22	Crude Received

[2] ( ) refer to naming conventions in Figure 1.

2.2 Results

GHG emissions for the 2006-2010 calendar years are shown in Table 2, below, for the 2006-2010 calendar years.

Table 2. Refinery GHG Emissions[3]

	Demonstration Workbook Calculated Emissions				Actual Emissions
Year	Fuel Combustion (tonnes/yr)	FCC Emissions (tonnes/yr)	All Other Emissions (tonnes/yr)	Total Emissions (tonnes/yr)	Total Emissions (tonnes/yr)
2006	308,406	162,976	11,148	482,530	536,124
2007	331,667	184,301	11,486	527,454	569,048
2008	305,447	203,649	8,321	517,418	522,593
2009	342,322	230,138	9,274	577,945	581,734
2010	337,371	184,372	7,907	523,117	529,651

[3] Actual GHG emissions were calculated by methods and data available at the time and reported for EPA MRR and internal compliance. Demonstration Workbook Calculated Emissions are results from utilizing current methodologies and input data.

As mentioned previously, GHG emissions and detailed calculations, mathematical equations, input data, and emission factors for the 2006-2010 calendar years are provided in Attachment IV and in hardcopy format as Attachment V.

Attachment I

Chevron Hawaii GHG Emission Reduction Plan

Dated June 30, 2015

Jon Mauer
Refinery Manager

Chevron Products Company
Hawaii Refinery
91-480 Malakole Street
Kapolei HI 96707-1807
Tel 808-682-5711
Fax 808-682-2324
JonMauer@chevron.com

June 30, 2015

CERTIFIED MAIL No. 7014 1820 0000 0357 1755
RETURN RECEIPT REQUESTED

Mr. Nolan Hirai
Manager, Clean Air Branch
Environmental Management Division
919 Ala Moana Boulevard
Honolulu, Hawaii 96814

Chevron Hawaii Refinery
GHG Emission Reduction Plan

Dear Mr. Hirai:

The Chevron Products Company is hereby submitting its Greenhouse Gas Emission Reduction Plan for the Chevron Hawaii Refinery. This plan is being submitted to meet the requirements of §11-60.1-204(a).

If you should have questions or require further information, please contact Kristi Mitchum at (808) 682-3145.

I certify, as the company official having supervisory responsibility for the persons who acting under my direct instructions made the verification, that this knowledge is true, and accurate, and complete to the best of their knowledge, information, and belief.

Sincerely,

kam

Enclosures

Chevron Hawaii Refinery
GHG Emission Reduction Plan
§11-60.1-204
June 30, 2015

Introduction

This plan is being submitted in order to meet the requirements of §11-60.1-204(a). The Chevron Hawaii Refinery (Chevron or the Refinery) is located within the Campbell Industrial Park at 91-480 Malakole Street, Kapolei, Hawaii. The facility operates under a Covered Source Permit No. 0088-01-C issued by the Hawaii Department of Health. The Refinery began operation in 1960 with capacity of processing up to 58,000 barrels of crude oil per day. The Refinery has not operated at this rated capacity in recent history but rather sets operations based on market demands. The facility consists of numerous operational units, including crude vacuum and distillation units, fluid catalytic cracker, dimersol, hydrogen manufacturing, alkylation, and isomerization units. The refinery operates utilities including boilers, cogeneration units, effluent treatment plant, and tank fields for storage, blending, and shipping capability in support of its operations.

Chevron has prepared this Greenhouse Gas (GHG) Emission Reduction Plan (the GHG Plan or the Plan) to comply with requirements of the Hawaii Greenhouse Gas Emissions law[1] (the Act) and implementing regulations of the Hawaii Department of Health ("DOH").[2] The GHG rule[3] sets forth the regulatory program for meeting the statutory statewide GHG limit that is equal to or below the 1990 statewide GHG emission levels. The GHG rule generally requires each regulated source to propose a GHG Plan that would cap the source's direct GHG emissions to 16% of that source's 2010 direct GHG emissions. In meeting the GHG limit, the regulation provides flexibility to the Director of the Department of Health, Clean Air Branch (Director or CAB) to set the facility-wide GHG emissions cap for an individual source by varying from the established regulatory structure in two ways: 1) by granting a request to use an alternate emission baseline; and 2) establishing an alternate GHG emission cap based on a finding that the presumptively required 16% reduction is not attainable.

The GHG rule is premised on an assumption that the GHG covered sources reducing their direct GHG levels by 16% from 2010 emission levels will be adequate to return the State of Hawaii to 1990 GHG levels. Although the ultimate goal of the Act is to reduce *statewide* GHG emissions to 1990 emission levels, the Refinery has actually achieved reductions in GHG emissions to less than its estimated 1990 levels and, as a prudent operator, continues to seek these as part of our business. Unlike other sources of GHGs within the state and the selected industries subject to the current GHG rule that have seen growth, and thus increases in GHG emissions since 1990, the Refinery has not experienced sustained increases in capacity and therefore, increased GHG emissions over this same period of time.

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[1] HRS §§ 342B *et seq.*, enacted by Act 234, 2007 Hawaii Session Laws.
[2] HAR § 11-60.1-204, "Greenhouse gas emission reduction plan." Hereinafter, the "GHG rule."
[3] HAR §11-60.1-201, Purpose.

Request for Alternate Baseline Annual Emission Year

Section 11-60.1-204(d)(1) generally requires regulated sources to use 2010 to compute the GHG baseline emissions. This paragraph, however, also allows an owner or operator to propose an alternate GHG emission baseline, and includes several potential methodologies to support computation of an acceptable alternative. These alternatives allow an owner or operator to use emissions from the years 2005-2010 in various formulations, if the owner or operator documents that 2010 is "not representative of normal source operations."

Per §11-60.1-204(d)(1)(A)(i), Chevron requests that the Director approve an alternative baseline year of 2009 based on the most representative year during the five-year period ending 2010. Considering the criteria in paragraph (d)(1)(A), 2009 is an appropriate baseline year. Emissions reported for the 2010 reporting year do not accurately reflect normal operation which resulted in less GHG emissions.
An analysis of the Refinery operations during the 5-year period ending in 2010 demonstrate that the 2009 reporting year is more representative of current operations and anticipated future operations than the 2010 reporting year. In 2010, the Refinery conducted a major plant turnaround of its Fluid Catalytic Cracker (FCC) unit. The result of this maintenance event significantly reduced the GHG emissions for the 2010 calendar year making the use of the 2010 calendar year as a baseline not representative of normal and continuous operation. In 2009, Refinery operations were continuous. Chevron has been estimating GHG emissions internally for several years prior to the GHG Reporting Rule requirement. The 2009 emission calculations are representative and comparable to the 2010 reporting year calculation methodology.

Direct GHG emission estimates for the proposed 2009 baseline year are 581,734 metric tons per year (tpy) of carbon dioxide equivalent (CO_2e). Table 1. GHG Annual Emission Summary indicates the direct GHG emissions estimated for the 1990 calendar year as well as the calculated 2009 and 2010 calendar years. The 1990, 2009, and 2010 calendar years were calculated using the methodologies as required by the GHG Reporting Rule in 40 CFR Part 98; however, estimates were used some operational data that was unavailable for the 1990 calendar year

Table 1. GHG Annual Emission Summary

Calendar Year	Direct emissions reported in metric tons per year of CO_2e
1990	613,900 (estimated)
2009 (baseline year)	581,734
2010	529,651

2020 Facility-Wide Direct GHG Emissions Cap

Per §11-60.1-204(d)(2), the regulation requires a 16% reduction from the proposed 2009 baseline year which would equate to a reduction of 93,077 metric tpy CO_2e and an emissions cap of 488,657 metric tpy CO_2e. For this facility, a reduction of this size is not attainable for long term sustainability of the Refinery.

The Refinery proposes a direct GHG emissions cap of 569,000 tons CO_2e. This is equivalent to a 7.3% reduction in direct GHG emissions since 1990 (or 44,900 tpy of CO_2e) or a 2.2% (or 12,734 tpy of CO_2e) reduction from the baseline year of 2009. Since 2009, the Refinery implemented several energy efficiency measures, and consequently, reduced GHG emissions below this proposed cap. However, these GHG emission reductions were incidental to the intended benefits of the various projects. Those GHG reductions were never intended to be considered an enforceable GHG limit in the refinery Covered Source Permit and are not necessarily permanent.

Minimal decreases, as discussed below, may be attainable but anything greater would not survive the economic impact analysis that the rule requires in §11-60.1-204(d)(5).

GHG Control Assessment

Per §11-60.1-204(d)(2), the GHG rule requires each affected source to conduct a GHG control assessment. The Refinery has reviewed the available control measures identified §11-60.1-204(d)(3), as well as other sources including available EPA guidelines for GHG Best Available Control Technology. These included "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from the Petroleum Refining Industry", EPA Office of Air and Radiation, October 2010 and "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from Industrial, Commercial, and Institutional Boilers", EPA Office of Air and Radiation, October 2010.

Chevron has conducted a GHG control assessment of these control measures and has included the technical feasibility, control effectiveness, and cost evaluation of each measure. A summary of this information is provided in Table 2. GHG Control Assessment. Please note that the refinery already has a many of these measures in place and has noted this where applicable.

Proposed Control Strategy

Per §11-60.1-204(d)(6), the regulation requires each affected source to propose a control strategy to include a listing of identified control measures that can be implemented in order to meet the required or proposed alternate 2020 facility-wide GHG emissions cap.

From 1990 to present, Chevron Hawaii Refinery has completed many control measures that have attributed to the reduction of direct GHG emissions.

- Economizers were installed on the 2 crude furnaces in 1993,
- In 1999, the boiler feed water preparation system (hot lime water) was replaced with reverse osmosis which treats wastewater from the City and County of Honolulu's Honouliuli wastewater treatment plant,
- Control and operational improvements were realized with the new FCC reactor which was replaced in 2003 which also included flare reductions,
- In 2005, the cooling tower motorization was completed,
- In 2006, a flare gas recovery system was installed to recover waste gases being routed to the flare for destruction which is now used for energy recovery; and,
- As part of the Energy Project which began in the early 2000's, Chevron built a new cogeneration unit (Cogen #4) which allows the refinery to optimize its energy use and steam generation. This project included motorization of the Alky plant compressor in April 2013 which enabled full utilization of 4 cogen units. The project also included replacement of three existing boilers with two more energy efficient boilers. A revision of the permit limits for the boilers is pending and the ultimate shutdown of the original three boilers will achieve further reductions in direct GHG emissions.

Since 1990, the Refinery has not expanded nor increased its rated production capacity, nor has the Refinery operated at its maximum permitted rate in the allowable baseline years (2006 through 2010). In fact, Chevron has made significant progress by continuing to evaluate and integrate energy efficiency projects as well as operational best practices which have resulted in lowering GHG emissions for the refinery and the state of Hawaii.

These reductions and other optimization projects have reduced the refinery's Direct GHG emissions by 7.3% since 1990.

Chevron continues to evaluate energy efficiency measures to streamline its cost of operation as well as reducing emissions of GHG. However, cost efficient measures resulting in large reductions in energy consumption and subsequent direct GHG emissions have already been utilized by the Refinery. Additional control measures have been evaluated utilizing a cost per ton methodology similar to Best Achievable Control Technology (BACT). Similar BACT exercises for GHG have been performed within the US resulting in a $20 per ton ($CO_2$e basis) threshold for refineries. Reference: US EPA Region 8 Response to Comments for Sinclair Wyoming Refinery's PSD permit March 21, 2013; PSD permit for Flint Hills Corpus Christi West Refinery April 2014]. In addition, recent regulations like the Heater and Boiler MACT have energy assessment criteria that would only include projects that have payback within 2 year or less.

Utilizing this information, Chevron's GHG control assessment does not yield any additional future projects that result in significant direct GHG emissions reductions given the practical and technical feasibility and cost effectiveness considerations. A waterfall diagram depicting Chevron's GHG emission history including historical projects and the impact of current planned reductions is shown in Chart 1. Waterfall Diagram of GHG Control Assessment. Projects will continue to be evaluated for future emission reductions and future business needs.

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
(A) GHG Capture and Control									
Carbon dioxide capture and storage (CCS)	Large combustion sources; large CO2 vents (e.g., hydrogen plant)	Technically infeasible Physical: CO2 storage in local geologic formations (volcanic formations) is not feasible. Engineering: Techno-economic studies indicate that CCS is not likely to be economically feasible below about 1,000,000 tonnes per year of capture, particularly if the carbon dioxide cannot be used for enhanced oil recovery	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(B) Fuel Switching or Cofiring									
Co-firing	Fuel-fired sources (including boilers, furnaces)	Technically feasible Actual: Boiler F-5201 is currently operated on a combination of fuel oil and refinery fuel gas.	2%	118,831	1,853	1	Reduction in criteria pollutant emissions	Additional emissions for storage of secondary fuel	$162
Fuel Switching	Fuel-fired sources (including boilers, furnaces, and cogens)	Technically feasible Not Considered: Fuel switching is not cost effective.	19.5% reduction in CO2	26,425	6,398	No Change	Reduction in criteria pollutant emissions	Additional emissions for storage of secondary fuel	$547
(C) Energy efficiency upgrades									

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Replace equipment	Boilers	Technically feasible. Current Plan: Boilers F-5201, F-5202, and F-5203 will be replaced with Boilers F-5205 & F-5206 in 2016.	9.80%	45,437	4,940	100	Reduction in criteria pollutant emissions	None	Boiler construction is complete. Permit is pending.
Replace/ upgrade burners	Furnaces	Technically feasible Not Considered: Replacing or upgrading burners is not cost effective.	0.60%	144,520	903	4	Reduction in criteria pollutant emissions	None	$554
Cogeneration	Actual: Cogens 1, 2, and 3 are installed and operational. Cogen 4 was installed and operational as of 2010.								
Instrumentation and controls (improve process monitoring and control systems)	Furnaces, boilers, cogens	Technically feasible Actual: Refinery furnaces, boilers, and cogens are currently equipped with instrumentation and controls to improve process monitoring. Not Considered: Additional instrumentation and controls are not cost effective.	0.20%	237,022	451	2	None	Additional LDAR regulated components	$1,109
Economizer	Actual: Boilers (F-5201, F-5202, F-5203, F-5205, and F-5206) have economizers. Crude furnaces (F-5150 and F-5153) were equipped with economizers in 1993.								
		Technically feasible							

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Heat Recovery: Air Preheater	Furnaces, boilers, cogens	Actual: Crude furnaces (F-5150 and F-5153) and boilers (F-5201, F-5202, F-5203, F-5205, and F-5206) have air preheat. Not Considered: Additional air preheat capability is not cost effective at this time	0.60%	85,257	500	20	None	May increase NOx emissions (2)	$10,000
Power/ waste heat recovery	Actual: Furnaces have waste heat recovery.								
Create turbulent flow within fire tubes	Not applicable. The refinery does not operate fire tubes.								
Capture energy from boiler blowdown	Actual: Boiler blowdown system exchanges heat with RO water.								
		Technically feasible Actual: Condensate return system in place and operational.							

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Condensate return system		Under Evaluation: Improvements to condensate recovery are under evaluation but are not cost effective at this time.	2.20%	58,416	1,338	13	None	None	$374
Motorization projects (use high efficiency motors; use variable speed drives)	Steam-driven motors (MAB or Wet Gas Compressor)	Technically feasible Actual: Completed motorization of Alky Compressor in 2013 and Cooling Tower in 2005.	9.50%	212,467	25,006	70	Reduction in criteria pollutant emissions	Increase emissions for HECO	Complete
Optimize compressed air systems	Optimization of existing air compressors	Technically feasible Not Considered: Optimization of existing air compressors is not cost effective.	0.01%	237,457	16	1	None	None	$31,250
Power/ waste heat recovery	Actual: Already in place for furnaces.								
(D) Combustion and operational improvements									
		Technically feasible							

Table 2. GHG Control Assessment

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Tuning (optimizing excess oxygen)	Furnaces, boilers, cogens	Under Evaluation: Furnace tuning is under evaluation but is not cost effective at this time.	0.80%	235,667	1,806	12	Reduction in NOx emissions	Low excess air may lead to increased CO emissions	$277
Optimization	Furnaces, boilers, cogens	Covered under Instrumentation and Controls - Energy Efficiency - as well as Tuning above							
Reduce air leakages	Furnaces, boilers	Technically feasible Under Evaluation: Reducing air leakages is under evaluation but is not cost effective at this time.	0.66%	235,890	1,583	5	Reduction in criteria pollutant emissions	None	$190
Reduce steam trap leaks	All	Technically feasible Actual: Program in place at refinery to reduce steam trap leaks.	0.14%	237,140	333	3	Reduction in criteria pollutant emissions	None	$150
Insulation/ insulating jackets	All, most suitable for surface temperatures above 120 degrees F (1)	Technically feasible Under Evaluation: Insulation improvements are under evaluation.	0.50%	236,286	1187	10	Reduction in criteria pollutant emissions	None	$126
		Technically feasible							

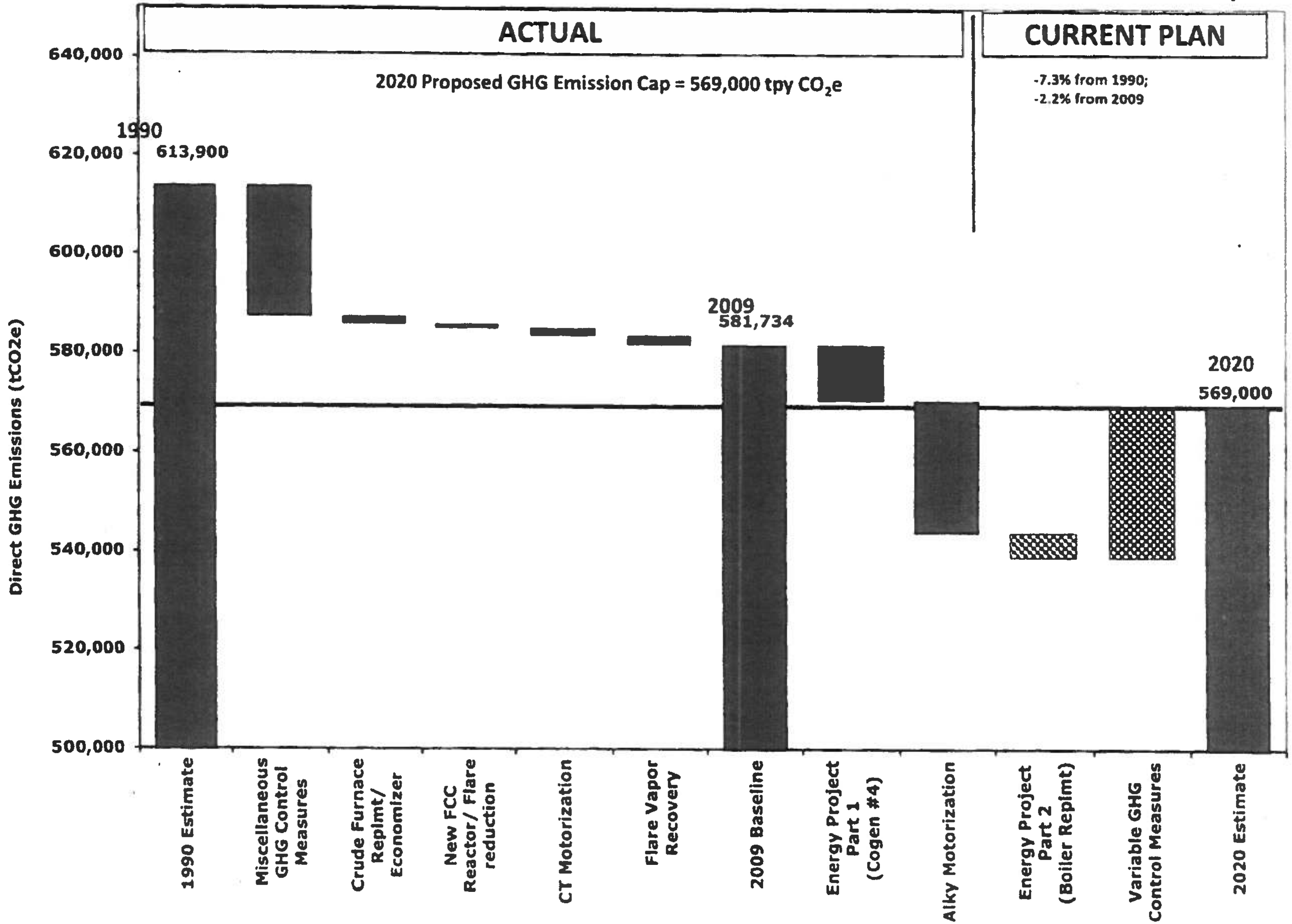
§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Reduce slagging and fouling of heat transfer surfaces (Furnace tube coatings)	Furnaces, boilers	Not Considered: The addition of furnace tube coatings is not cost effective.	0.02%	63,366	10	0.12	Reduction in criteria pollutant emissions	None	$10,000
Furnace cleaning during turnarounds	Actual: Furnace cleaning is performed during turnarounds.								
FCC surface condenser ejector cleaning	Actual: FCC surface condenser ejector cleaning is performed.								
Manage steam letdown	Actual: Refinery manages steam letdown.								
Implement lighting system efficiency improvements	Refinery-wide	Technically feasible Not Considered: Implementing lighting system efficiency improvements is not cost effective.	0.01%	237462	11	0.1	None	None	$909
		Technically feasible							

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Online Furnace Cleaning	Furnaces	Under Evaluation: Programs to incorporate online furnace cleaning are under evaluation but are not cost effective at this time.	0.14%	237,140	333	2	None	None	$180
(E) Restrictive operation									
Minimize use of import electricity	HECO	Actual: Refinery optimizes use of cogens and boilers for energy efficiency to minimize use of import electricity							
Optimize FCC preheat furnace	FCC Preheat Furnace	Technically feasible Under Evaluation: Optimization of FCC preheat furnace operation is under evaluation.	25%	300	100	1	Reduction in criteria pollutants	None	$100
Refinery turndown	Refinery-wide	Technically feasible Not Considered: Refinery turndown is not cost effective.	13%	207473	30,000		Reduction in criteria pollutants	None	> $1,000
Reduce steam vents on reboilers		Technically feasible Under Evaluation: Reboiler vent reduction efforts are under evaluation but not cost effective at this time.	0.31%	236,733	740	5	None	None	$68
(F) Planned upgrades, overhaul or retirement of equipment									

§11-60.1-204(d)(3)		§11-60.1-204(d)(4)	§11-60.1-204(d)(5)(A through G)						
			Control Effectiveness and Cost Evaluation						
GHG Control Measure	Applicable Source Type	Technically Feasible Measures (eliminate all technically infeasible options based on physical, chemical, or engineering principles)	(A) Control Effectives (% of pollutant removed)	(B) Expected emission rate (tons per year CO2e, pounds CO2e/kilowatt-hour)	(C) Expected emission reduction (tons per year CO2e)	(D) Energy Impacts (BTU, kilowatt-hour)	(E) Environmental impacts (other media and the emissions of other regulated air pollutants)	(F) Any secondary emissions or impacts resulting from the production or acquisition of the control measure	(G) Economic Impact (cost effectiveness: annualized control cost, $/megawatt-hr, $/ton CO2e removed, and incremental cost effectiveness between the control and status quo)
Included in line items above and below.									
(G) Outstanding regulatory mandates, emission standards and binding agreements									
Heater and Boiler MACT	Furnaces, Boilers	Energy assessments for applicable sources are required to be completed by January 31, 2016. Impacts of this regulation are included in line items above.							
NSPS Ja	Furnaces	Flare monitoring equipment and flare monitoring plan are required to be completed by November 11, 2015. Impacts of this regulation are included in line items above.							
Tier 3 Gasoline	Furnaces	Technically feasible Current Plan: Refinery plans to meet the sulfur specifications for Tier 3 gasoline by 2020.	↑1.00%	↑239873	↑2400	↑16	↑Increase in criteria pollutant emissions	Unknown	↑Increase in CO2 emissions
(H) Other GHG reduction initiatives that may affect the facility's GHG emissions									
Leak detection and repair	Actual: Refinery complies with existing leak detection and repair regulatory requirements.								
Flare gas recovery	Actual: Refinery installed flare gas recovery in 2006.								

Chart 1. Waterfall Diagram of GHG Control Assessment

Chevron Hawaii Refinery



Attachment II
DOH Letter Requesting Additional Information
Dated February 10, 2016

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O Box 3378
HONOLULU, HAWAII 96801-3378

In reply please refer to
File:

16-071E CAB
File No. 0088

February 10, 2016

Ms. Kristi Mitchum
HES Manager
Chevron Products Company
Hawaii Refinery
91-480 Malakole Street
Kapolei, Hawaii 96707-1807

Dear Ms. Mitchum:

SUBJECT: Greenhouse Gas (GHG) Emissions Reduction Plan
Covered Source Permit (CSP) Nos. 0088-01-C, 0088-02-C, and 0088-03-C
Chevron Products Company
Hawaii Refinery
Located At: 91-480 Malakole Street, Kapolei, Oahu

The Department of Health, Clean Air Branch (CAB), completed an initial review of your GHG Emissions Reduction Plan and determined that additional information is needed for the plan. Please refer to the enclosed attachment and Compact Disk (CD) for the requested information.

Pursuant to the Hawaii Administrative Rules §11-60.1-204(e), the CAB requests that the additional information be provided by **April 8, 2016**.

If you have any questions, please contact Mr. Keith McFall of my staff at (808) 586-4200.

Sincerely,

NOLAN S. HIRAI, P.E.
Manager, Clean Air Branch

KM:mah

Enclosures

Chevron Products Company
Greenhouse Gas Emissions Reduction Plan (GHGERP)
Hawaii Refinery
CSP Nos. 0088-01-C, 0088-02-C, and 0088-03-C
February 10, 2016

ATTACHMENT

Please provide the following information and/or clarifications:

1) Table 1 of your GHGERP presents GHG emissions from the Chevron Products Company, Hawaii Refinery for calendar years 2009 and 2010 to provide information on an appropriate baseline level for the GHG emissions cap. These results were compared with GHG emissions based on fuel consumption data from annual emission reports submitted to the CAB for calendar years 2009 and 2010. The results show emissions based on Chevron's fuel burning data account for about half of the total GHG emissions in Table 1 of your GHGERP. Thus, the detailed GHG emissions information provided in the GHGERP appears crucial to accurately estimating GHG emissions. The CAB requests confirmation on whether or not fuel burning data alone is sufficient to determine GHG emissions.

2) Pursuant to Hawaii Administrative Rules §11-60.1-204(d)(1)(A), the owner or operator shall clearly document why calendar year 2010 is not representative of normal operations and why the proposed alternate year or period is more suitable based on trends, existing equipment and controls, scheduled maintenance, operational practices, and any other relevant information.

The "Request for Alternate Baseline Annual Emission Year" section of your GHGERP discusses a proposed 2009 alternative baseline year and presents Chevron's associated justification and rationale and states:

Statement #1: "Considering the criteria in paragraph (d)(l)(A), 2009 is an appropriate baseline year. Emissions reported for the 2010 reporting year do not accurately reflect normal operation which resulted in less GHG emissions. An analysis of the Refinery operations during the 5-year period ending in 2010 demonstrate that the 2009 reporting year is more representative of current operations and anticipated future operations than the 2010 reporting year. In 2010, the Refinery conducted a major plant turnaround of its Fluid Catalytic Cracker (FCC) unit. The result of this maintenance event significantly reduced the GHG emissions for the 2010 calendar year making the use of the 2010 calendar year as a baseline not representative of normal and continuous operation. In 2009, Refinery operations were continuous. Chevron has been estimating GHG emissions internally for several years prior to the GHG Reporting Rule requirement. The 2009 emission calculations are representative and comparable to the 2010 reporting year calculation methodology."

Statement #2: "Direct GHG emission estimates for the proposed 2009 baseline year are 581,734 metric tons per year (tpy) of carbon dioxide equivalent (CO_2e). Table 1. GHG Annual Emission Summary indicates the direct GHG emissions estimated for the 1990 calendar year as well as the calculated 2009 and 2010 calendar years."

The CAB examined the information provided in your GHGERP and identified the following items:

a) Statement#1 indicates that facility GHG emissions for calendar year 2010 are not representative of normal operations due to operations associated with the FCC unit, and that facility emissions associated with calendar year 2009 are "more representative of current operations and anticipated future operations than the 2010 reporting year." The GHGERP did not include the "analysis of Refinery operations" associated with your calendar year 2006 through 2010 GHG emissions. It did not quantify the significance of the "major plant turnaround" of the FCC unit relative to other changes in operations that occurred during the 2006 to 2010 period. The CAB examined annual fuel burning data associated with the Chevron Refinery, including calendar years 2006 through 2010, and calculated the annual heat content associated with the FCC Furnace (Unit F5300) for this period. Please see Table A-1 below. Presuming these results are correct, there does not appear to be a significant difference between the values for 2009 and 2010. However, as shown in Table A-1, relative to the 5-year mean value of 96,011 MMBTU, there is significant reduction in energy use for the FCC between the 2006 to 2007 years (~ 142% of the mean) and the 2009 to 2010 years (~ 61% of the mean).

Table A-1. FCC Furnace (Unit F5300) Heat Content					
	2006 (MMBTU)	2007 (MMBTU)	2008 (MMBTU)	2009 (MMBTU)	2010 (MMBTU)
FCC Unit No. F5300	136,305	136,553	89,606	59,897.4	57,694
% of 5-year mean[a]	142.0%	142.2%	93.3%	62.4%	60.1%

a. Percentage of the average 96,011 MMBtu energy use between 2006 and 2010.

Total MMBtu per year energy use associated with all annual fuel consumption was also calculated. Please see Table A-2 below. Presuming these results are correct, there does not appear to be a significant difference in energy use for the Chevron Refinery between 2008 and 2010. Relative to the 5-year mean value of 4,561,312 MMBTU, the variations are relatively small compared to those shown in Table A-1 for the FCC Furnace. In addition, since the FCC's MMBtu energy use is only a few percent of Chevron Refinery's total energy use for fuel burning, and the energy use from burning fuel appears to contribute only about half of the total GHG emissions for the facility, without additional explanation and quantification, it is not clear that FCC operations are representative of your facility's annual GHG emissions.

Table A-2. Total Fuel Burning Heat Content					
	2006 (MMBTU)	2007 (MMBTU)	2008 (MMBTU)	2009 (MMBTU)	2010 (MMBTU)
All	4,649,600	4,968,139	4,392,463	4,490,778	4,305,579
% of 5-year mean[a]	101.9%	108.9%	96.3%	98.5%	94.4%

a: Percentage of the average 4,561,312 MMBtu energy use between 2006 and 2010.

The GHGERP identified the "major plant turnaround" of the FCC unit as the reason for the assertion that calendar year 2010 was not representative of normal operations. However, the GHGERP does not include the supporting data, analysis, and results needed to assess this claim. The CAB's evaluation of energy use by your facility does not appear to validate the claim either. The CAB, therefore, requests additional information to document FCC unit operation as the means to evaluate the relative suitability of calendar years 2006 through 2010 as an appropriate representation of baseline GHG emissions. For the purpose of establishing trend information, the CAB requests similar information for calendar years 2011 through 2014.

b) Statement#1 indicates that the "major plant turnaround" of the FCC unit during 2010 resulted in annual CO_2e emission levels that were not representative of "normal operations". It is unclear to what extent this shutdown resulted in annual refining activity failing to meet planned levels, and thus annual CO_2e emissions that would not be representative of "normal operations." It is also unclear to what extent the annual impact of the "major plant turnaround" was mitigated by production before and after the shutdown. As such, the CAB requests a discussion of pre and post shutdown mitigation efforts, and the estimated net impact that this shutdown had on annual Refinery operations for 2010 versus that for 2006, 2007, 2008, and 2009.

c) Statement#1 indicates that an analysis of Refinery operations for the years 2006 – 2010 was performed. While the GHGERP only addresses operations associated with the FCC unit, it is unclear if the analysis identified other factors useful for the assessment of whether calendar year 2010 is representative of normal operations. It is unclear if the analysis considered differences between planned and actual annual production in the assessment of "normal operations." The CAB requests additional information, if available, from the analysis to evaluate the relative suitability of calendar years 2006 through 2010 as representative of baseline GHG emissions. Please include discussions of associated mitigation efforts, and the estimated net impact of any other factors on annual refining activity for 2010 versus that for 2006, 2007, 2008, and 2009. For the purpose of establishing trend information, the CAB requests similar information for calendar years 2011 through 2014.

d) Statement#2 presents the annual GHG emissions for the facility in 2009, but the GHGERP does not include the supporting documentation needed to confirm your results. Table 1 in your GHGERP includes 2010 GHG emissions for the facility, and this value appears to match the facility total reported in the EPA Facility Level Information on GHGs Tool (FLIGHT) at: http://ghgdata.epa.gov/ghgp/main.do). However, it is unclear if the annual GHG emissions for calendar years 2009 and 2010 were calculated in a consistent manner. For example, the 2010 value has not been corrected to reflect the current greenhouse gas global warming potentials (GWPs) for methane (CH_4) and nitrous oxide (N_2O). To assist in the evaluation of the relative suitability of emission years 2006 – 2010 for establishment of baseline GHG emissions, the CAB requests that you provide the refinery's annual GHG emissions with supporting information and spreadsheet calculations for calendar years 2006, 2007, 2008, 2009, and 2010. Please ensure that the information provided for the annual GHG emission inventories has sufficient detail to enable validation of the calculations. The CAB requests that any inconsistencies in year to year GHG calculation methods be discussed and their impact quantified.

e) To assist in the evaluation of operating trends, annual GHG emissions information for calendar years 2011 through 2014 is also needed. For the 2011 through 2014 GHG inventories, the CAB requests that your provide confirmation that the EPA

GHG Reporting Program CO_2e information available at EPA's FLIGHT website (http://ghgdata.epa.gov/ghgp/main.do) are accurate, and consistent with the 2006 – 2010 annual GHG emissions discussed previously. The CAB requests that any causes of inaccuracy or inconsistency (e.g., data quality, data source, calculation methods) be discussed and their impact quantified. The CAB requests the submission of updated data and calculations if revisions are needed to ensure accuracy or consistency. Note that the CAB used updated GWPs from the EPA Emission Factor Hub website (http://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub) to correct for the change in GWPs that occurred during the reporting periods. As can be seen in the Table A-3 below, these corrections are insignificant in magnitude.

Table A-3. EPA FLIGHT Annual GHG emissions for Chevron Refinery with GWP Corrections

	GHG Summary Report: http://ghgdata.epa.gov/ghgp/main.do	Chevron Refinery	2010	2011	2012	2013	2014
	CO2 equivalent emissions from facility subparts C-II, SS, and TT	Metric Tons	529,650.8	560,055.7	568,094.9	462,620.6	536,124.3
	CO2 equivalent emissions from supplier subparts LL-QQ	Metric Tons	0.0	0.0	0.0	0.0	0.0
	Biogenic CO2 emissions from facility subparts C-II, SS, and TT	Metric Tons	0.0	0.0	0.0	0.0	0.0
	Reported Total (no GWP corrections)	Metric Tons	529,650.8	560,055.7	568,094.9	462,620.6	536,124.3
	Calculated Total (April 2014 GWP)	Metric Tons	529,748.0	560,159.2	568,194.4	462,620.6	536,124.3
	Difference (Reported - Calculated)	Metric Tons	-97.2	-103.5	-99.5	0.0	0.0
	% Difference	%	-0.01835%	-0.01848%	-0.01752%	-0.00001%	-0.00001%

f) This initial CAB review examined fuel burning data from annual emissions inventory submissions for calendar years 2006 – 2014. Seven fuels with possible erroneous heat content information were identified. They are summarized below in Table A-4 and documented in more detail in the file "Chev-Ref-2009-review-9.xlsx" located on the enclosed CD. Please see Sheets "2-Review Comments" and "3- ProcessesHeatCO2." The CAB requests confirmation and explanation, or correction of these values.

Table A-4. Fuels with Possible Erroneous Heat Content Information

Emission Year	Fuel Type	Fuel Material Code	SCC	Fuel Heat Content (Annual Ave.)	Fuel Heat Content Unit Numerator	Fuel Heat Content Unit Denominator	Review Comments:
2013	Refinery Gas	553	30600106	1.129	E6BTU	E6FT3S	The "Fuel Heat Content Unit Denominator" changed from "E3BTU" to "E6BTU" after 2012. It is unclear if the "Throughput" values are consistent with "E6BTU". See Sheet "3 ProcessesHeatCO2" for CAB fuel burning related GHG emissions estimates
2013	Liquified Petroleum Gas (LPG)	178	30600107	91.5	E6BTU	E6BTU	The "Fuel Heat Content Unit Denominator" appears to be incorrect. For this case, a corrected value of E3GAL seems plausible. It is unclear if the "Throughput" value and units are consistent with this heat content unit
2013	Refinery Gas	553	20200701	1.129	E6BTU	E6FT3S	The "Fuel Heat Content Unit Denominator" changed from "E3BTU" to "E6BTU" after 2012. It is unclear if the "Throughput" values are consistent with "E6BTU".
2013	Refinery Gas	553	20200701	111.022	E5BTU	E6FT3S	It appears that the "Fuel Heat Content" for Refinery Gas and Gasoline have been swapped. A corrected value of 1.129 E6BTU/E3FT3S seems plausible. Also, the "Fuel Heat Content Unit Denominator" changed from "E3BTU" to "E6BTU" after 2012. It is unclear if the "Throughput" values are consistent with "E6BTU"
2013	Gasoline	127	20201701	1.129	E6BTU	E3GAL	It appears that the "Fuel Heat Content" for Refinery Gas and Gasoline have been swapped. A corrected value of 111.022 E6BTU/E3GAL seems plausible
2014	Refinery Gas	553	30600106	1.057	E6BTU	E6FT3S	The "Fuel Heat Content Unit Denominator" changed from "E3BTU" to "E6BTU" after 2012. It is unclear if the "Throughout" values are consistent with "E6BTU"
2014	Refinery Gas	553	20200701	1.057	E6BTU	E6FT3S	The "Fuel Heat Content Unit Denominator" changed from "E3BTU" to "E6BTU" after 2012. It is unclear if the "Throughout" values are consistent with "E6BTU".

For your written response to our request for additional information, the CAB also requests that you provide emissions inventory data and supporting calculations in an excel spreadsheet format to enable us to verify your results. Please email the requested information to CAB.Emissions@doh.hawaii.gov. Also mail a hardcopy of the requested information to:

Clean Air Branch
Hawaii Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, Hawaii 96814

Attachment III

Chevron letter with Preliminary Recommendation

Dated June 30, 2016

Chevron

Kristi Mitchum
HES Manager

Chevron Products Company
Hawaii Refinery
91-480 Malakole Street
Kapolei HI 96707-1807
Tel 808-682-3145
Fax 808-682-2324
Kristi.Mitchum@chevron.com

June 30, 2016

CERTIFIED MAIL No. 7015 0640 0003 9266 0915
RETURN RECEIPT REQUESTED

Mr. Nolan Hirai
Manager, Clean Air Branch
Environmental Management Division
919 Ala Moana Boulevard
Honolulu, Hawaii 96814

Chevron Hawaii Refinery
GHG Emission Reduction Plan – Additional Information Request

Dear Mr. Hirai:

Per your May 27, 2016 request, we are providing a preliminary recommendation for a revised set of information regarding our GHG Emissions Reduction Plan (GHGERP). The recommendations below address the remaining items, originally requested in the Department of Health, Clean Air Branch (CAB) letters dated February 10, 2016 and April 20, 2016. We appreciate your staff's efforts to help clarify the questions concerning the refinery's GHGERP, submitted June 30, 2015.

As indicated in the table below, the refinery has addressed the requested information in items 1, 2 (b), 2(c), 2(e), and 2(f). We plan to provide the information described for items 2(a) and 2(d) below.

Referenced Line Item # for Requested Additional Information (April 20, 2016 CAB letter2)	Status	Preliminary Plan
1	Complete. No further action.	
2a	In progress	Provide dates and supporting process information identifying process unit shutdown periods. Provide utilization-related data supporting the determination that 2010 is not representative of normal source operation. Some or all of this information may be Confidential Business Information (CBI) and will be submitted per DOH's CBI protocol, provided to the refinery by email, June 9, 2016
2b	Complete. No further action.	
2c	Complete. No further action.	

2d	In progress	Provide input process data and parameters used in the estimation of 2009 and 2010 GHG emissions, consistent with the GHG MRR reporting.
2e	Complete. No further action.	
2f	Complete. No further action.	

We believe the preliminary recommendation above is consistent with the discussions with your staff. Due to the extensive data collection, we may request additional time to complete collection of the information, as noted in your May 27, 2016 letter.

If you should have questions or require further information, please contact Kristi Mitchum at (808) 682-3145.

Sincerely,

Enclosures

bcc: Kristi Mitchum

Records File: A-3-0-0-16

Electronic File:
\\KAPHINTDATA1.KAPHI.CHEVRONTEXACO.NET\SHARE\Envr\GHG\Emission Reduction Plan\2016 DOH Request for Additional Information\Correspondence\Jun 30 2016 Preliminary Plan for GHG Additional Information Request.docx

scb 6/30/16
AA 6/30/16

Legal review: Susan Owen 6/30/16
Discussed early draft w/ KM. 6/29/16

Attachment IV
CD with Chevron Hawaii Refinery GHG Emissions

Attachment V
Chevron Hawaii Refinery GHG emissions

Attachment V

GHG Calculations 2006-2010.xlsx

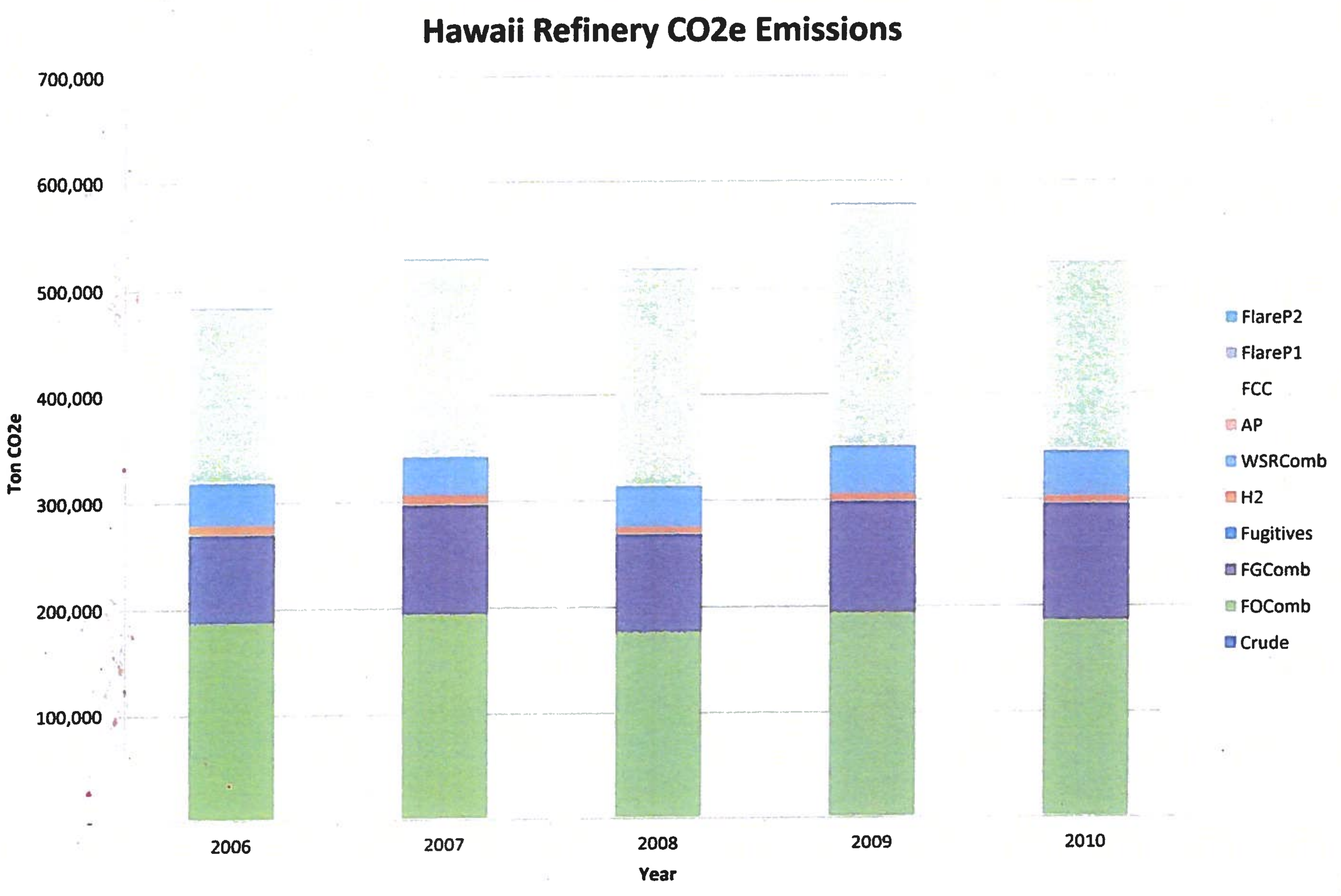
Instructions

This is a sheet for calculating direct GHG emissions in the Hawaii Refinery.

Process Units	Tab
FCC Unit (Regenerator) (Plant 53)	FCC
Fuel Oil Combustion	FO Comb
Fuel Gas Combustion	FG Comb
WSR Combustion (Cogens)	WSR Comb
Flare P1 Sweet	Flare P1
Flare P2 Sour	Flare P2
Acid Plant (Unit 62)	AP
Crude Tank	Crude
Diesel Engine	Diesel Eng
Fugitives	Fugitives
Hydrogen Manufacturing (Unit 57)	H2 Manufac

Color Code	
	Description
	Inputs
	Intermediate Expressions
	Final Expression (Emission Rate)
	Not Used

Attachment V
GHG Calculations 2006-2010.xlsx
GHG Breakdown



Attachment V
GHG Calculations 2006-2010.xlsx
Summary data

Year	Crude	FCC	FO Comb	FG Comb	Fugitives	Flare P1	Flare P2	H2	AP	WSR Comb	TOTAL (ton CO2e)
2006	46	162,976	186,569	82,136	363	1,044	118	8,993	584	39,700	482,530
2007	46	184,301	193,906	102,017	363	1,053	93	9,354	577	35,745	527,454
2008	42	203,649	175,891	91,098	363	424	99	6,908	486	38,457	517,418
2009	45	226,349	193,346	103,990	363	1,017	117	7,247	485	44,986	577,945
2010	37	177,838	186,197	108,645	363	-	8	7,025	475	42,529	523,117

	Demonstration Workbook Calculated Emissions Metric Tons CO2e/year						
Year	Fuel Combustion	FCC	Remaining Sources	Demonstration Total	Actual Emissions	% Diff	
2006	308,406	162,976	11,148	482,530	536,124	10%	
2007	331,667	184,301	11,486	527,454	569,048	7%	
2008	305,447	203,649	8,321	517,418	522,593	1%	Difference in Averaging Periods, GWP and EF Changes
2009	342,322	226,349	9,274	577,945	581,734	1%	Difference in Averaging Periods, GWP and EF Changes
2010	337,371	177,838	7,907	523,117	529,651	1%	Difference in Averaging Periods, GWP and EF Changes

Notes on GHG emission calculations for historical years:
GWP potentials in Default Const tab are the current factors, effective 2014, for consistency with the MRR reporting.
Input data averaging periods are different from EPA's IVT methodology. Different averaging periods of data such as heating value can cause differences in calculation results.
Some emission factors have changed from the earlier years in this historical data set (e.g. FO combustion). This spreadsheet uses the current Efs for consistency with MRR reporting.
Some sources have been added to the historical years for consistency with the current MRR inventory (AP and Crude).
GHG emissions for internal combustion engines (ICE) have been added to the 2015 and later years inventory to account for newly permitted sources.

Attachment V

GHG Calculations 2006-2010.xlsx

Default Const

Type of Value	Parameter Name	Variable Name	Unit	Variable Value	
Global Constant	F to R	STPConv	dimensionless	459.671	
Global Constant	MolVolConvEPA, StdCond	StdMolVolEPA	scf/mol	0.8495	
Global Constant	Operating Hours in a Month	OperatingHoursMonth	hr	732	
Global Constant	kg to tonne	ConvTonneKg	dimensionless	0.001	
Global Constant	mmbbl to bbl	ConvBblMmbbl	dimensionless	1000000	
Global Constant	tonne to lb	ConvLbTonne	dimensionless	2204.62	
Global Constant	kg to lb	ConvLbKg	dimensionless	2.20462	
Global Constant	bbl to gal	ConvGalBbl	dimensionless	42	
Global Constant	mbtu to mmbtu	ConvMmbtuMbtu	dimensionless	0.001	
Global Constant	mscf to scf	ConvScfMscf	dimensionless	1000	
Global Constant	g to lb	ConvLbG	dimensionless	0.00220462	
Global Constant	btu to mmbtu	ConvMmbtuBtu	dimensionless	0.000001	
Global Constant	Minute to Hour	ConvHrMin	dimensionless	0.016666667	
Global Constant	Operating Hours in a 30d Month	OperatingHoursMonth	hr	720	
Global Constant	Operating Hours in a 31d Month	OperatingHoursMonth	hr	744	
Global Constant	Operating Hours in a 28d Month	OperatingHoursMonth	hr	672	
Global Constant	Operating Hours in a 29d Month	OperatingHoursMonth	hr	696	leap years: 2016: 2012; 2008; 2004; 2000
Global Constant	Methane GWP 2014 updated value	MGWP	dimensionless	25	
Global Constant	Nitrous Oxide GWP 2014 updated value	NGWP	dimensionless	298	
Global Constant	Methane GWP old value	oMGWP	dimensionless	21	
Global Constant	Nitrous Oxide GWP old value	oNGWP	dimensionless	301	

Entity - Proc Unit ID	Material Name	Type of Value	Parameter Name	Variable Name	Unit	Variable Value
Crude Tank	Methane	Global Emission Factor	Dflt Emiss Factor, Storage Tanks, EPA Y	EF	tonne/1000000 bbl	0.1
Diesel Engine	Carbon Dioxide	Global Emission Factor	Comb, Distillate Fuel Oil No. 2, EPA	EF	kg/mmbtu	73.96
	Carbon Dioxide	Global Emission Factor	Default HHV, Distillate Fuel Oil No 2, EPA	HHV	mmbtu/gal	0.138
	Methane	Global Emission Factor	Comb, Distillate Fuel Oil No. 2, EPA	EF	kg/mmbtu	0.003
	Methane	Global Emission Factor	Default HHV, Distillate Fuel Oil No 2, EPA	HHV	mmbtu/gal	0.138
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Distillate Fuel Oil No. 2, EPA	EF	kg/mmbtu	0.0006
	Nitrogen Oxide (N2O)	Global Emission Factor	Default HHV, Distillate Fuel Oil No 2, EPA	HHV	mmbtu/gal	0.138
FCC Unit (Regenerator) (Plant 53)	Methane	Global Emission Factor	Comb, Petroleum Coke, EPA	EF_CO2	kg/mmbtu	102.41
	Methane	Global Emission Factor	Comb, Petroleum Products, EPA	EF_CH4	kg/mmbtu	0.003
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Petroleum Coke, EPA	EF_CO2	kg/mmbtu	102.41
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Petroleum Products, EPA	EF_N2O	kg/mmbtu	0.0006
Fuel Oil Combustion	Carbon Dioxide	Global Emission Factor	Comb, Distillate Fuel Oil No. 6, EPA	EF	kg/mmbtu	75.1
	Methane	Global Emission Factor	Comb, Distillate Fuel Oil No. 6, EPA	EF	kg/mmbtu	0.003
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Distillate Fuel Oil No. 6, EPA	EF	kg/mmbtu	0.0006
Fugitives						
Fuel Gas Combustion	Methane	Global Emission Factor, 2014, 2015	Comb, Natural Gas, Pipeline, EPA	EF	kg/mmbtu	0.001
	Nitrogen Oxide (N2O)	Global Emission Factor, 2014, 2015	Comb, Natural Gas, Pipeline, EPA	EF	kg/mmbtu	0.0001
	Methane	Global Emission Factor, 2013 and earlier	Comb, Fuel Gas, EPA	EF	kg/mmbtu	0.003
	Nitrogen Oxide (N2O)	Global Emission Factor, 2013 and earlier	Comb, Fuel Gas, EPA	EF	kg/mmbtu	0.0006
Flare P1 Sweet	Carbon Dioxide	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Methane	Global Emission Factor	Comb, Petroleum Products, EPA	EF_CH4	kg/mmbtu	0.003
	Methane	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Petroleum Products, EPA	EF_N2O	kg/mmbtu	0.0006
	Nitrogen Oxide (N2O)	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Methane	Global Emission Factor	Default weight fraction of carbon in methane in	f_CH4	dimensionless	0.4
Flare P2 Sour	Carbon Dioxide	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Methane	Global Emission Factor	Comb, Petroleum Products, EPA	EF_CH4	kg/mmbtu	0.003
	Methane	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Petroleum Products, EPA	EF_N2O	kg/mmbtu	0.0006
	Nitrogen Oxide (N2O)	Global Emission Factor	Flr, Refinery Default, EPA	EF_CO2	kg/mmbtu	60
	Methane	Global Emission Factor	Default weight fraction of carbon in methane in	f_CH4	dimensionless	0.4
Hydrogen Manufacturing (Unit 57)						
Acid Plant (Unit 62)						
WSR Combustion (Cogens)	Carbon Dioxide	Global Emission Factor	Comb, Naptha (<401 deg F), EPA	EF	kg/mmbtu	68.02
	Methane	Global Emission Factor	Comb, Naptha (<401 deg F), EPA	EF	kg/mmbtu	0.003
	Nitrogen Oxide (N2O)	Global Emission Factor	Comb, Naptha (<401 deg F), EPA	EF	kg/mmbtu	0.0006

Attachment V
GHG Calculations 2006-2010.xlsx
Crude

Month	Year	Process Unit	Emission Scenario	GHG Species	Crude Received	Units	Species Emission Rate Expression	Species Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Crude Receiving Tanks	Venting	Methane	1492000	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	328.929304	lb/month	0.1492	MT/month	3.73	
Feb	2010	Crude Receiving Tanks	Venting	Methane	440079	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	97.0206965	lb/month	0.0440079	MT/month	1.1001975	
Mar	2010	Crude Receiving Tanks	Venting	Methane	430569	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	94.92410288	lb/month	0.0430569	MT/month	1.0764225	
Apr	2010	Crude Receiving Tanks	Venting	Methane	1050333	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	231.5585138	lb/month	0.1050333	MT/month	2.6258325	
May	2010	Crude Receiving Tanks	Venting	Methane	1731924	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	381.8234289	lb/month	0.1731924	MT/month	4.32981	
Jun	2010	Crude Receiving Tanks	Venting	Methane	1491503	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	328.8197344	lb/month	0.1491503	MT/month	3.7287575	
Jul	2010	Crude Receiving Tanks	Venting	Methane	1386339	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	305.6350686	lb/month	0.1386339	MT/month	3.4658475	
Aug	2010	Crude Receiving Tanks	Venting	Methane	1323702	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	291.8259903	lb/month	0.1323702	MT/month	3.309255	
Sep	2010	Crude Receiving Tanks	Venting	Methane	1320190	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	291.0517278	lb/month	0.132019	MT/month	3.300475	
Oct	2010	Crude Receiving Tanks	Venting	Methane	1762869	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	388.6456255	lb/month	0.1762869	MT/month	4.4071725	
Nov	2010	Crude Receiving Tanks	Venting	Methane	1310805	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	288.9826919	lb/month	0.1310805	MT/month	3.2770125	
Dec	2010	Crude Receiving Tanks	Venting	Methane	1104842	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	243.575677	lb/month	0.1104842	MT/month	2.762105	
Jan	2009	Crude Receiving Tanks	Venting	Methane	1559299	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	343.7661761	lb/month	0.1559299	MT/month	3.8982475	
Feb	2009	Crude Receiving Tanks	Venting	Methane	1427805	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	314.7767459	lb/month	0.1427805	MT/month	3.5695125	
Mar	2009	Crude Receiving Tanks	Venting	Methane	1594532	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	351.5337138	lb/month	0.1594532	MT/month	3.98633	
Apr	2009	Crude Receiving Tanks	Venting	Methane	1506419	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	332.1081456	lb/month	0.1506419	MT/month	3.7660475	
May	2009	Crude Receiving Tanks	Venting	Methane	1623472.49	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	357.9139921	lb/month	0.162347249	MT/month	4.058681225	
Jun	2009	Crude Receiving Tanks	Venting	Methane	1331272	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	293.4948877	lb/month	0.1331272	MT/month	3.32818	
Jul	2009	Crude Receiving Tanks	Venting	Methane	1529534	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	337.2041247	lb/month	0.1529534	MT/month	3.823835	
Aug	2009	Crude Receiving Tanks	Venting	Methane	1506679	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	332.1654657	lb/month	0.1506679	MT/month	3.7666975	
Sep	2009	Crude Receiving Tanks	Venting	Methane	1436862	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	316.7734702	lb/month	0.1436862	MT/month	3.592155	
Oct	2009	Crude Receiving Tanks	Venting	Methane	1490289	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	328.5520935	lb/month	0.1490289	MT/month	3.7257225	
Nov	2009	Crude Receiving Tanks	Venting	Methane	1406602	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	310.1022901	lb/month	0.1406602	MT/month	3.516505	
Dec	2009	Crude Receiving Tanks	Venting	Methane	1472692.53	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	324.6727405	lb/month	0.147269253	MT/month	3.681731325	
Jan	2008	Crude Receiving Tanks	Venting	Methane	1,397,466	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	308.0881493	lb/month	0.1397466	MT/month	3.493665	
Feb	2008	Crude Receiving Tanks	Venting	Methane	1,384,529	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	305.2360324	lb/month	0.1384529	MT/month	3.4613225	
Mar	2008	Crude Receiving Tanks	Venting	Methane	1,486,376	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	327.6894257	lb/month	0.1486376	MT/month	3.71594	

Apr	2008	Crude Receiving Tanks	Venting	Methane	269,218	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	59.35233872	lb/month	0.0269218	MT/month	0.673045	
May	2008	Crude Receiving Tanks	Venting	Methane	1,291,791	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	284.7908274	lb/month	0.1291791	MT/month	3.2294775	
Jun	2008	Crude Receiving Tanks	Venting	Methane	1,623,674	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	357.9584174	lb/month	0.1623674	MT/month	4.059185	
Jul	2008	Crude Receiving Tanks	Venting	Methane	1,627,361	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	358.7712608	lb/month	0.1627361	MT/month	4.0684025	
Aug	2008	Crude Receiving Tanks	Venting	Methane	1,611,706	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	355.3199282	lb/month	0.1611706	MT/month	4.029265	
Sep	2008	Crude Receiving Tanks	Venting	Methane	1,550,789	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	341.8900445	lb/month	0.1550789	MT/month	3.8769725	
Oct	2008	Crude Receiving Tanks	Venting	Methane	1,557,031	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	343.2661683	lb/month	0.1557031	MT/month	3.8925775	
Nov	2008	Crude Receiving Tanks	Venting	Methane	1,509,513	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	332.7903101	lb/month	0.150951325	MT/month	3.773783125	
Dec	2008	Crude Receiving Tanks	Venting	Methane	1,356,291	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	299.0106264	lb/month	0.1356291	MT/month	3.3907275	
Jan	2007	Crude Receiving Tanks	Venting	Methane	1466545	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	323.3174438	lb/month	0.1466545	MT/month	3.6663625	
Feb	2007	Crude Receiving Tanks	Venting	Methane	1339636	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	295.3388318	lb/month	0.1339636	MT/month	3.34909	
Mar	2007	Crude Receiving Tanks	Venting	Methane	1693629	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	373.3808366	lb/month	0.1693629	MT/month	4.2340725	
Apr	2007	Crude Receiving Tanks	Venting	Methane	1578161	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	347.9245304	lb/month	0.1578161	MT/month	3.9454025	
May	2007	Crude Receiving Tanks	Venting	Methane	1600416	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	352.8309122	lb/month	0.1600416	MT/month	4.00104	
Jun	2007	Crude Receiving Tanks	Venting	Methane	1527688	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	336.7971519	lb/month	0.1527688	MT/month	3.81922	
Jul	2007	Crude Receiving Tanks	Venting	Methane	1602345	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	353.2561834	lb/month	0.1602345	MT/month	4.0058625	
Aug	2007	Crude Receiving Tanks	Venting	Methane	1618201	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	356.7518289	lb/month	0.1618201	MT/month	4.0455025	
Sep	2007	Crude Receiving Tanks	Venting	Methane	1509742	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	332.8407408	lb/month	0.1509742	MT/month	3.774355	
Oct	2007	Crude Receiving Tanks	Venting	Methane	1558936	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	343.6861484	lb/month	0.1558936	MT/month	3.89734	
Nov	2007	Crude Receiving Tanks	Venting	Methane	1522028	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	335.5493369	lb/month	0.1522028	MT/month	3.80507	
Dec	2007	Crude Receiving Tanks	Venting	Methane	1487195	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	327.8699841	lb/month	0.1487195	MT/month	3.7179875	
Jan	2006	Crude Receiving Tanks	Venting	Methane	1591074	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	350.7713562	lb/month	0.1591074	MT/month	3.977685	
Feb	2006	Crude Receiving Tanks	Venting	Methane	1303237	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	287.3142355	lb/month	0.1303237	MT/month	3.2580925	
Mar	2006	Crude Receiving Tanks	Venting	Methane	1615911	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	356.2469709	lb/month	0.1615911	MT/month	4.0397775	
Apr	2006	Crude Receiving Tanks	Venting	Methane	1616167	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	356.3034092	lb/month	0.1616167	MT/month	4.0404175	
May	2006	Crude Receiving Tanks	Venting	Methane	1647866	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	363.2918341	lb/month	0.1647866	MT/month	4.119665	
Jun	2006	Crude Receiving Tanks	Venting	Methane	1614604	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	355.958827	lb/month	0.1614604	MT/month	4.03651	
Jul	2006	Crude Receiving Tanks	Venting	Methane	1549070	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	341.5110703	lb/month	0.154907	MT/month	3.872675	
Aug	2006	Crude Receiving Tanks	Venting	Methane	1620232	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	357.1995872	lb/month	0.1620232	MT/month	4.05058	
Sep	2006	Crude Receiving Tanks	Venting	Methane	1514354	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	333.8575115	lb/month	0.1514354	MT/month	3.785885	

Oct	2006	Crude Receiving Tanks	Venting	Methane	1052789	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	232.0999685	lb/month	0.1052789	MT/month	2.6319725	
Nov	2006	Crude Receiving Tanks	Venting	Methane	1574147	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	347.0395959	lb/month	0.1574147	MT/month	3.9353675	
Dec	2006	Crude Receiving Tanks	Venting	Methane	1660198	bbl	CrudeReceived * EF / ConvBblMmbbl * ConvLbTonne	366.0105715	lb/month	0.1660198	MT/month	4.150495	

	dscf/mn			10 20481451	%	0 00929677	%	4 374090131	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 13268483	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44519 40088	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	23179129 3
	dscf/mn	0	%	10 20481451	%	0 00929677	%	4 374090131	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 13268483	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44519 40088	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	679 009744
	dscf/mn	0	%	10 20481451	%	0 00929677	%	4 374090131	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 13268483	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44519 40088	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	135 8019483
	dscf/mn	0	%	16 4532986	%	0 009487539	%	4 305485173	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 64670348	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47507 35137	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	36008722 5
	dscf/mn	0	%	16 4532986	%	0 009487539	%	4 305485173	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 64670348	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47507 35137	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1054 840033
	dscf/mn	0	%	16 4532986	%	0 009487539	%	4 305485173	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 64670348	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47507 35137	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	210 9680064
	dscf/mn	0	%	17 56034431	%	0 008225262	%	4 541940927	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 1302492	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47802 2084	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	42808656 1
	dscf/mn	0	%	17 56034431	%	0 008225262	%	4 541940927	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 1302492	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47802 2084	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1254 037385
	dscf/mn	0	%	17 56034431	%	0 008225262	%	4 541940927	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 1302492	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47802 2084	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	250 8074768
	dscf/mn	0	%	12 210897	%	0 007940259	%	4 586588555	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 5219008	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45125 90154	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	27199602 3
	dscf/mn	0	%	12 210897	%	0 007940259	%	4 586588555	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 5219008	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45125 90154	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	796 7855394
	dscf/mn	0	%	12 210897	%	0 007940259	%	4 586588555	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 5219008	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45125 90154	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	159 3571078
	dscf/mn	0	%	13 80042512	%	0 008333253	%	3 337308052	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 0580913	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44868 10977	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	31577425 5
	dscf/mn	0	%	13 80042512	%	0 008333253	%	3 337308052	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 0580913	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44868 10977	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	925 0295553
	dscf/mn	0	%	13 80042512	%	0 008333253	%	3 337308052	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 0580913	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44868 10977	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	185 0059111
	dscf/mn	0	%	13 07355005	%	0 011378932	%	4 548690658	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 16819931	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44281 26779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	28582367 53
	dscf/mn	0	%	13 07355005	%	0 011378932	%	4 548690658	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 16819931	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44281 26779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	837 292262
	dscf/mn	0	%	13 07355005	%	0 011378932	%	4 548690658	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 16819931	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44281 26779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	167 4584564
	dscf/mn	0	%	12 47238214	%	0 008443811	%	4 3897272	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 1679435	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43874 55559	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	27912792 0
	dscf/mn	0	%	12 47238214	%	0 008443811	%	4 3897272	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 1679435	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43874 55559	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	817 6777274
	dscf/mn	0	%	12 47238214	%	0 008443811	%	4 3897272	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 1679435	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43874 55559	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	163 5355454
	dscf/mn	0	%	13 02184054	%	0 005953374	%	3 457219749	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 39184742	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43889 06708	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	29145697 4
	dscf/mn	0	%	13 02184054	%	0 005953374	%	3 457219749	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 39184742	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43889 06708	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	853 7944751
	dscf/mn	0	%	13 02184054	%	0 005953374	%	3 457219749	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 39184742	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	43889 06708	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	170 758895
	dscf/mn	0	%	16 61011746	%	0 004393222	%	2 843360766	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 2808906	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46375 61019	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	38008783 97
	dscf/mn	0	%	16 61011746	%	0 004393222	%	2 843360766	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 2808906	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46375 61019	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1113 42986
	dscf/mn	0	%	16 61011746	%	0 004393222	%	2 843360766	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 2808906	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46375 61019	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	222 6850718
	dscf/mn	0	%	16 8742817	%	0 004429187	%	3 417274972	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 34894527	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46930 71882	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	40377897 6
	dscf/mn	0	%	16 8742817	%	0 004429187	%	3 417274972	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 34894527	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46930 71882	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1182 830708
	dscf/mn	0	%	16 8742817	%	0 004429187	%	3 417274972	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 34894527	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46930 71882	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	236 5661418
	dscf/mn	0	%	19 33085199	%	0 003984093	%	2 767673659	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 21675678	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47885 03779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	45671716 7
	dscf/mn	0	%	19 33085199	%	0 003984093	%	2 767673659	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 21675678	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47885 03779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1337 907922
	dscf/mn	0	%	19 33085199	%	0 003984093	%	2 767673659	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	47 21675678	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47885 03779	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	267 5815845
	dscf/mn	0	%	11 4362891	%	0 005433291	%	5 810371317	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	37 03977087	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	35362 12613	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	20624194 5
	dscf/mn	0	%	11 4362891	%	0 005433291	%	5 810371317	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	37 03977087	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	35362 12613	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	604 16545
	dscf/mn	0	%	11 4362891	%	0 005433291	%	5 810371317	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	37 03977087	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	35362 12613	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	120 83309
	dscf/mn	0	%	20 46530138	%	0 005698974	%	2 526256368	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 4313597	mscf/mn	FlowRtO2Enrch * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrch) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45583 79579	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	47566011
	dscf/mn	0	%	20 46530138	%	0 005698974	%	2 526256368	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 4313597	mscf/mn	FlowRtO2Enrch * (68 +	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 -	45583 79579	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 *	1393 39940

															MolPctCO - MolPctO2)			OperatingHoursMonth / ConvHrMin	
dscf/mn	0	%	18 52640848	%	0 006094246	%	2 67992809	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 58734116	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45710 25593	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1264 951386
dscf/mn	0	%	18 52640848	%	0 006094246	%	2 67992809	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 58734116	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45710 25593	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	252 980277
dscf/mn	0	%	18 76407785	%	0 007984931	%	3 131940267	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 10019284	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44610 67622	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	41310227 57
dscf/mn	0	%	18 76407785	%	0 007984931	%	3 131940267	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 10019284	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44610 67622	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1210 14239
dscf/mn	0	%	18 76407785	%	0 007984931	%	3 131940267	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 10019284	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44610 67622	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	242 028479
dscf/mn	0	%	19 43123088	%	0 007108902	%	3 23341827	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 31225872	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45270 24474	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	44855864 7
dscf/mn	0	%	19 43123088	%	0 007108902	%	3 23341827	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 31225872	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45270 24474	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1314 008342
dscf/mn	0	%	19 43123088	%	0 007108902	%	3 23341827	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 31225872	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45270 24474	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	262 801668
dscf/mn	0	%	16 19328263	%	0 011493132	%	4 513726153	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	42 21111135	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42061 23594	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	33622642 1
dscf/mn	0	%	16 19328263	%	0 011493132	%	4 513726153	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	42 21111135	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42061 23594	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	984 942159
dscf/mn	0	%	16 19328263	%	0 011493132	%	4 513726153	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	42 21111135	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42061 23594	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	196 988431
dscf/mn	0	%	15 3899901	%	0 010963866	%	3 532759432	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 48375091	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44324 4223	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	34796689 5
dscf/mn	0	%	15 3899901	%	0 010963866	%	3 532759432	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 48375091	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44324 4223	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1019 334721
dscf/mn	0	%	15 3899901	%	0 010963866	%	3 532759432	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 48375091	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44324 4223	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	203 866944
dscf/mn	0	%	22 57401243	%	0 009372942	%	3 654396361	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 20359278	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49484 46394	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	56964611 2
dscf/mn	0	%	22 57401243	%	0 009372942	%	3 654396361	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 20359278	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49484 46394	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1668 72213
dscf/mn	0	%	22 57401243	%	0 009372942	%	3 654396361	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 20359278	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49484 46394	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	333 744426
dscf/mn	0	%	22 96471622	%	0 007592571	%	3 365116114	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 92078533	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48175 64464	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	54593251 7
dscf/mn	0	%	22 96471622	%	0 007592571	%	3 365116114	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 92078533	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48175 64464	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1599 255496
dscf/mn	0	%	22 96471622	%	0 007592571	%	3 365116114	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 92078533	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48175 64464	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	319 851099
dscf/mn	0	%	20 43580079	%	0 008921771	%	3 333836417	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 21554203	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47899 01599	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	49912870 6
dscf/mn	0	%	20 43580079	%	0 008921771	%	3 333836417	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 21554203	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47899 01599	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1462 148345
dscf/mn	0	%	20 43580079	%	0 008921771	%	3 333836417	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 21554203	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47899 01599	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	292 429669
dscf/mn	0	%	16 28837684	%	0 006987859	%	3 678202952	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 07107575	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45480 16046	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	36558877 7
dscf/mn	0	%	16 28837684	%	0 006987859	%	3 678202952	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 07107575	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45480 16046	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1070 956286
dscf/mn	0	%	16 28837684	%	0 006987859	%	3 678202952	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 07107575	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	45480 16046	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	214 191257
dscf/mn	0	%	9 497966578	%	0 00721837	%	3 806375825	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 25290623	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42150 71381	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	20422679 7
dscf/mn	0	%	9 497966578	%	0 00721837	%	3 806375825	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 25290623	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42150 71381	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	598 2622721
dscf/mn	0	%	9 497966578	%	0 00721837	%	3 806375825	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 25290623	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42150 71381	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	119 6524544
dscf/mn	0	%	13 44745824	%	0 004849689	%	5 093075613	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	51 62659544	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	50070 71671	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	34333780 5
dscf/mn	0	%	13 44745824	%	0 004849689	%	5 093075613	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	51 62659544	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	50070 71671	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1005 77367
dscf/mn	0	%	13 44745824	%	0 004849689	%	5 093075613	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	51 62659544	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	50070 71671	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	201 154733
dscf/mn	0	%	14 80961304	%	0 005591761	%	3 745372548	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	50 87968286	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49355 64147	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	34868076 21
dscf/mn	0	%	14 80961304	%	0 005591761	%	3 745372548	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	50 87968286	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49355 64147	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1021 42592
dscf/mn	0	%	14 80961304	%	0 005591761	%	3 745372548	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	50 87968286	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	49355 64147	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	204 285184
dscf/mn	0	%	14 33368853	%	0 005424359	%	4 000870643	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	51 69083294	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	50007 04113	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	36551117 9
dscf/mn	0	%	14 33368853	%	0 005424359	%	4 000870643	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	51 69083294	mscf/mn	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/mn	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	50007 04113	scf/mn	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1070 72897

																MolPctCO - MolPctO2)			OperatingHoursMonth / ConvHrMin	
	dscf/min	0	%	17 40828022	%	0 008448215	%	6 817793657	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	29 45385282	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	30711 27428	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	798 712565
	dscf/min	0	%	17 40828022	%	0 008448215	%	6 817793657	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	29 45385282	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	30711 27428	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	159 7425171
	dscf/min	0	%	18 28152555	%	0 009467992	%	2 188455657	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 97097046	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48650 40077	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	43896561 42
	dscf/min	0	%	18 28152555	%	0 009467992	%	2 188455657	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 97097046	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48650 40077	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1285 908496
	dscf/min	0	%	18 28152555	%	0 009467992	%	2 188455657	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	48 97097046	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	48650 40077	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	257 1812992
	dscf/min	0	%	19 07625708	%	0 01045769	%	3 021017057	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 63333439	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47296 52253	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	46015867 74
	dscf/min	0	%	19 07625708	%	0 01045769	%	3 021017057	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 63333439	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47296 52253	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1347 [illegible]
	dscf/min	0	%	19 07625708	%	0 01045769	%	3 021017057	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 63333439	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47296 52253	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	269 5978971
	dscf/min	0	%	18 71348156	%	0 006335377	%	2 039736455	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 37448178	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44239 83219	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	42214562 2
	dscf/min	0	%	18 71348156	%	0 006335377	%	2 039736455	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 37448178	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44239 83219	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1236 63399
	dscf/min	0	%	18 71348156	%	0 006335377	%	2 039736455	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	44 37448178	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	44239 83219	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	247 3267971
	dscf/min	0	%	17.23943656	%	0 005932078	%	2 651819933	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	43 38886323	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42791 50924	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	36402974 34
	dscf/min	0	%	17 23943656	%	0 005932078	%	2 651819933	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	43 38886323	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42791 50924	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1066 389249
	dscf/min	0	%	17 23943656	%	0 005932078	%	2 651819933	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	43 38886323	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	42791 50924	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	213 2778498
	dscf/min	0	%	21 16427788	%	0 007143959	%	2 650340364	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 58121986	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47269 62021	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	51012823 35
	dscf/min	0	%	21 16427788	%	0 007143959	%	2 650340364	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 58121986	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47269 62021	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1494 370374
	dscf/min	0	%	21 16427788	%	0 007143959	%	2.650340364	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	45 58121986	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47269 62021	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	298 8740749
	dscf/min	0	%	18 41000277	%	0 007167105	%	2.734966858	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 57199283	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46661 85335	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	42392756 97
	dscf/min	0	%	18 41000277	%	0 007167105	%	2.734966858	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 57199283	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46661 85335	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1241 854027
	dscf/min	0	%	18 41000277	%	0 007167105	%	2.734966858	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 57199283	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	46661 85335	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	246 3708054
	dscf/min	0	%	18 60706096	%	0 011034741	%	2 975584751	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 91709463	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47272 34357	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * ConvLbG * OperatingHoursMonth / ConvHrMin	44663134 51
	dscf/min	0	%	18 60706096	%	0 011034741	%	2 975584751	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 91709463	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47272 34357	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_CH4 / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	1314 221302
	dscf/min	0	%	18 60706096	%	0 011034741	%	2 975584751	%	FlowRateAir * (68 + STPConv) / (60 + STPConv)	46 91709463	mscf/min	FlowRtO2Enrich * (68 + STPConv) / (60 + STPConv)	0	scf/min	(79 * FlowRateAirStd * ConvScfMscf + (100 - MolPctO2Enrich) * FlowRtO2EnrStd) / (100 - MolPctCO2 - MolPctCO - MolPctO2)	47272 34357	scf/min	FlowExhaust * (MolPctCO2 + MolPctCO) / 100 * (44 / StdMolVolEPA) * EF_N2O / EF_CO2 * ConvLbG * OperatingHoursMonth / ConvHrMin	262 8442604

Attachment V
GHG Calculations 2006-2010.xlsx
FCC 2006 7

Month	Year	Process Unit	Emission Scenario	GHG Species	Inlet Air Flow Rate [FlowRateAir]	Units	Enriched O_2 Flow Rate [FlowRtO2Enrich]	Units	Species Emission Rate Expression	Species Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10952880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	37349320.8	lb/month	16941.38709	MT/month	16941.38709	
Jan	2007	FCC Unit- Plant 53	Coke Combustion	Methane	10952880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1094.111536	lb/month	0.496281235	MT/month	12.40703	
Jan	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10952880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	218.8223072	lb/month	0.099256247	MT/month	29.57836	
Feb	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	7325280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	24979204.8	lb/month	11330.39018	MT/month	11330.39018	
Feb	2007	FCC Unit- Plant 53	Coke Combustion	Methane	7325280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	731.7411815	lb/month	0.331912611	MT/month	8.29782	
Feb	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	7325280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	146.3482363	lb/month	0.066382522	MT/month	19.78199	
Mar	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9062880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	30904420.8	lb/month	14018.02615	MT/month	14018.02615	
Mar	2007	FCC Unit- Plant 53	Coke Combustion	Methane	9062880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	905.3145435	lb/month	0.410644258	MT/month	10.26611	
Mar	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9062880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	181.0629087	lb/month	0.082128852	MT/month	24.47440	
Apr	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10183680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	34726348.8	lb/month	15751.62559	MT/month	15751.62559	
Apr	2007	FCC Unit- Plant 53	Coke Combustion	Methane	10183680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1017.274157	lb/month	0.461428344	MT/month	11.53571	
Apr	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10183680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	203.4548314	lb/month	0.092285669	MT/month	27.50113	
May	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9509280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	32426644.8	lb/month	14708.49616	MT/month	14708.49616	
May	2007	FCC Unit- Plant 53	Coke Combustion	Methane	9509280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	949.9065951	lb/month	0.430870896	MT/month	10.77177	
May	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9509280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	189.981319	lb/month	0.086174179	MT/month	25.67991	
Jun	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9282000	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	31651620	lb/month	14356.9504	MT/month	14356.95040	
Jun	2007	FCC Unit- Plant 53	Coke Combustion	Methane	9282000	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	927.2030075	lb/month	0.42057271	MT/month	10.51432	
Jun	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9282000	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	185.4406015	lb/month	0.084114542	MT/month	25.06613	
Jul	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	11227680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	38286388.8	lb/month	17366.43449	MT/month	17366.43449	
Jul	2007	FCC Unit- Plant 53	Coke Combustion	Methane	11227680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1121.562019	lb/month	0.508732579	MT/month	12.71831	
Jul	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	11227680	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	224.3124039	lb/month	0.101746516	MT/month	30.32046	
Aug	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10929840	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	37270754.4	lb/month	16905.74993	MT/month	16905.74993	
Aug	2007	FCC Unit- Plant 53	Coke Combustion	Methane	10929840	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1091.810011	lb/month	0.495237279	MT/month	12.38093	
Aug	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10929840	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	218.3620021	lb/month	0.099047456	MT/month	29.51614	
Sep	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10604640	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	36161822.4	lb/month	16402.74623	MT/month	16402.74623	
Sep	2007	FCC Unit- Plant 53	Coke Combustion	Methane	10604640	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1059.324941	lb/month	0.480502282	MT/month	12.01256	
Sep	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10604640	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	211.8649882	lb/month	0.096100456	MT/month	28.63794	
Oct	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10614720	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	36196195.2	lb/month	16418.33749	MT/month	16418.33749	
Oct	2007	FCC Unit- Plant 53	Coke Combustion	Methane	10614720	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1060.331858	lb/month	0.480959013	MT/month	12.02398	
Oct	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10614720	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	212.0663716	lb/month	0.096191803	MT/month	28.66516	
Nov	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9746880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	33236860.8	lb/month	15076.00439	MT/month	15076.00439	
Nov	2007	FCC Unit- Plant 53	Coke Combustion	Methane	9746880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	973.6410741	lb/month	0.441636688	MT/month	11.04092	
Nov	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9746880	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	194.7282148	lb/month	0.088327338	MT/month	26.32155	
Dec	2007	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9419280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	32119744.8	lb/month	14569.28849	MT/month	14569.28849	
Dec	2007	FCC Unit- Plant 53	Coke Combustion	Methane	9419280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	940.9162621	lb/month	0.426792945	MT/month	10.66982	
Dec	2007	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9419280	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	188.1832524	lb/month	0.085358589	MT/month	25.43686	
Jan	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9310731.846	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	31749595.6	lb/month	14401.39144	MT/month	14401.39144	
Jan	2006	FCC Unit- Plant 53	Coke Combustion	Methane	9310731.846	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	930.073106	lb/month	0.421874566	MT/month	10.54686	
Jan	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9310731.846	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	186.0146212	lb/month	0.084374913	MT/month	25.14372	
Feb	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	6365910.358	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	21707754.32	lb/month	9846.48344	MT/month	9846.48344	
Feb	2006	FCC Unit- Plant 53	Coke Combustion	Methane	6365910.358	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	635.9072646	lb/month	0.288443026	MT/month	7.21108	
Feb	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	6365910.358	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	127.1814529	lb/month	0.057688605	MT/month	17.19120	
Mar	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	3503832.394	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	11948068.46	lb/month	5419.559137	MT/month	5419.55914	
Mar	2006	FCC Unit- Plant 53	Coke Combustion	Methane	3503832.394	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	350.0068879	lb/month	0.158760643	MT/month	3.96902	

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FCC 2006 7

Mar	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	3503832.394	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	70.00137759	lb/month	0.031752129	MT/month	9.46213	
Apr	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	8164240.557	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	27840060.3	lb/month	12628.05395	MT/month	12628.05395	
Apr	2006	FCC Unit- Plant 53	Coke Combustion	Methane	8164240.557	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	815.5471233	lb/month	0.369926392	MT/month	9.24816	
Apr	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	8164240.557	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	163.1094247	lb/month	0.073985278	MT/month	22.04761	
May	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	8952108.813	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	30526691.05	lb/month	13846.69061	MT/month	13846.69061	
May	2006	FCC Unit- Plant 53	Coke Combustion	Methane	8952108.813	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	894.2493229	lb/month	0.405625152	MT/month	10.14063	
May	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	8952108.813	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	178.8498646	lb/month	0.08112503	MT/month	24.17526	
Jun	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	8919019.898	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	30413857.85	lb/month	13795.51027	MT/month	13795.51027	
Jun	2006	FCC Unit- Plant 53	Coke Combustion	Methane	8919019.898	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	635.9072646	lb/month	0.288443026	MT/month	7.21108	
Jun	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	8919019.898	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	70.00137759	lb/month	0.031752129	MT/month	9.46213	
Jul	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	10188566.28	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	27840060.3	lb/month	12628.05395	MT/month	12628.05395	
Jul	2006	FCC Unit- Plant 53	Coke Combustion	Methane	10188566.28	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1017.76226	lb/month	0.461649745	MT/month	11.54124	
Jul	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	10188566.28	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	203.552452	lb/month	0.092329949	MT/month	27.51432	
Aug	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	9604346.836	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	32750822.71	lb/month	14855.54096	MT/month	14855.54096	
Aug	2006	FCC Unit- Plant 53	Coke Combustion	Methane	9604346.836	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	959.4030674	lb/month	0.435178429	MT/month	10.87946	
Aug	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	9604346.836	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	191.8806135	lb/month	0.087035686	MT/month	25.93663	
Sep	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	11170007.68	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	38089726.19	lb/month	17277.22972	MT/month	17277.22972	
Sep	2006	FCC Unit- Plant 53	Coke Combustion	Methane	11170007.68	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1115.800982	lb/month	0.506119414	MT/month	12.65299	
Sep	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	11170007.68	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	223.1601964	lb/month	0.101223883	MT/month	30.16472	
Oct	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	7963865.613	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	27156781.74	lb/month	12318.12364	MT/month	12318.12364	
Oct	2006	FCC Unit- Plant 53	Coke Combustion	Methane	7963865.613	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	795.5311514	lb/month	0.36084729	MT/month	9.02118	
Oct	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	7963865.613	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	159.1062303	lb/month	0.072169458	MT/month	21.50650	
Nov	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	11240984.94	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	38331758.65	lb/month	17387.01393	MT/month	17387.01393	
Nov	2006	FCC Unit- Plant 53	Coke Combustion	Methane	11240984.94	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1122.891084	lb/month	0.509335434	MT/month	12.73339	
Nov	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	11240984.94	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	224.5782169	lb/month	0.101867087	MT/month	30.35639	
Dec	2006	FCC Unit- Plant 53	Coke Combustion	Carbon Dioxide	11753015.55	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12	40077783.03	lb/month	18178.99821	MT/month	18178.99821	
Dec	2006	FCC Unit- Plant 53	Coke Combustion	Methane	11753015.55	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_CH4 / EF_CO2	1174.039148	lb/month	0.532535833	MT/month	13.31340	
Dec	2006	FCC Unit- Plant 53	Coke Combustion	Nitrogen Oxide	11753015.55	lbs	0.93	lb C/ lb coke	CokeBurned * CarbonContent * 44/12 * EF_N2O / EF_CO2	234.8078295	lb/month	0.106507167	MT/month	31.73914	

Attachment V
GHG Calculations 2006-2010.xlsx
FO Comb

Month	Year	Process Unit	Emission Scenario	GHG Species	Fuel Use (Liquid Volume) [FuelUsage]	Units	Heat Content (Liquid) - HHV	Units	Species Emission Rate Calculation	Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31340	bbl	6327	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	32829971.56	lb/month	14891.44232	MT/month	14891.44232	
Jan	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	31340	bbl	6327	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1311.450262	lb/month	0.59486454	MT/month	14.8716135	
Jan	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31340	bbl	6327	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	262.2900524	lb/month	0.118972908	MT/month	35.45392658	
Feb	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33918	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35552998.07	lb/month	16126.58784	MT/month	16126.58784	
Feb	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	33918	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1420.226288	lb/month	0.644204574	MT/month	16.10511435	
Feb	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33918	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	284.0452576	lb/month	0.128840915	MT/month	38.39459261	
Mar	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33340	bbl	6318	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34875375.88	lb/month	15819.22321	MT/month	15819.22321	
Mar	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	33340	bbl	6318	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1393.157492	lb/month	0.63192636	MT/month	15.798159	
Mar	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33340	bbl	6318	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	278.6314984	lb/month	0.126385272	MT/month	37.66281106	
Apr	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	30460	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	31998911.51	lb/month	14514.47937	MT/month	14514.47937	
Apr	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	30460	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1278.252124	lb/month	0.5798061	MT/month	14.4951525	
Apr	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	30460	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	255.6504248	lb/month	0.11596122	MT/month	34.55644356	
May	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31282	bbl	6351	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	32893516.49	lb/month	14920.26585	MT/month	14920.26585	
May	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	31282	bbl	6351	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1313.988675	lb/month	0.596015946	MT/month	14.90039865	
May	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31282	bbl	6351	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	262.797735	lb/month	0.119203189	MT/month	35.52255038	
Jun	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33876	bbl	6320	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35447277.28	lb/month	16078.63363	MT/month	16078.63363	
Jun	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	33876	bbl	6320	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1416.003087	lb/month	0.64228896	MT/month	16.057224	
Jun	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33876	bbl	6320	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	283.2006174	lb/month	0.128457792	MT/month	38.28042202	
Jul	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32359	bbl	6309	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33800980.57	lb/month	15331.88512	MT/month	15331.88512	
Jul	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	32359	bbl	6309	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1350.238904	lb/month	0.612458793	MT/month	15.31146983	
Jul	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32359	bbl	6309	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	270.0477808	lb/month	0.122491759	MT/month	36.50254406	
Aug	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34262	bbl	6373	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36151831.92	lb/month	16398.21462	MT/month	16398.21462	
Aug	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	34262	bbl	6373	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1444.147747	lb/month	0.655055178	MT/month	16.37637945	
Aug	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34262	bbl	6373	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	288.8295493	lb/month	0.131011036	MT/month	39.04128861	
Sep	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	29624	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	31052008.22	lb/month	14084.97075	MT/month	14084.97075	
Sep	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	29624	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1240.426427	lb/month	0.562648632	MT/month	14.0662158	
Sep	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	29624	bbl	6331	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	248.0852854	lb/month	0.112529726	MT/month	33.53385847	
Oct	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33425	bbl	6363	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35213323.71	lb/month	15972.51395	MT/month	15972.51395	
Oct	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	33425	bbl	6363	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1406.657405	lb/month	0.638049825	MT/month	15.95124563	
Oct	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33425	bbl	6363	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	281.331481	lb/month	0.127609965	MT/month	38.02776957	
Nov	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32314	bbl	6359	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34021481.82	lb/month	15431.90292	MT/month	15431.90292	
Nov	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	32314	bbl	6359	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1359.04721	lb/month	0.616454178	MT/month	15.41135445	
Nov	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32314	bbl	6359	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	271.809442	lb/month	0.123290836	MT/month	36.74066901	
Dec	2010	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33567	bbl	6347	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35273999.7	lb/month	16000.03615	MT/month	16000.03615	
Dec	2010	Fuel Oil Combustion Sources	Stationary Comb	Methane	33567	bbl	6347	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1409.081213	lb/month	0.639149247	MT/month	15.97873118	

Dec	2010	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33567	bbl	6347	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	281.8162426	lb/month	0.127829849	MT/month	38.09329512	
Jan	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	36719	bbl	6314	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	38385668	lb/month	17411.46683	MT/month	17411.46683	
Jan	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	36719	bbl	6314	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1533.38221	lb/month	0.695531298	MT/month	17.38828245	
Jan	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	36719	bbl	6314	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	306.676442	lb/month	0.13910626	MT/month	41.45366536	
Feb	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33395	bbl	6287	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34761506.37	lb/month	15767.57281	MT/month	15767.57281	
Feb	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	33395	bbl	6287	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1388.608776	lb/month	0.629863095	MT/month	15.74657738	
Feb	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33395	bbl	6287	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	277.7217553	lb/month	0.125972619	MT/month	37.53984046	
Mar	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	37900	bbl	6328	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	39708123.18	lb/month	18011.32312	MT/month	18011.32312	
Mar	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	37900	bbl	6328	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1586.20998	lb/month	0.7194936	MT/month	17.98734	
Mar	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	37900	bbl	6328	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	317.2419961	lb/month	0.14389872	MT/month	42.88181856	
Apr	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33723	bbl	6292	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35130845.04	lb/month	15935.10221	MT/month	15935.10221	
Apr	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	33723	bbl	6292	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1403.362651	lb/month	0.636555348	MT/month	15.9138837	
Apr	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33723	bbl	6292	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	280.6725303	lb/month	0.12731107	MT/month	37.93869874	
May	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35290	bbl	6324	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36950234.55	lb/month	16760.3644	MT/month	16760.3644	
May	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	35290	bbl	6324	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1476.041327	lb/month	0.66952188	MT/month	16.738047	
May	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35290	bbl	6324	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	295.2082654	lb/month	0.133904376	MT/month	39.90350405	
Jun	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31427	bbl	6303	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	32796229.18	lb/month	14876.13701	MT/month	14876.13701	
Jun	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	31427	bbl	6303	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1310.102364	lb/month	0.594253143	MT/month	14.85632858	
Jun	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31427	bbl	6303	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	262.0204728	lb/month	0.118850629	MT/month	35.41748732	
Jul	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35350	bbl	6308	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36919412.61	lb/month	16746.38378	MT/month	16746.38378	
Jul	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	35350	bbl	6308	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1474.810091	lb/month	0.6689634	MT/month	16.724085	
Jul	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35350	bbl	6308	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	294.9620182	lb/month	0.13379268	MT/month	39.87021864	
Aug	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33960	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35675739.82	lb/month	16182.26262	MT/month	16182.26262	
Aug	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	33960	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1425.12942	lb/month	0.6464286	MT/month	16.160715	
Aug	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33960	bbl	6345	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	285.025884	lb/month	0.12928572	MT/month	38.52714456	
Sep	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34521	bbl	6313	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36082185.68	lb/month	16366.62358	MT/month	16366.62358	
Sep	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	34521	bbl	6313	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1441.865606	lb/month	0.653793219	MT/month	16.34483048	
Sep	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34521	bbl	6313	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	288.2731213	lb/month	0.130758644	MT/month	38.96607585	
Oct	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	38044	bbl	6299	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	39676327.04	lb/month	17996.90062	MT/month	17996.90062	
Oct	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	38044	bbl	6299	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1584.939828	lb/month	0.718917468	MT/month	17.9729367	
Oct	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	38044	bbl	6299	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	316.9879657	lb/month	0.143783494	MT/month	42.84748109	
Nov	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	27119	bbl	6342	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	28475646.23	lb/month	12916.35122	MT/month	12916.35122	
Nov	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	27119	bbl	6342	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1137.50917	lb/month	0.515966094	MT/month	12.89915235	
Nov	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	27119	bbl	6342	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	227.501834	lb/month	0.103193219	MT/month	30.7515792	
Dec	2009	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	28856	bbl	6333	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	30256542.42	lb/month	13724.1531	MT/month	13724.1531	
Dec	2009	Fuel Oil Combustion Sources	Stationary Comb	Methane	28856	bbl	6333	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1208.650163	lb/month	0.548235144	MT/month	13.7058786	
Dec	2009	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	28856	bbl	6333	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	241.7300326	lb/month	0.109647029	MT/month	32.67481458	

Attachment V
GHG Calculations 2006-2010.xlsx
FO Comb

Jan	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34582	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36140218.72	lb/month	16392.94696	MT/month	16392.94696	
Jan	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	34582	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1443.683837	lb/month	0.654844752	MT/month	16.3711188	
Jan	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34582	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	288.7367674	lb/month	0.13096895	MT/month	39.02874722	
Feb	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32201	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33651934.04	lb/month	15264.27867	MT/month	15264.27867	
Feb	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	32201	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1344.284982	lb/month	0.609758136	MT/month	15.2439534	
Feb	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32201	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	268.8569964	lb/month	0.121951627	MT/month	36.34158491	
Mar	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32628	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34098174.09	lb/month	15466.68999	MT/month	15466.68999	
Mar	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	32628	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1362.110816	lb/month	0.617843808	MT/month	15.4460952	
Mar	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32628	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	272.4221632	lb/month	0.123568762	MT/month	36.82349096	
Apr	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	8430	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8809844.539	lb/month	3996.083016	MT/month	3996.083016	
Apr	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	8430	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	351.9245488	lb/month	0.15963048	MT/month	3.990762	
Apr	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	8430	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	70.38490976	lb/month	0.031926096	MT/month	9.513976608	
May	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	28750	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	30045436.59	lb/month	13628.397	MT/month	13628.397	
May	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	28750	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1200.217174	lb/month	0.54441	MT/month	13.61025	
May	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	28750	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	240.0434348	lb/month	0.108882	MT/month	32.446836	
Jun	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33223	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34719984	lb/month	15748.73856	MT/month	15748.73856	
Jun	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	33223	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1386.950093	lb/month	0.629110728	MT/month	15.7277682	
Jun	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33223	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	277.3900186	lb/month	0.125822146	MT/month	37.49499939	
Jul	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34999	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36576008.19	lb/month	16590.61797	MT/month	16590.61797	
Jul	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	34999	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1461.092205	lb/month	0.662741064	MT/month	16.5685266	
Jul	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34999	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	292.2184409	lb/month	0.132548213	MT/month	39.49936741	
Aug	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32891	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34373024.52	lb/month	15591.3602	MT/month	15591.3602	
Aug	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	32891	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1373.090194	lb/month	0.622823976	MT/month	15.5705994	
Aug	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32891	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	274.6180388	lb/month	0.124564795	MT/month	37.12030897	
Sep	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33745	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35265504.62	lb/month	15996.18284	MT/month	15996.18284	
Sep	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	33745	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1408.741862	lb/month	0.63899532	MT/month	15.974883	
Sep	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33745	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	281.7483725	lb/month	0.127799064	MT/month	38.08412107	
Oct	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33550	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35061718.18	lb/month	15903.74676	MT/month	15903.74676	
Oct	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	33550	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1400.601259	lb/month	0.6353028	MT/month	15.88257	
Oct	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33550	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	280.1202518	lb/month	0.12706056	MT/month	37.86404688	
Nov	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31964	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33404255.14	lb/month	15151.93328	MT/month	15151.93328	
Nov	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	31964	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1334.391018	lb/month	0.605270304	MT/month	15.1317576	
Nov	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31964	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	266.8782035	lb/month	0.121054061	MT/month	36.07411012	
Dec	2008	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32841	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34320771.59	lb/month	15567.65864	MT/month	15567.65864	
Dec	2008	Fuel Oil Combustion Sources	Stationary Comb	Methane	32841	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1371.00286	lb/month	0.621877176	MT/month	15.5469294	
Dec	2008	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32841	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	274.200572	lb/month	0.124375435	MT/month	37.06387969	
Jan	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31360	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	32773039.71	lb/month	14865.61843	MT/month	14865.61843	

Jan	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	31360	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1309.17602	lb/month	0.59383296	MT/month	14.845824	
Jan	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31360	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	261.8352041	lb/month	0.118766592	MT/month	35.39244442	
Feb	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	28116	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	29382869.4	lb/month	13327.86122	MT/month	13327.86122	
Feb	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	28116	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1173.749776	lb/month	0.532404576	MT/month	13.3101144	
Feb	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	28116	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	234.7499553	lb/month	0.106480915	MT/month	31.73131273	
Mar	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	36763	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	38419491.67	lb/month	17426.80901	MT/month	17426.80901	
Mar	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	36763	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1534.733356	lb/month	0.696144168	MT/month	17.4036042	
Mar	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	36763	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	306.9466711	lb/month	0.139228834	MT/month	41.49019241	
Apr	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34034	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35567526.58	lb/month	16133.17786	MT/month	16133.17786	
Apr	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	34034	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1420.806654	lb/month	0.644467824	MT/month	16.1116956	
Apr	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34034	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	284.1613308	lb/month	0.128893565	MT/month	38.41028231	
May	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	38036	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	39749851.35	lb/month	18030.25072	MT/month	18030.25072	
May	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	38036	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1587.876885	lb/month	0.720249696	MT/month	18.0062424	
May	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	38036	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	317.575377	lb/month	0.144049939	MT/month	42.92688188	
Jun	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	38318	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	40044557.89	lb/month	18163.92752	MT/month	18163.92752	
Jun	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	38318	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1599.64945	lb/month	0.725589648	MT/month	18.1397412	
Jun	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	38318	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	319.92989	lb/month	0.14511793	MT/month	43.24514302	
Jul	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34045	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35579022.22	lb/month	16138.3922	MT/month	16138.3922	
Jul	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	34045	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1421.265868	lb/month	0.64467612	MT/month	16.116903	
Jul	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34045	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	284.2531735	lb/month	0.128935224	MT/month	38.42269675	
Aug	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34395	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35944792.75	lb/month	16304.30312	MT/month	16304.30312	
Aug	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	34395	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1435.877207	lb/month	0.65130372	MT/month	16.282593	
Aug	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34395	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	287.1754414	lb/month	0.130260744	MT/month	38.81770171	
Sep	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31273	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	32682119.6	lb/month	14824.37772	MT/month	14824.37772	
Sep	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	31273	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1305.544059	lb/month	0.592185528	MT/month	14.8046382	
Sep	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31273	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	261.1088117	lb/month	0.118437106	MT/month	35.29425747	
Oct	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35140	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36723361.46	lb/month	16657.45637	MT/month	16657.45637	
Oct	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	35140	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1466.978487	lb/month	0.66541104	MT/month	16.635276	
Oct	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35140	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	293.3956974	lb/month	0.133082208	MT/month	39.65849798	
Nov	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32072	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33517121.48	lb/month	15203.12865	MT/month	15203.12865	
Nov	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	32072	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1338.89966	lb/month	0.607315392	MT/month	15.1828848	
Nov	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32072	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	267.7799319	lb/month	0.121463078	MT/month	36.19599736	
Dec	2007	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34128	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	35665762.09	lb/month	16177.73679	MT/month	16177.73679	
Dec	2007	Fuel Oil Combustion Sources	Stationary Comb	Methane	34128	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1424.730842	lb/month	0.646247808	MT/month	16.1561952	
Dec	2007	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34128	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	284.9461685	lb/month	0.129249562	MT/month	38.51636936	
Jan	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35662	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	37268882.08	lb/month	16904.90065	MT/month	16904.90065	
Jan	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	35662	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1488.770256	lb/month	0.675295632	MT/month	16.8823908	

Jan	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35662	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	297.7540512	lb/month	0.135059126	MT/month	40.24761967	
Feb	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	26270	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	27453691.11	lb/month	12452.79962	MT/month	12452.79962	
Feb	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	26270	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1096.685397	lb/month	0.49744872	MT/month	12.436218	
Feb	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	26270	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	219.3370794	lb/month	0.099489744	MT/month	29.64794371	
Mar	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35918	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	37536417.1	lb/month	17026.25264	MT/month	17026.25264	
Mar	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	35918	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1499.457407	lb/month	0.680143248	MT/month	17.0035812	
Mar	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35918	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	299.8914815	lb/month	0.13602865	MT/month	40.53653758	
Apr	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	34843	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36412979.03	lb/month	16516.6691	MT/month	16516.6691	
Apr	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	34843	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1454.579722	lb/month	0.659787048	MT/month	16.4946762	
Apr	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	34843	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	290.9159444	lb/month	0.13195741	MT/month	39.32330806	
May	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35450	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	37047329.64	lb/month	16804.40604	MT/month	16804.40604	
May	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	35450	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1479.919959	lb/month	0.6712812	MT/month	16.78203	
May	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35450	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	295.9839918	lb/month	0.13425624	MT/month	40.00835952	
Jun	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	31973	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33413660.67	lb/month	15156.19956	MT/month	15156.19956	
Jun	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	31973	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1334.766738	lb/month	0.605440728	MT/month	15.1360182	
Jun	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	31973	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	266.9533476	lb/month	0.121088146	MT/month	36.08426739	
Jul	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32727	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34201634.9	lb/month	15513.61908	MT/month	15513.61908	
Jul	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	32727	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1366.243738	lb/month	0.619718472	MT/month	15.4929618	
Jul	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32727	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	273.2487475	lb/month	0.123943694	MT/month	36.93522093	
Aug	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	35127	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	36709775.7	lb/month	16651.29396	MT/month	16651.29396	
Aug	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	35127	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1466.43578	lb/month	0.665164872	MT/month	16.6291218	
Aug	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	35127	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	293.287156	lb/month	0.133032974	MT/month	39.64382637	
Sep	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32895	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34377204.76	lb/month	15593.25632	MT/month	15593.25632	
Sep	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	32895	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1373.257181	lb/month	0.62289972	MT/month	15.572493	
Sep	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32895	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	274.6514361	lb/month	0.124579944	MT/month	37.12482331	
Oct	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	25757	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	26917576.01	lb/month	12209.62162	MT/month	12209.62162	
Oct	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	25757	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1075.269348	lb/month	0.487734552	MT/month	12.1933638	
Oct	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	25757	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	215.0538696	lb/month	0.09754691	MT/month	29.0689793	
Nov	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	33146	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	34639514.48	lb/month	15712.23816	MT/month	15712.23816	
Nov	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	33146	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1383.735598	lb/month	0.627652656	MT/month	15.6913164	
Nov	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	33146	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	276.7471197	lb/month	0.125530531	MT/month	37.4080983	
Dec	2006	Fuel Oil Combustion Sources	Stationary Comb	Carbon Dioxide	32487	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	33950820.82	lb/month	15399.85159	MT/month	15399.85159	
Dec	2006	Fuel Oil Combustion Sources	Stationary Comb	Methane	32487	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	1356.224534	lb/month	0.615173832	MT/month	15.3793458	
Dec	2006	Fuel Oil Combustion Sources	Stationary Comb	Nitrogen Oxide	32487	bbl	6312	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	271.2449067	lb/month	0.123034766	MT/month	36.66436039	

Month	Year	Process Unit	Emission Scenario	GHG Species	Fuel Use (Gas Volume) [FuelCalculated]	Units	Carbon Content [CC]	Units	Molecular Weight [MW]	Units	Higher Heating Value	Units	Convert Fuel Volume to STP	Fuel Use (Gas Volume) At STP [FuelConverted]	Units	Convert CC to Annual Weighted Average	Annual Weighted Average CC	Units	Convert MW to Annual Weighted Average	Annual Weighted Average MW	Units	Species Emission Rate Expression	Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	170846.8796	mscf	0.752534432	kg C/kg gas	18.26999805	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173479.0895	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	21100880.34	lb/month	9571.123476	MT/month	9571.123476	
Jan	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	170846.8796	mscf	0.752534432	kg C/kg gas	18.26999805	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173479.0895	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1179.48297	lb/month	0.535009512	MT/month	13.3752376	
Jan	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	170846.8796	mscf	0.752534432	kg C/kg gas	18.26999805	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173479.0895	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	235.8965341	lb/month	0.107001902	MT/month	31.88656891	
Feb	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	151531.8782	mscf	0.745078704	kg C/kg gas	17.9324738	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153864.6148	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18714933.32	lb/month	8488.981011	MT/month	8488.981011	
Feb	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	151531.8782	mscf	0.745078704	kg C/kg gas	17.9324738	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153864.6148	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1046.132914	lb/month	0.474518472	MT/month	11.8629618	
Feb	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	151531.8782	mscf	0.745078704	kg C/kg gas	17.9324738	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153864.6148	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	209.2265827	lb/month	0.094903684	MT/month	28.28130093	
Mar	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	178972.6383	mscf	0.755326667	kg C/kg gas	18.44378245	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181727.8067	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	22104002.1	lb/month	10026.21862	MT/month	10026.21862	
Mar	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	178972.6383	mscf	0.755326667	kg C/kg gas	18.44378245	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181727.8067	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1235.576095	lb/month	0.560448556	MT/month	14.0112139	
Mar	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	178972.6383	mscf	0.755326667	kg C/kg gas	18.44378245	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181727.8067	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	247.1152191	lb/month	0.112089711	MT/month	33.40273383	
Apr	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	170560.155	mscf	0.750832562	kg C/kg gas	18.50545071	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173185.8167	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	21065018.89	lb/month	9554.943249	MT/month	9554.943249	
Apr	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	170560.155	mscf	0.750832562	kg C/kg gas	18.50545071	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173185.8167	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1177.498708	lb/month	0.534105085	MT/month	13.35262962	
Apr	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	170560.155	mscf	0.750832562	kg C/kg gas	18.50545071	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173185.8167	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	235.4997416	lb/month	0.106821013	MT/month	31.83266186	
May	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	187854.173	mscf	0.613002989	kg C/kg gas	17.78433837	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	190746.0988	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	23350915.36	lb/month	10523.7707	MT/month	10523.7707	
May	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	187854.173	mscf	0.613002989	kg C/kg gas	17.78433837	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	190746.0988	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1296.891879	lb/month	0.58838067	MT/month	14.70952175	
May	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	187854.173	mscf	0.613002989	kg C/kg gas	17.78433837	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	190746.0988	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	259.3783359	lb/month	0.117652174	MT/month	35.06034786	
Jun	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	148535.5088	mscf	0.719179146	kg C/kg gas	19.0791883	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	150822.1183	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18344666.87	lb/month	8321.101535	MT/month	8321.101535	
Jun	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	148535.5088	mscf	0.719179146	kg C/kg gas	19.0791883	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	150822.1183	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1025.448834	lb/month	0.465135413	MT/month	11.62838532	
Jun	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	148535.5088	mscf	0.719179146	kg C/kg gas	19.0791883	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	150822.1183	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	205.0883668	lb/month	0.093027083	MT/month	27.72207081	
Jul	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	160937.1313	mscf	0.685072045	kg C/kg gas	19.53876308	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	163414.6547	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19876528.17	lb/month	9015.852243	MT/month	9015.852243	
Jul	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	160937.1313	mscf	0.685072045	kg C/kg gas	19.53876308	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	163414.6547	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1111.084094	lb/month	0.503970785	MT/month	12.59926966	
Jul	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	160937.1313	mscf	0.685072045	kg C/kg gas	19.53876308	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	163414.6547	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	222.2128188	lb/month	0.100794159	MT/month	30.03665639	
Aug	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	159297.3158	mscf	0.662707604	kg C/kg gas	17.98470182	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161739.4413	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19672747.83	lb/month	8923.427998	MT/month	8923.427998	
Aug	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	159297.3158	mscf	0.662707604	kg C/kg gas	17.98470182	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161739.4413	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1099.876236	lb/month	0.498884437	MT/month	12.47211093	
Aug	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	159297.3158	mscf	0.662707604	kg C/kg gas	17.98470182	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161739.4413	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	219.9348476	lb/month	0.099763687	MT/month	29.7297444	
Sep	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	162513.3821	mscf	0.650517212	kg C/kg gas	17.86702803	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	165015.1708	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20071202.9	lb/month	9104.155321	MT/month	9104.155321	
Sep	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	162513.3821	mscf	0.650517212	kg C/kg gas	17.86702803	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	165015.1708	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1121.94608	lb/month	0.508908787	MT/month	12.72268967	
Sep	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	162513.3821	mscf	0.650517212	kg C/kg gas	17.86702803	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	165015.1708	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	224.3882161	lb/month	0.101781357	MT/month	30.33084449	
Oct	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	162138.0853	mscf	0.646818252	kg C/kg gas	17.45148385	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164634.0985	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20024651.8	lb/month	9083.130834	MT/month	9083.130834	
Oct	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	162138.0853	mscf	0.646818252	kg C/kg gas	17.45148385	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164634.0985	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1119.355138	lb/month	0.507731504	MT/month	12.69328484	
Oct	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	162138.0853	mscf	0.646818252	kg C/kg gas	17.45148385	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164634.0985	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	223.8710278	lb/month	0.101546311	MT/month	30.2608008	
Nov	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	166288.5250	mscf	0.737877648	kg C/kg gas	17.18076528	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	168848.4302	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20537451.71	lb/month	9315.642473	MT/month	9315.642473	
Nov	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	166288.5250	mscf	0.737877648	kg C/kg gas	17.18076528	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	168848.4302	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1148.008595	lb/month	0.520728609	MT/month	13.01821387	
Nov	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	166288.5250	mscf	0.737877648	kg C/kg gas	17.18076528	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	168848.4302	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	229.601719	lb/month	0.104145712	MT/month	31.03542209	
Dec	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	110771.0982	mscf	0.745203087	kg C/kg gas	17.23064375	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112476.3458	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	13680775.81	lb/month	6205.502905	MT/month	6205.502905	
Dec	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	110771.0982	mscf	0.745203087	kg C/kg gas	17.23064375	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112476.3458	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	764.7320827	lb/month	0.34687705	MT/month	8.671926259	
Dec	2010	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	110771.0982	mscf	0.745203087	kg C/kg gas	17.23064375	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112476.3458	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.705429836	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.11985228	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	152.9464165	lb/month	0.06937541	MT/month	20.6736722	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	141295.1409	mscf	0.708870723	kg C/kg gas	18.10487074	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143470.2685	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.708870723	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17466918.32	lb/month	7922.870298	MT/month	7922.870298	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	141295.1409	mscf	0.708870723	kg C/kg gas	18.10487074	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143470.2685	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.708870723	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	975.4613894	lb/month	0.44246237	MT/month	11.06155924	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	141295.1409	mscf	0.708870723	kg C/kg gas	18.10487074	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143470.2685	mscf	∑ (FuelCalculated(i) * CC(i)) / ∑ (FuelCalculated(i))	0.708870723	kg C/kg gas	∑ (FuelCalculated(i) * MW(i)) / ∑ (FuelCalculated(i))	18.10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	195.0922779	lb/month	0.088492474	MT/month	26.37079723	

Feb	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	133358 9603	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	135411 9355	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18465846 95	lb/month	7477 863282	MT/month	7477 863282	
Feb	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	133358 9603	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	135411 9355	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	920 8722603	lb/month	0 417810409	MT/month	10 44026023	
Feb	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	133358 9603	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	135411 9355	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	184 1344521	lb/month	0 083522082	MT/month	24 88958039	
Mar	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	136862 0985	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	138765 8214	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16894180 95	lb/month	7663 080891	MT/month	7663 080891	
Mar	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	136862 0985	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	138765 8214	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	943 4761715	lb/month	0 427954102	MT/month	10 69885254	
Mar	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	136862 0985	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	138765 8214	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	188 6652343	lb/month	0 08558082	MT/month	25 50008446	
Apr	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	137719 2741	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	139639 3735	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17024866 34	lb/month	7722 360016	MT/month	7722 360016	
Apr	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	137719 2741	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	139639 3735	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	950 7748241	lb/month	0 431264628	MT/month	10 7816157	
Apr	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	137719 2741	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	139639 3735	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	190 1549248	lb/month	0 086252926	MT/month	25 70337183	
May	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	153198 9327	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155555 3007	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18938218 92	lb/month	8590 241821	MT/month	8590 241821	
May	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	153198 9327	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155555 3007	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1057 627989	lb/month	0 479732548	MT/month	11 99331369	
May	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	153198 9327	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155555 3007	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	211 5255636	lb/month	0 09594651	MT/month	28 59205083	
Jun	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	126838 4462	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	128791 0423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	15679780 4	lb/month	7112 237209	MT/month	7112 237209	
Jun	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	126838 4462	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	128791 0423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	875 856488	lb/month	0 397191575	MT/month	9 929789363	
Jun	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	126838 4462	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	128791 0423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	175 1312978	lb/month	0 079438315	MT/month	23 67261784	
Jul	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	144104 8847	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	146323 0631	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17814231 81	lb/month	8080 409281	MT/month	8080 409281	
Jul	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	144104 8847	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	146323 0631	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	994 8575411	lb/month	0 451280327	MT/month	11 28150816	
Jul	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	144104 8847	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	146323 0631	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	198 9715082	lb/month	0 090252065	MT/month	26 89511548	
Aug	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	155720 3423	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158117 5566	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19250163 05	lb/month	8731 737464	MT/month	8731 737464	
Aug	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	155720 3423	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158117 5566	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1075 04867	lb/month	0 487634545	MT/month	12 19086361	
Aug	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	155720 3423	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158117 5566	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	215 0097739	lb/month	0 097526909	MT/month	29 06301685	
Sep	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	152070 6513	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154411 6609	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18798867 91	lb/month	8527 08762	MT/month	8527 08762	
Sep	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	152070 6513	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154411 6609	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1049 852443	lb/month	0 476205624	MT/month	11 9051406	
Sep	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	152070 6513	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154411 6609	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	209 9704886	lb/month	0 095241125	MT/month	28 38163519	
Oct	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	164171 6382	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	166698 9557	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20294813 14	lb/month	9205 628699	MT/month	9205 628699	
Oct	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	164171 6382	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	166698 9557	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1133 394215	lb/month	0 514089579	MT/month	12 85248946	
Oct	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	164171 6382	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	166698 9557	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	226 6788429	lb/month	0 102819816	MT/month	30 64033493	
Nov	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	220380 0865	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	223782 862	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	27244644 28	lb/month	12357 97746	MT/month	12357 97746	
Nov	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	220380 0865	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	223782 862	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1521 510438	lb/month	0 690146346	MT/month	17 25365866	
Nov	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	220380 0865	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	223782 862	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	304 3020876	lb/month	0 138029269	MT/month	41 13272224	
Dec	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	180296 6365	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	183072 187	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	22288298 6	lb/month	10109 80686	MT/month	10109 80686	
Dec	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	180296 6365	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	183072 187	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1244 716601	lb/month	0 564594625	MT/month	14 11486562	
Dec	2009	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	180296 6365	mscf	0 708670723	kg C/kg gas	18 10487074	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	183072 187	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	18 10487074	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	248 9433203	lb/month	0 112918925	MT/month	33 64983063	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	172278 4005	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	174930 5154	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19046279 5	lb/month	8639 257333	MT/month	8639 257333	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	172278 4005	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	174930 5154	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1189 360983	lb/month	0 539485709	MT/month	13 48714273	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	172278 4005	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	174930 5154	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	237 8721969	lb/month	0 107897142	MT/month	32 15334628	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	156449 9204	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158856 366	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17296358 13	lb/month	7845 505409	MT/month	7845 505409	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	156449 9204	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158856 366	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1080 080669	lb/month	0 489919201	MT/month	12 24798002	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	156449 9204	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	158856 366	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	216 0171337	lb/month	0 09798384	MT/month	29 19918437	
Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	169411 1735	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	172019 1492	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18729292 54	lb/month	8495 474295	MT/month	8495 474295	
Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	169411 1735	mscf	0 708670723	kg C/kg gas	16 19144796	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	172019 1492	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1169 586465	lb/month	0 530507056	MT/month	13 26267641	

Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	168411 1735	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	172019 1492	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	233 9132933	lb/month	0 106101411	MT/month	31 61822055	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	24886 77019	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	25282 0707	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	2752689 455	lb/month	1248 600419	MT/month	1248 600419	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	24886 77019	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	25282 0707	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	171 8940143	lb/month	0 077969808	MT/month	1 949247851	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	24886 77019	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	25282 0707	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	34 37880285	lb/month	0 015593661	MT/month	4 6470084	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	88251 40081	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	89809 97423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	9756654 589	lb/month	4425 548341	MT/month	4425 548341	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	88251 40081	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	89809 97423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	609 2625232	lb/month	0 276357161	MT/month	6 908929013	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	88251 40081	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	89809 97423	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	121 8525048	lb/month	0 055271432	MT/month	16 47088677	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	176289 1436	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	179003 0013	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19489688 16	lb/month	8840 384358	MT/month	8840 384358	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	176289 1436	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	179003 0013	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1217 050012	lb/month	0 552043256	MT/month	13 8011314	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	176289 1436	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	179003 0013	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	243 4100025	lb/month	0 110409051	MT/month	32 90189726	
Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	158030 66	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	160463 4401	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17471117 17	lb/month	7924 774868	MT/month	7924 774868	
Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	158030 66	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	160463 4401	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1090 998644	lb/month	0 494869249	MT/month	12 37173123	
Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	158030 66	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	160463 4401	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	218 1997289	lb/month	0 09897385	MT/month	29 49420726	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	172859 3953	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	175520 4543	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19110511 53	lb/month	8668 392525	MT/month	8668 392525	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	172859 3953	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	175520 4543	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1193 372008	lb/month	0 541305061	MT/month	13 53262702	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	172859 3953	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	175520 4543	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	238 6744015	lb/month	0 108261016	MT/month	32 26178283	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	154327 8243	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	156703 7032	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17061780 35	lb/month	7739 093515	MT/month	7739 093515	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	154327 8243	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	156703 7032	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1065 436012	lb/month	0 483274221	MT/month	12 08185552	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	154327 8243	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	156703 7032	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	213 0872025	lb/month	0 096654844	MT/month	28 80314356	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	177978 3904	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	180718 253	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19678443 25	lb/month	8925 095141	MT/month	8925 095141	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	177978 3904	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	180718 253	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1228 712091	lb/month	0 557335092	MT/month	13 93337731	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	177978 3904	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	180718 253	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	245 7424182	lb/month	0 111467018	MT/month	33 2171715	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	182913 267	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	185729 0989	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20222019 71	lb/month	9172 564753	MT/month	9172 564753	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	182913 267	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	185729 0989	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1262 78[illegible]	lb/month	0 572788541	MT/month	14 31971302	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	182913 267	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	185729 0989	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	252 5562146	lb/month	0 114557708	MT/month	34 13819704	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	173385 807	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	176055 0712	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19168720 15	lb/month	8694 795544	MT/month	8694 795544	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	173385 807	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	176055 0712	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1197 006894	lb/month	0 54296384	MT/month	13 57384509	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	173385 807	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	176055 0712	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	239 4013788	lb/month	0 108590768	MT/month	32 38004885	
Jan	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	178766 7061	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181518 7063	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19763395 8	lb/month	8964 626984	MT/month	8964 626984	
Jan	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	178766 7061	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181518 7063	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1234 154412	lb/month	0 55980389	MT/month	13 99509228	
Jan	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	178766 7061	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	181518 7063	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	246 8308823	lb/month	0 111960736	MT/month	33 36429984	
Feb	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	135161 7329	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	137242 4606	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	14942637 5	lb/month	6777 985136	MT/month	6777 985136	
Feb	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	135161 7329	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	137242 4606	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	933 1180882	lb/month	0 423255748	MT/month	10 58139371	
Feb	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	135161 7329	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	137242 4606	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	186 6236176	lb/month	0 08465115	MT/month	25 22604261	
Mar	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	160365 0869	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162833 804	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17729200 29	lb/month	8041 83954	MT/month	8041 83954	
Mar	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	160365 0869	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162833 804	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1107 114862	lb/month	0 502179451	MT/month	12 55448629	
Mar	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	160365 0869	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162833 804	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	221 4229725	lb/month	0 10043589	MT/month	29 92980531	
Apr	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	158876 7943	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161322 6001	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17564661 75	lb/month	7967 206024	MT/month	7967 206024	
Apr	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	158876 7943	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161322 6001	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1096 840114	lb/month	0 497518800	MT/month	12 43797247	
Apr	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	158876 7943	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	161322 6001	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	219 3680229	lb/month	0 09950378	MT/month	29 65212636	
May	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	152511 2383	mscf	0 708670723	kg C/kg gas	16 19144798	kg/kmol	0 001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154858 0005	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0 708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16 19144798	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16860918 19	lb/month	7647 992032	MT/month	7647 992032	

Attachment V
GHG Calculations 2006-2010.xlsx
FG Comb

May	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	152511.2363	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154859.0505	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1052.89413	lb/month	0.477565312	MT/month	11.93983279	
May	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	152511.2363	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	154859.0505	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	210.578826	lb/month	0.095517082	MT/month	29.48408458	
Jun	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	160354.174	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162822.7232	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17727993.82	lb/month	8041.292295	MT/month	8041.292295	
Jun	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	160354.174	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162822.7232	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1107.038523	lb/month	0.502145278	MT/month	12.55363198	
Jun	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	160354.174	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	162822.7232	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	221.4079047	lb/month	0.100429056	MT/month	29.92785838	
Jul	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	189728.2294	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192648.8731	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20975449.48	lb/month	9514.315158	MT/month	9514.315158	
Jul	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	189728.2294	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192648.8731	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1309.829631	lb/month	0.594129433	MT/month	14.85323583	
Jul	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	189728.2294	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192648.8731	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	261.9658282	lb/month	0.118825887	MT/month	35.41011421	
Aug	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	168203.7736	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	170793.1624	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18595808.18	lb/month	8434.926736	MT/month	8434.926736	
Aug	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	168203.7736	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	170793.1624	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1161.230923	lb/month	0.526726113	MT/month	13.16815282	
Aug	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	168203.7736	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	170793.1624	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	232.2461846	lb/month	0.105345223	MT/month	31.39287633	
Sep	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	174697.3187	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	177386.8713	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	19313703.59	lb/month	8760.559002	MT/month	8760.559002	
Sep	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	174697.3187	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	177386.8713	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1206.080507	lb/month	0.547060494	MT/month	13.67651236	
Sep	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	174697.3187	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	177386.8713	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	241.2121014	lb/month	0.109412099	MT/month	32.60480546	
Oct	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	183917.9382	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	186749.2363	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	20333091.37	lb/month	9222.946071	MT/month	9222.946071	
Oct	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	183917.9382	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	186749.2363	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1269.717037	lb/month	0.575934645	MT/month	14.39836612	
Oct	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	183917.9382	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	186749.2363	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	253.9434073	lb/month	0.115186929	MT/month	34.32570483	
Nov	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	171086.6746	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173730.5676	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18915633.52	lb/month	8579.997242	MT/month	8579.997242	
Nov	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	171086.6746	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173730.5676	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1181.202586	lb/month	0.535785163	MT/month	13.39462907	
Nov	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	171086.6746	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	173730.5676	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	236.2405372	lb/month	0.107157033	MT/month	31.93279071	
Dec	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	189980.1113	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192904.7327	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	21003296.38	lb/month	9526.946302	MT/month	9526.946302	
Dec	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	189980.1113	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192904.7327	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1311.568552	lb/month	0.594918195	MT/month	14.87295489	
Dec	2007	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	189980.1113	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	192904.7327	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	262.3137105	lb/month	0.118983639	MT/month	35.45712446	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	141828.2982	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	144011.6514	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	15679860.99	lb/month	7112.273768	MT/month	7112.273768	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	141828.2982	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	144011.6514	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	979.1421418	lb/month	0.444131933	MT/month	11.10329832	
Jan	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	141828.2982	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	144011.6514	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	195.8284284	lb/month	0.088826387	MT/month	26.4702632	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	110487.7863	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112188.6745	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	12215003.47	lb/month	5540.638961	MT/month	5540.638961	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	110487.7863	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112188.6745	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	762.776192	lb/month	0.345989872	MT/month	8.649746804	
Feb	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	110487.7863	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	112188.6745	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	152.5552384	lb/month	0.069197974	MT/month	20.62099638	
Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	58082.53949	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	58956.37486	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	6419117.832	lb/month	2911.666342	MT/month	2911.666342	
Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	58082.53949	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	58956.37486	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	400.8472273	lb/month	0.18182146	MT/month	4.545536501	
Mar	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	58082.53949	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	58956.37486	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	80.16944545	lb/month	0.036364292	MT/month	10.83655902	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	129407.5159	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	131399.6612	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	14306678.66	lb/month	6489.406008	MT/month	6489.406008	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	129407.5159	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	131399.6612	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	893.3826143	lb/month	0.405236555	MT/month	10.13091388	
Apr	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	129407.5159	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	131399.6612	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	178.6765229	lb/month	0.081047311	MT/month	24.15209888	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	150737.4689	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153057.9751	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16664816.7	lb/month	7559.042691	MT/month	7559.042691	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	150737.4689	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153057.9751	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1040.646531	lb/month	0.472030795	MT/month	11.80076988	
May	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	150737.4689	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	153057.9751	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	208.1297063	lb/month	0.094406159	MT/month	28.13303539	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	146908.2168	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	149170.7894	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16241563.37	lb/month	7367.067055	MT/month	7367.067055	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	146908.2168	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	149170.7894	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1014.21937	lb/month	0.460042715	MT/month	11.50106787	
Jun	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	146908.2168	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	149170.7894	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	202.8438739	lb/month	0.092008543	MT/month	27.41854579	

Attachment V
GHG Calculations 2006-2010.xlsx
FG Comb

Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	162469.4442	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164970.5508	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	17961848.02	lb/month	8147.368901	MT/month	8147.368901	
Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	162469.4442	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164970.5508	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1121.642746	lb/month	0.508769197	MT/month	12.71922991	
Jul	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	162469.4442	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	164970.5508	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	224.3285482	lb/month	0.101753639	MT/month	30.32264411	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	141489.4332	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143867.5718	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	15642397.91	lb/month	7095.280777	MT/month	7095.280777	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	141489.4332	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143867.5718	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	976.802728	lb/month	0.443070791	MT/month	11.07676978	
Aug	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	141489.4332	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	143867.5718	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	195.3605456	lb/month	0.088614158	MT/month	26.40701916	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	148809.2065	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	151100.0283	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16451637.19	lb/month	7462.345978	MT/month	7462.345978	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	148809.2065	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	151100.0283	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1027.336357	lb/month	0.465992487	MT/month	11.64981218	
Sep	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	148809.2065	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	151100.0283	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	205.4672715	lb/month	0.093198497	MT/month	27.77315224	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	119203.9787	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	121039.0471	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	13178624.2	lb/month	5977.730482	MT/month	5977.730482	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	119203.9787	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	121039.0471	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	822.8003011	lb/month	0.373284421	MT/month	9.332110534	
Oct	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	119203.9787	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	121039.0471	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	164.5600602	lb/month	0.074656884	MT/month	22.24775151	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	152999.5698	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155354.8983	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	16914903.78	lb/month	7672.480417	MT/month	7672.480417	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	152999.5698	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155354.8983	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1056.26543	lb/month	0.47911431	MT/month	11.97785274	
Nov	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	152999.5698	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	155354.8983	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	211.253086	lb/month	0.095822902	MT/month	28.55622477	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Carbon Dioxide	166886.8267	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	169468.1265	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	(44/12) * FuelCalculated * CarbonContent * MW / StdMolVolEPA * ConvScfMscf * ConvLbG	18451539.45	lb/month	8369.487461	MT/month	8369.487461	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Methane	166886.8267	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	169468.1265	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	1152.22194	lb/month	0.522639702	MT/month	13.06599255	
Dec	2008	Mix Drum Fuel Gas To Refinery	Stationary Comb	Nitrogen Oxide	166886.8267	mscf	0.708670723	kg C/kg gas	16.19144796	kg/kmol	0.001028	mmbtu/scf	FuelUsage * (68 + STPConv) / (60 + STPConv)	169468.1265	mscf	Σ (FuelCalculated(i) * CC(i)) / Σ (FuelCalculated(i))	0.708670723	kg C/kg gas	Σ (FuelCalculated(i) * MW(i)) / Σ (FuelCalculated(i))	16.19144796	kg/kmol	FuelConverted*HHV*EF * ConvScfMscf * ConvLbKg	230.444388	lb/month	0.10452794	MT/month	31.14832625	

								STPConv))			(STPConv) / (60 + STPConv)			STPConv) / (60 + STPConv)			ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]			0.98 * (16 / 44) * f_CH4))		
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO2	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO3	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO4	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO5	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO6	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO7	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO8	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO9	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO10	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO11	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO12	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	0	#
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO13	0	#
358	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1114.823979	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	181338.913	#
358	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1114.823979	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) *	181338.913	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	547.3042756	#

																		CarbContentSSM * ConvLbG * ConvScfMscf]]				
385	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1140.118143	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	185436.3401	lb/month	EmissionsCO2 * EF_N2O / EF_CO4	1.854363401
341	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.113924	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175189.2254
341	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.113924	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175189.2254	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	528.8016889
341	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.113924	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175189.2254	lb/month	EmissionsCO2 * EF_N2O / EF_CO5	1.751892254
379	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160.809061	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188801.9787
379	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160.809061	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188801.9787	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	569.8912416
379	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160.809061	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188801.9787	lb/month	EmissionsCO2 * EF_N2O / EF_CO6	1.888019787
378	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	951.8809893	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	154820.4786
378	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	951.8809893	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	154820.4786	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	467.319439
378	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	951.8809893	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	154820.4786	lb/month	EmissionsCO2 * EF_N2O / EF_CO7	1.548204786
385	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1093.641523	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177877.3878
385	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1093.641523	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177877.3878	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	536.9157999
385	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1093.641523	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177877.3878	lb/month	EmissionsCO2 * EF_N2O / EF_CO8	1.778773878
327	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.299828	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175219.4622
327	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.299828	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175219.4622	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	528.8929573
327	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1077.299828	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175219.4622	lb/month	EmissionsCO2 * EF_N2O / EF_CO9	1.752194622
483	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1027.379545	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	167100.0836
483	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1027.379545	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	167100.0836	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	504.3849369
483	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1027.379545	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	167100.0836	lb/month	EmissionsCO2 * EF_N2O / EF_CO10	1.671000836
485	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1085.580714	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	173313.3846
485	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1085.580714	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	173313.3846	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	523.1395383
485	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1085.580714	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	173313.3846	lb/month	EmissionsCO2 * EF_N2O / EF_CO11	1.733133846
226	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1005.743156	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	163580.9923
226	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1005.743156	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	163580.9923	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	493.7627003
226	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1005.743156	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	163580.9923	lb/month	EmissionsCO2 * EF_N2O / EF_CO12	1.635809923
476	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1052.998953	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	171267.0005
476	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1052.998953	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	171267.0005	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	516.9626094
476	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1052.998953	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	171267.0005	lb/month	EmissionsCO2 * EF_N2O / EF_CO13	1.712670005
723	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	999.2107686	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	162518.5198
723	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	999.2107686	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	162518.5198	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	490.5556694
723	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	999.2107686	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	162518.5198	lb/month	EmissionsCO2 * EF_N2O / EF_CO2	1.625185198
697	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	989.9808048	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	161014.0094
697	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	989.9808048	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	161014.0094	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	486.0143649
697	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	989.9808048	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	161014.0094	lb/month	EmissionsCO2 * EF_N2O / EF_CO3	1.610140094
345	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1082.782855	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	172658.3217
345	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1082.782855	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	172658.3217	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0.02 / 0.98 * (16 / 44) * f_CH4))	521.[illegible]
345	mscf																					

																	CarbContentSSM * ConvLbG * ConvScfMscf])				
321	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	923 8514365	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	150229 0297	lb/month	EmissionsCO2 * EF_N2O / EF_CO6	1 502290297
377	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160 953144	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	188825 4134
377	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160 953144	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	188825 4134	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	569 9819783
377	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1160 953144	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	188825 4134	lb/month	EmissionsCO2 * EF_N2O / EF_CO7	1 888254134
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO8	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO9	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO10	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO11	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO12	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	0
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO13	0
534	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1048 60337	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	170552 0726
534	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1048 60337	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	170552 0726	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	514 8046279
534	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1048 60337	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	170552 0726	lb/month	EmissionsCO2 * EF_N2O / EF_CO2	1 705520726
344	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	957 8613845	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	155793 1712
344	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	957 8613845	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	155793 1712	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	470 2554729
344	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	957 8613845	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	155793 1712	lb/month	EmissionsCO2 * EF_N2O / EF_CO3	1 557931712
597	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1210 972099	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	196980 8407
597	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1210 972099	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	196980 8407	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	594 5184411
597	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1210 972099	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	196980 8407	lb/month	EmissionsCO2 * EF_N2O / EF_CO4	1 969808407
323	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1128 410613	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	183532 4722
323	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1128 410613	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	183532 4722	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	553 9854464
323	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1128 410613	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	183532 4722	lb/month	EmissionsCO2 * EF_N2O / EF_CO5	1 835324722
256	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1144 323298	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	186120 6208
256	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1144 323298	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * ([FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf])	186120 6208	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	561 7976696
256	mscf	0	mscf	0	kg/kmol	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]									

																			CarbContentSSM * ConvLbG * ConvScfMscf]]				
311	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1145 702564	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	186344 9541	lb/month	EmissionsCO2 * EF_N2O / EF_CO8	1 863449541
323	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1157 03986	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188188 93
323	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1157 03986	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188188 93	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	568 0407766
323	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1157 03986	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	188188 93	lb/month	EmissionsCO2 * EF_N2O / EF_CO9	1 8818893
317	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1079 489923	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175575 6742
317	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1079 489923	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175575 6742	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	529 9681691
317	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1079 489923	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	175575 6742	lb/month	EmissionsCO2 * EF_N2O / EF_CO10	1 755756742
343	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1114 684428	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	181296 6979
343	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1114 684428	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	181296 6979	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	547 2368509
343	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1114 684428	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	181296 6979	lb/month	EmissionsCO2 * EF_N2O / EF_CO11	1 812966979
321	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1068 274611	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177004 4764
321	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1068 274611	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177004 4764	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	534 2609517
321	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1068 274611	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	177004 4764	lb/month	EmissionsCO2 * EF_N2O / EF_CO12	1 770044764
795	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1083 368454	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	172953 5674
795	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1083 368454	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	172953 5674	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	522 0534444
795	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1083 368454	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	172953 5674	lb/month	EmissionsCO2 * EF_N2O / EF_CO13	1 729535674
545	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1137 643617	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	185034 1914
545	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1137 643617	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	185034 1914	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	558 5183261
545	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1137 643617	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	185034 1914	lb/month	EmissionsCO2 * EF_N2O / EF_CO2	1 850341914
590	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	931 8355114	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	151560 144
590	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	931 8355114	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	151560 144	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	457 4782491
590	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	931 8355114	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	151560 144	lb/month	EmissionsCO2 * EF_N2O / EF_CO3	1 51560144
98	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 402473	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187922 6141
98	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 402473	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187922 6141	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	567 2389147
98	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 402473	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187922 6141	lb/month	EmissionsCO2 * EF_N2O / EF_CO4	1 879226141
729	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 565517	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187952 3657
729	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 565517	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187952 3657	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	567 326779
729	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1155 565517	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187952 3657	lb/month	EmissionsCO2 * EF_N2O / EF_CO5	1 879523657
399	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1178 250815	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	191638 8257
399	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1178 250815	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	191638 8257	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	578 4541511
399	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1178 250815	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	191638 8257	lb/month	EmissionsCO2 * EF_N2O / EF_CO6	1 916388257
102	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1154 467947	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187770 8164
102	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1154 467947	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187770 8164	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	566 7781156
102	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1154 467947	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	187770 8164	lb/month	EmissionsCO2 * EF_N2O / EF_CO7	1 877708164
344	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1107 610076	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	180149 3299
344	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1107 610076	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	180149 3299	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	543 7735684
344	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934													

																	CarbContentSSM * ConvLbG * ConvScfMscf]]					
478	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1082.787577	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	176112 0274	lb/month	EmissionsCO2 * EF_N2O / EF_CO10	1 761120274	[illegible]
318	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	752.7611449	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	122434 256	[illegible]
318	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	752.7611449	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	122434 256	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	369 5629179	[illegible]
318	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	752 7611449	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	122434 256	lb/month	EmissionsCO2 * EF_N2O / EF_CO11	1 22434256	[illegible]
261	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1125 540538	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	183065 6634	[illegible]
261	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1125 540538	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	183065 6634	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	552 5764026	[illegible]
261	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1125 540538	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	183065 6634	lb/month	EmissionsCO2 * EF_N2O / EF_CO12	1 830656634	[illegible]
295	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1187 008394	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	193072 9775	[illegible]
295	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1187 008394	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	193072 9775	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCO2 * 0 02 / 0 98 * (16 / 44) * f_CH4))	582 7830811	[illegible]
295	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	1187 008394	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	193072 9775	lb/month	EmissionsCO2 * EF_N2O / EF_CO13	1 930729775	[illegible]

			mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO2
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO3
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	84.78542867	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	84.78542867	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	11839.5573	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	84.78542867	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	11839.5573	lb/month	EmissionsCO2 * EF_N2O / EF_CO4
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	26.9282583	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	26.9282583	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	3760.300113	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	26.9282583	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	3760.300113	lb/month	EmissionsCO2 * EF_N2O / EF_CO5
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO6
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO7
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO8
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO9
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO10
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO11
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO12
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1077.21694	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0.151709875	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12

																				ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	42.89025757	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	6975.966824	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	42.89025757	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	6975.966824	lb/month	EmissionsCO2 * EF_N2O / EF_CO3
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	47.03308654	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	47.03308654	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7649.781602	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	47.03308654	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7649.781602	lb/month	EmissionsCO2 * EF_N2O / EF_CO4
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	368.4663036	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	368.4663036	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	59929.89681	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	368.4663036	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	59929.89681	lb/month	EmissionsCO2 * EF_N2O / EF_CO5
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	108.2004225	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	108.2004225	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	17598.46176	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	108.2004225	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	17598.46176	lb/month	EmissionsCO2 * EF_N2O / EF_CO6
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	323.6264889	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	323.6264889	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	52636.84058	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	323.6264889	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	52636.84058	lb/month	EmissionsCO2 * EF_N2O / EF_CO7
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	184.2331518	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	184.2331518	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	29964.9484	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	184.2331518	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	29964.9484	lb/month	EmissionsCO2 * EF_N2O / EF_CO8
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51.17587551	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51.17587551	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8323.596779	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51.17587551	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8323.596779	lb/month	EmissionsCO2 * EF_N2O / EF_CO9
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	43.86503615	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	43.86503615	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7134.511525	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	43.86503615	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7134.511525	lb/month	EmissionsCO2 * EF_N2O / EF_CO10
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	52.15065409	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	52.15065409	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8482.14148	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	52.15065409	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8482.14148	lb/month	EmissionsCO2 * EF_N2O / EF_CO11
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	77.98228649	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	77.98228649	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	12683.57604	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	77.98228649	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	12683.57604	lb/month	EmissionsCO2 * EF_N2O / EF_CO12
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	114.5364833	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	114.5364833	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	18629.00232	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0.02 / 0.98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254.684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	114.5364833	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0.98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	18629.00232	lb/month	EmissionsCO2 * EF_N2O / EF_CO13

																	FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]			
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	50 20109692	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	50 20109692	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8165 052079	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	50 20109692	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8165 052079	lb/month	EmissionsCO2 * EF_N2O / EF_CO4
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	54 34390589	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	54 34390589	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8838 867056	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	54 34390589	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8838 867056	lb/month	EmissionsCO2 * EF_N2O / EF_CO5
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	800 2932151	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	800 2932151	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	130165 1992	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	800 2932151	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	130165 1992	lb/month	EmissionsCO2 * EF_N2O / EF_CO6
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	37 77267002	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	37 77267002	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	6143 607146	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	37 77267002	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	6143 607146	lb/month	EmissionsCO2 * EF_N2O / EF_CO7
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO8
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO9
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO10
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO11
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO12
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	0	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	0	lb/month	EmissionsCO2 * EF_N2O / EF_CO13
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	46 05828796	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	46 05828796	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7491 237101	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0																

																… FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]			… 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	193 9809376	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	31550 39541	lb/month	EmissionsCO2 * EF_N2O / EF_CO4
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	133 0572763	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	133 0572763	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	21641 35163	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	133 0572763	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	21641 35163	lb/month	EmissionsCO2 * EF_N2O / EF_CO5
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 81459331	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 81459331	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7451 600926	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 81459331	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7451 600926	lb/month	EmissionsCO2 * EF_N2O / EF_CO6
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	98 45263669	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	98 45263669	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	16013 01476	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	98 45263669	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	16013 01476	lb/month	EmissionsCO2 * EF_N2O / EF_CO7
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51 41957015	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51 41957015	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8363 232954	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	51 41957015	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8363 232954	lb/month	EmissionsCO2 * EF_N2O / EF_CO8
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	122 0910173	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	122 0910173	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	19857 72374	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	122 0910173	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	19857 72374	lb/month	EmissionsCO2 * EF_N2O / EF_CO9
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 34356868	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 34356868	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	13555 5719	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 34356868	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	13555 5719	lb/month	EmissionsCO2 * EF_N2O / EF_CO10
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 83095797	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 83095797	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	13634 84425	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	83 83095797	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	13634 84425	lb/month	EmissionsCO2 * EF_N2O / EF_CO11
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	106 9819493	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	106 9819493	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	17400 28089	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	106 9819493	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	17400 28089	lb/month	EmissionsCO2 * EF_N2O / EF_CO12
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	71 40253106	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	71 40253106	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	11613 39932	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	71 40253106	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	11613 39932	lb/month	EmissionsCO2 * EF_N2O / EF_CO13
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	76 88489017	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	76 88489017	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	12505 08795	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	76 88489017	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	12505 08795	lb/month	EmissionsCO2 * EF_N2O / EF_CO2
mscf	0	mscf	0	kg/kmol	0	kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	262 3006899	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0	mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
mscf	0	mscf	0	kg/kmol		kg/kg	HHV / ((68 + STPConv) / …	1254 684934	btu/scf	…									

																						FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	219 7234114	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	35737 3286	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	219 7234114	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	35737 3286	lb/month	EmissionsCO2 * EF_N2O / EF_CO5
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	103 0874246	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	103 0874246	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	16766 84857	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	103 0874246	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	16766 84857	lb/month	EmissionsCO2 * EF_N2O / EF_CO6
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	-94 96395642	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	-94 96395642	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	-15445 59177	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	-94 96395642	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	-15445 59177	lb/month	EmissionsCO2 * EF_N2O / EF_CO7
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 28188352	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 28188352	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7364 957338	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	45 28188352	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	7364 957338	lb/month	EmissionsCO2 * EF_N2O / EF_CO8
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	49 5760095	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	49 5760095	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8063 383555	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	49 5760095	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	8063 383555	lb/month	EmissionsCO2 * EF_N2O / EF_CO9
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	153 4570528	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	153 4570528	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	24959 31175	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	153 4570528	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	24959 31175	lb/month	EmissionsCO2 * EF_N2O / EF_CO10
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	239 6624799	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	239 6624799	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	38980 356	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	239 6624799	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	38980 356	lb/month	EmissionsCO2 * EF_N2O / EF_CO11
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	116 8135201	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	116 8135201	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	18999 35527	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	116 8135201	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	18999 35527	lb/month	EmissionsCO2 * EF_N2O / EF_CO12
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	156 7197701	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf				0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12 FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	156 7197701	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	25489 98255	lb/month	((EmissionsCO2 * EF_CH4 / EF_CO2) + (EmissionsCC * 0 02 / 0 98 * (16 / 44) * f_CH4))
	mscf	0	mscf	0	kg/kmol	0		kg/kg	HHV / ((68 + STPConv) / (60 + STPConv))	1254 684934	btu/scf	FlareGasVolNorm * (68 + STPConv) / (60 + STPConv)	156 7197701	mscf	FlareGasVolSSM * (68 + STPConv) / (60 + STPConv)	0		mscf	0 98 * [[FlrGsVolNormStd * HHVStd * EF_CO2 * ConvLbKg * ConvScfMscf * ConvMmbtuBtu] + [(44 / 12) * FlrGsVolSSMStd * MW_SSM / StdMolVolEPA * CarbContentSSM * ConvLbG * ConvScfMscf]]	25489 98255	lb/month	EmissionsCO2 * EF_N2O / EF_CO13

Attachment V
GHG Calculations 2006-2010.xlsx
Fugitives

Month	Year	Process Unit	Emission Scenario	GHG Species	# Crude Oil Distillation Columns [CrudeDistill]	Units	# Cat Cracking / Coking Units [CatAndCoke]	Units	# Hydrotreaters [HydroTreater]	Units	# Hydrogen Plants [H2Plants]	Units	# Fuel Gas Systems [FuelGasSystems]	Units	Fugitive Emissions Estimation Expression	Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Feb	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Mar	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Apr	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
May	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jun	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jul	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Aug	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Sep	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Oct	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Nov	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Dec	2010	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jan	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Feb	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Mar	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Apr	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
May	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jun	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jul	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Aug	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Sep	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Oct	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Nov	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Dec	2009	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jan	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Feb	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Mar	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Apr	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
May	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jun	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jul	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Aug	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Sep	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	

Oct	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Nov	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Dec	2008	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jan	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Feb	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Mar	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Apr	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
May	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jun	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jul	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Aug	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Sep	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Oct	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Nov	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Dec	2007	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jan	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Feb	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Mar	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Apr	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
May	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jun	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Jul	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Aug	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Sep	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Oct	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Nov	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	
Dec	2006	Fugitive - Refining Equipment - EPA	Fugitive	Methane	1	dimensionless	18	dimensionless	2	dimensionless	1	dimensionless	1	dimensionless	(0.4 * CrudeDistill + 0.2 * CatAndCoke + 0.1 * HydroTreater + 4.3 * H2Plants + 6 * FuelGasSystems) * ConvLbTonne / 12	2663.915833	lb/month	1.208333333	MT/month	30.20833333	

Attachment V
GHG Calculations 2006-2010.xlsx
H2 Manufac

Month	Year	Process Unit	Emission Scenario	GHG Species	Feedstock Volume [Feedstock]	Units	Carbon Content [CarbonContent]	Units	Molecular Weight [MW_Fuel]	Units	Feedstock Volume at Standard Conditions (STP) Expression	Feedstock Volume at STP [FeedstockCalc]	Units	Emission Rate Expression	EmissionRate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4557.99226	mscf	0.798	lb/lb	28.37	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	4628.159812	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	997039.4568	lb/month	452.250028	MT/month	452.250028	
Feb	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5709.949444	mscf	0.795	lb/lb	29.24	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5797.850434	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1282487.955	lb/month	581.7274428	MT/month	581.7274428	
Mar	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	8347.398091	mscf	0.791	lb/lb	26.54	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8475.901918	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1693187.738	lb/month	768.0179524	MT/month	768.0179524	
Apr	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	7700.61974	mscf	0.7914	lb/lb	27.05	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	7819.165616	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1592815.703	lb/month	722.4899089	MT/month	722.4899089	
May	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	9114.524672	mscf	0.7914	lb/lb	26.78371635	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	9254.836903	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1866712.67	lb/month	846.7276312	MT/month	846.7276312	
Jun	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	6108.334109	mscf	0.792787646	lb/lb	27.38149513	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6202.367974	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1281157.12	lb/month	581.1237857	MT/month	581.1237857	
Jul	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	3063.492712	mscf	0.797075854	lb/lb	29.12463678	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	3110.653207	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	687153.1751	lb/month	311.6878079	MT/month	311.6878079	
Aug	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5923.013985	mscf	0.797162796	lb/lb	29.3955619	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6014.194946	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1341059.6	lb/month	608.2951257	MT/month	608.2951257	
Sep	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	6012.58834	mscf	0.799788052	lb/lb	28.60492476	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6105.148261	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1329084.646	lb/month	602.8633715	MT/month	602.8633715	
Oct	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4979.266381	mscf	0.795662187	lb/lb	28.61603982	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5055.918977	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1095418.69	lb/month	496.8741507	MT/month	496.8741507	
Nov	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5233.722972	mscf	0.795728831	lb/lb	28.46093612	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5314.292763	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1145253.269	lb/month	519.4787624	MT/month	519.4787624	
Dec	2010	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5526.95467	mscf	0.806	lb/lb	27.324	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5612.038574	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1176093.247	lb/month	533.4875575	MT/month	533.4875575	
Jan	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5958.694211	mscf	0.80186822	lb/lb	32.72872373	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6050.424466	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1510983.443	lb/month	685.3713761	MT/month	685.3713761	
Feb	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	6563.694567	mscf	0.793938583	lb/lb	27.98133516	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6664.738413	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1408898.68	lb/month	639.065544	MT/month	639.065544	
Mar	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4679.473646	mscf	0.802065	lb/lb	33.14836185	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	4751.511126	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1202113.402	lb/month	545.2701153	MT/month	545.2701153	
Apr	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	7503.379572	mscf	0.793204849	lb/lb	27.69753453	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	7618.889263	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1592795.148	lb/month	722.4805855	MT/month	722.4805855	
May	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4888.019012	mscf	0.798854277	lb/lb	28.88938995	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	4963.266913	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1086970.318	lb/month	493.0420288	MT/month	493.0420288	
Jun	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4996.716173	mscf	0.798189687	lb/lb	28.75547443	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5073.637397	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1105348.117	lb/month	501.3771613	MT/month	501.3771613	
Jul	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	4263.185184	mscf	0.79718298	lb/lb	29.16538709	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	4328.814171	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	957715.4544	lb/month	434.4129394	MT/month	434.4129394	
Aug	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	3600.251792	mscf	0.799475067	lb/lb	30.42184951	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	3655.675347	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	846057.6325	lb/month	383.7657431	MT/month	383.7657431	
Sep	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	6851.956891	mscf	0.798691977	lb/lb	30.03798296	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6957.43835	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1588330.798	lb/month	720.4555868	MT/month	720.4555868	
Oct	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	7975.415561	mscf	0.798787294	lb/lb	28.97770236	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8098.191941	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1779246.842	lb/month	807.0537518	MT/month	807.0537518	
Nov	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	6007.980916	mscf	0.798520097	lb/lb	28.73186991	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	6100.469909	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1328512.694	lb/month	602.6039382	MT/month	602.6039382	
Dec	2009	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	8680.580599	mscf	0.798963373	lb/lb	30.44804614	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8783.423831	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1570279.794	lb/month	712.2677803	MT/month	712.2677803	
Jan	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12302.73532	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	12492.128	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1637446.033	lb/month	742.7339103	MT/month	742.7339103	
Feb	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	8524.497184	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8655.726322	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1134577.29	lb/month	514.6362141	MT/month	514.6362141	
Mar	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12926.64924	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13125.64687	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1720488.54	lb/month	780.4004951	MT/month	780.4004951	
Apr	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	1853.962188	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	1882.502741	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	246755.1282	lb/month	111.9263785	MT/month	111.9263785	
May	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	5407.119871	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	5490.358996	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	719686.5421	lb/month	326.4356407	MT/month	326.4356407	
Jun	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14088.17377	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14305.05213	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1875080.92	lb/month	850.52341	MT/month	850.52341	
Jul	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	11594.99195	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	11773.48938	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1543248.155	lb/month	700.0084207	MT/month	700.0084207	
Aug	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12056.39582	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	12241.99626	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1604859.207	lb/month	727.8620386	MT/month	727.8620386	

Attachment V
GHG Calculations 2006-2010.xlsx
H2 Manufac

Sep	2006	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	7611.444087	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	7728.617361	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1013053.488	lb/month	459.5138791	MT/month	459.5138791
Oct	2006	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	8320.474658	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8448.563001	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1107422.689	lb/month	502.3190793	MT/month	502.3190793
Nov	2006	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	9790.4465	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	9941.164112	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1303070.201	lb/month	591.0634036	MT/month	591.0634036
Dec	2006	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	9954.465004	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	10107.70757	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1324900.424	lb/month	600.9654378	MT/month	600.9654378
Jan	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13487.42076	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13695.0509	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1795123.039	lb/month	814.2550822	MT/month	814.2550822
Feb	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	10245.91955	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	10403.64888	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1363691.886	lb/month	618.5609699	MT/month	618.5609699
Mar	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13577.5368	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13786.55403	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1807117.107	lb/month	819.6955082	MT/month	819.6955082
Apr	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13458.07723	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13665.25565	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1791217.531	lb/month	812.4835713	MT/month	812.4835713
May	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14703.66854	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14930.02204	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1957000.871	lb/month	887.6817188	MT/month	887.6817188
Jun	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12537.39823	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	12730.40339	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1668678.751	lb/month	756.9008494	MT/month	756.9008494
Jul	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13300.13194	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13504.8769	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1770195.629	lb/month	802.9481856	MT/month	802.9481856
Aug	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13298.57442	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13501.26681	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1769722.137	lb/month	802.7334129	MT/month	802.7334129
Sep	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12515.55109	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	12708.21993	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1665770.981	lb/month	755.5819057	MT/month	755.5819057
Oct	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13485.98713	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13693.5952	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1794932.229	lb/month	814.168532	MT/month	814.168532
Nov	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	9571.950121	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	9719.304122	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1273989.186	lb/month	577.8724616	MT/month	577.8724616
Dec	2007	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14763.55752	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14990.83297	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1964971.86	lb/month	891.297303	MT/month	891.297303
Jan	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13139.68222	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13341.95916	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1748840.396	lb/month	793.2616043	MT/month	793.2616043
Feb	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	9044.991955	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	9184.233775	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1203853.112	lb/month	546.0592356	MT/month	546.0592356
Mar	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	8978.942076	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	9117.1671	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1195062.131	lb/month	542.0717089	MT/month	542.0717089
Apr	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13112.7313	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13314.59334	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1745253.335	lb/month	791.634538	MT/month	791.634538
May	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14287.63073	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14507.5798	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1901627.883	lb/month	862.5649149	MT/month	862.5649149
Jun	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	13838.59614	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14051.6324	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1841863.111	lb/month	835.4560475	MT/month	835.4560475
Jul	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14359.41271	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14580.46661	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1911181.764	lb/month	866.8964967	MT/month	866.8964967
Aug	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12628.25825	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	12822.66214	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1680771.864	lb/month	762.3861999	MT/month	762.3861999
Sep	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	12966.69348	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	13166.30737	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1725816.273	lb/month	782.8180242	MT/month	782.8180242
Oct	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	7896.48029	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	8018.041513	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1050990.694	lb/month	476.7219266	MT/month	476.7219266
Nov	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14185.33789	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14403.71202	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1888013.085	lb/month	856.3893483	MT/month	856.3893483
Dec	2008	Unit 57 - Hydrogen Manufacturing	Hydrogen Plant	Carbon Dioxide	14524.6782	mscf	0.719	lb/lb	19.15842881	lb/lb-mol	Feedstock * ((68 + STPConv) / (60 + STPConv))	14748.27825	mscf	44 / 12 * FeedstockCalc * CarbonContent * (MW_Fuel / StdMolVolEPA) * ConvLbG * ConvScfMscf	1933177.955	lb/month	876.8758129	MT/month	876.8758129

Month	Year	Process Unit	Emission Scenario	GHG Species	AGR Flow Inlet [FlowInlet]	Units	AGR Mole Pct Sour Gas - Carbon [MolPctCSour]	Units	Correction Factor: Tail Gas Recycle [CorrectionFactr]	Units	AGR Flow Inlet Feed rate to Standard Contditions (STP) Expression	AGR Flow Inlet [FlowInletConv]	Units	Emission Rate Expression	Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4190.680347	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4256.193169	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	97178.97456	lb/month	44.07969381	MT/month	44.07969381	
Feb	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3677.119835	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3733.726826	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	85269.86432	lb/month	38.67780585	MT/month	38.67780585	
Mar	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4220.885918	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4285.863735	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	97879.42082	lb/month	44.39741127	MT/month	44.39741127	
Apr	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3609.695266	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3665.264198	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	83706.33296	lb/month	37.9685091	MT/month	37.9685091	
May	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4059.195979	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4121.684684	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	94129.94313	lb/month	42.69667477	MT/month	42.69667477	
Jun	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3530.328542	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3584.675674	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	81865.8736	lb/month	37.13377979	MT/month	37.13377979	
Jul	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3538.150434	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3592.617979	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	82047.25785	lb/month	37.2160544	MT/month	37.2160544	
Aug	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3985.209289	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4046.559016	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	92414.24304	lb/month	41.91844537	MT/month	41.91844537	
Sep	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3494.874851	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3548.676196	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	81043.72705	lb/month	36.76085995	MT/month	36.76085995	
Oct	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3233.299352	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3283.073911	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	74977.97241	lb/month	34.00947665	MT/month	34.00947665	
Nov	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4711.094948	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4783.619218	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	109247.0287	lb/month	49.55367759	MT/month	49.55367759	
Dec	2010	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	2922.912636	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	2967.908991	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	67780.31946	lb/month	30.74467231	MT/month	30.74467231	
Jan	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4506.513377	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4575.888245	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	104502.9238	lb/month	47.40178523	MT/month	47.40178523	
Feb	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3877.768821	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3937.464572	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	89922.77301	lb/month	40.78833223	MT/month	40.78833223	
Mar	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4141.117532	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4204.867366	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	96029.6472	lb/month	43.55836707	MT/month	43.55836707	
Apr	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	2846.238613	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	2890.054622	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	66002.30199	lb/month	29.93817619	MT/month	29.93817619	
May	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3857.294541	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3916.675104	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	89447.98864	lb/month	40.57297341	MT/month	40.57297341	
Jun	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3276.227082	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3326.662465	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	75973.43628	lb/month	34.461012	MT/month	34.461012	
Jul	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3784.005839	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3842.258169	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	87748.47441	lb/month	39.8020858	MT/month	39.8020858	
Aug	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3995.726853	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4057.238492	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	92658.13808	lb/month	42.02907443	MT/month	42.02907443	
Sep	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4338.024752	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4404.805846	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	100595.7893	lb/month	45.62953673	MT/month	45.62953673	
Oct	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4358.444723	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4425.54017	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	101069.3142	lb/month	45.8443243	MT/month	45.8443243	
Nov	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	2929.351355	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	2974.44683	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	67929.62889	lb/month	30.81239801	MT/month	30.81239801	
Dec	2009	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4185.40386	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4249.835454	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	97056.61649	lb/month	44.02419305	MT/month	44.02419305	
Jan	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4044.714246	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4106.980014	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	93794.12179	lb/month	42.54434859	MT/month	42.54434859	
Feb	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4302.118486	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4368.346826	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	99763.14781	lb/month	45.25185647	MT/month	45.25185647	
Mar	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4669.054173	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4740.931252	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	108272.1322	lb/month	49.11147148	MT/month	49.11147148	
Apr	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	429.2534577	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	435.8615379	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	9954.09036	lb/month	4.515104807	MT/month	4.515104807	
May	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	1826.438525	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	1854.555368	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	42353.8443	lb/month	19.21140346	MT/month	19.21140346	
Jun	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4754.361902	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4827.552238	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	110250.3594	lb/month	50.00878128	MT/month	50.00878128	
Jul	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4570.434525	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4640.793418	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	105985.2109	lb/month	48.07414018	MT/month	48.07414018	
Aug	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4714.358895	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4786.933411	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	109322.7174	lb/month	49.58800943	MT/month	49.58800943	
Sep	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4151.282066	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4215.188377	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	96265.3557	lb/month	43.66528277	MT/month	43.66528277	
Oct	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4402.061561	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4469.828461	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	102080.7585	lb/month	46.30310825	MT/month	46.30310825	
Nov	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4273.222877	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4339.006388	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvScfMscf	99093.07865	lb/month	44.94791785	MT/month	44.94791785	

Dec	2008	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4102.719513	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4165.878234	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	95139.22374	lb/month	43.1544773	MT/month	43.1544773
Jan	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5182.472409	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5262.253231	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	120177.9455	lb/month	54.51186396	MT/month	54.51186396
Feb	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3394.293536	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3446.546497	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	78711.31604	lb/month	35.70289485	MT/month	35.70289485
Mar	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4161.90701	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4225.976885	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	96511.74081	lb/month	43.77704131	MT/month	43.77704131
Apr	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3936.590281	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3997.19155	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	91286.80191	lb/month	41.40704607	MT/month	41.40704607
May	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3438.423843	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3491.356162	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	79734.68729	lb/month	36.16707972	MT/month	36.16707972
Jun	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4215.636254	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4280.533257	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	97757.68477	lb/month	44.34219265	MT/month	44.34219265
Jul	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5344.777721	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5427.057128	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	123941.6933	lb/month	56.21907325	MT/month	56.21907325
Aug	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4374.881206	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4442.229681	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	101450.4649	lb/month	46.01721153	MT/month	46.01721153
Sep	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5315.460459	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5397.288546	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	123261.8463	lb/month	55.91069947	MT/month	55.91069947
Oct	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5815.525885	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5905.052156	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	134858.0171	lb/month	61.17064035	MT/month	61.17064035
Nov	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5407.377935	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5490.621032	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	125393.3489	lb/month	56.87753394	MT/month	56.87753394
Dec	2007	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4304.366942	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4370.629896	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	99815.28796	lb/month	45.27550687	MT/month	45.27550687
Jan	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3648.495662	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3704.6619	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	84606.08725	lb/month	38.37672127	MT/month	38.37672127
Feb	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4919.341315	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4995.071403	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	114076.1177	lb/month	51.74411812	MT/month	51.74411812
Mar	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	8767.383994	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	8902.352218	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	203309.5621	lb/month	92.21977578	MT/month	92.21977578
Apr	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3946.801377	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4007.55984	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	91523.59017	lb/month	41.51445155	MT/month	41.51445155
May	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4071.270626	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4133.945212	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	94409.94583	lb/month	42.82368201	MT/month	42.82368201
Jun	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	2916.867978	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	2961.77128	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	67640.14803	lb/month	30.68109154	MT/month	30.68109154
Jul	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5218.576193	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5298.912809	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	121015.1672	lb/month	54.8916218	MT/month	54.8916218
Aug	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4518.360536	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4587.917784	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	104777.6512	lb/month	47.52639964	MT/month	47.52639964
Sep	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4367.535239	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4434.770628	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	101280.117	lb/month	45.93994294	MT/month	45.93994294
Oct	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	3553.88564	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	3608.595418	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	82412.14638	lb/month	37.38156525	MT/month	37.38156525
Nov	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	4615.737216	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	4686.793515	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	107035.7489	lb/month	48.55065678	MT/month	48.55065678
Dec	2006	Unit 62 - Acid Plant	Sulfur Recovery	Carbon Dioxide	5008.966275	mscf	20	%	100	%	FlowInlet * (68 + STPConv) / (60 + STPConv)	5086.076062	mscf	FlowInletConv * (44 / StdMolVolEPA) * (MolPctCSour / 100) * (CorrectionFactr / 100) * ConvLbG * ConvSclMscf	116154.4584	lb/month	52.68683875	MT/month	52.68683875

Attachment V
GHG Calculations 2006-2010.xlsx
WSR Comb

Month	Year	Process Unit	Emission Scenario	GHG Species	Fuel Use (Liquid Volume) [FuelUsage]	Units	Heat Content (Liquid) - HHV [HHV]	Units	Species Emission Rate Expression	Species Emission Rate	Units	Converted Rate	Units	MT/Month CO2e	Comments
Jan	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	12708	bbl	4986	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	9501667.985	lb/month	4309.889226	MT/month	4309.889226	
Jan	2010	WSR Combustion Sources	Stationary Comb	Methane	12708	bbl	4986	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	419.0679793	lb/month	0.190086264	MT/month	4.7521566	
Jan	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	12708	bbl	4986	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	83.81359587	lb/month	0.038017253	MT/month	11.32914133	
Feb	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9082	bbl	4958	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6752403.566	lb/month	3062.842379	MT/month	3062.842379	
Feb	2010	WSR Combustion Sources	Stationary Comb	Methane	9082	bbl	4958	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	297.8125654	lb/month	0.135085668	MT/month	3.3771417	
Feb	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9082	bbl	4958	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	59.56251308	lb/month	0.027017134	MT/month	8.051105813	
Mar	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10228	bbl	4994	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7659662.39	lb/month	3474.368549	MT/month	3474.368549	
Mar	2010	WSR Combustion Sources	Stationary Comb	Methane	10228	bbl	4994	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	337.826921	lb/month	0.153235896	MT/month	3.8308974	
Mar	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10228	bbl	4994	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	67.56538421	lb/month	0.030647179	MT/month	9.132859402	
Apr	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10552	bbl	4874	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7712420.102	lb/month	3498.299073	MT/month	3498.299073	
Apr	2010	WSR Combustion Sources	Stationary Comb	Methane	10552	bbl	4874	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	340.1537828	lb/month	0.154291344	MT/month	3.8572836	
Apr	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10552	bbl	4874	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	68.03075656	lb/month	0.030858269	MT/month	9.195764102	
May	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9211	bbl	5033	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6951909.075	lb/month	3153.336663	MT/month	3153.336663	
May	2010	WSR Combustion Sources	Stationary Comb	Methane	9211	bbl	5033	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	306.611691	lb/month	0.139076889	MT/month	3.476922225	
May	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9211	bbl	5033	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	61.32233821	lb/month	0.027815378	MT/month	8.288982584	
Jun	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9865	bbl	4969	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7350831.317	lb/month	3334.284964	MT/month	3334.284964	
Jun	2010	WSR Combustion Sources	Stationary Comb	Methane	9865	bbl	4969	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	324.2060269	lb/month	0.147057555	MT/month	3.676438875	
Jun	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9865	bbl	4969	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	64.84120538	lb/month	0.029411511	MT/month	8.764630278	
Jul	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8677	bbl	5025	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6538468.474	lb/month	2965.802939	MT/month	2965.802939	
Jul	2010	WSR Combustion Sources	Stationary Comb	Methane	8677	bbl	5025	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	288.3770277	lb/month	0.130805775	MT/month	3.270144375	
Jul	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8677	bbl	5025	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	57.67540554	lb/month	0.026161155	MT/month	7.79602419	
Aug	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8307	bbl	5036	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6273361.329	lb/month	2845.552217	MT/month	2845.552217	
Aug	2010	WSR Combustion Sources	Stationary Comb	Methane	8307	bbl	5036	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	276.6845632	lb/month	0.125502156	MT/month	3.1375539	
Aug	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8307	bbl	5036	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	55.33691263	lb/month	0.025100431	MT/month	7.479928498	
Sep	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11208	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8491058.533	lb/month	3851.483944	MT/month	3851.483944	

Sep	2010	WSR Combustion Sources	Stationary Comb	Methane	11208	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	374.4953778	lb/month	0.169868448	MT/month	4.2467112
Sep	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11208	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	74.89907557	lb/month	0.03397369	MT/month	10.1241595
Oct	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11766	bbl	5010	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8839688.077	lb/month	4009.619833	MT/month	4009.619833
Oct	2010	WSR Combustion Sources	Stationary Comb	Methane	11766	bbl	5010	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	389.8715706	lb/month	0.17684298	MT/month	4.4210745
Oct	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11766	bbl	5010	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	77.97431411	lb/month	0.035368596	MT/month	10.53984161
Nov	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9426	bbl	5056	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7146688.799	lb/month	3241.687365	MT/month	3241.687365
Nov	2010	WSR Combustion Sources	Stationary Comb	Methane	9426	bbl	5056	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	315.2023875	lb/month	0.142973568	MT/month	3.5743392
Nov	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9426	bbl	5056	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	63.0404775	lb/month	0.028594714	MT/month	8.521224653
Dec	2010	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	13454	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	10192603.63	lb/month	4623.292736	MT/month	4623.292736
Dec	2010	WSR Combustion Sources	Stationary Comb	Methane	13454	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	449.5414716	lb/month	0.203908824	MT/month	5.0977206
Dec	2010	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	13454	bbl	5052	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	89.90829431	lb/month	0.040781765	MT/month	12.15296591
Jan	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	16661	bbl	4974	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	12427312.4	lb/month	5636.940788	MT/month	5636.940788
Jan	2009	WSR Combustion Sources	Stationary Comb	Methane	16661	bbl	4974	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	548.1025757	lb/month	0.248615442	MT/month	6.21538605
Jan	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	16661	bbl	4974	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	109.6205151	lb/month	0.049723088	MT/month	14.81748034
Feb	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	12224	bbl	4912	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	9004136.495	lb/month	4084.21247	MT/month	4084.21247
Feb	2009	WSR Combustion Sources	Stationary Comb	Methane	12224	bbl	4912	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	397.1245146	lb/month	0.180132864	MT/month	4.5033216
Feb	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	12224	bbl	4912	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	79.42490293	lb/month	0.036026573	MT/month	10.73591869
Mar	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11897	bbl	5008	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8934539.071	lb/month	4052.643572	MT/month	4052.643572
Mar	2009	WSR Combustion Sources	Stationary Comb	Methane	11897	bbl	5008	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	394.0549428	lb/month	0.178740528	MT/month	4.4685132
Mar	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11897	bbl	5008	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	78.81098857	lb/month	0.035748106	MT/month	10.65293547
Apr	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11312	bbl	5006	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8491816.722	lb/month	3851.827853	MT/month	3851.827853
Apr	2009	WSR Combustion Sources	Stationary Comb	Methane	11312	bbl	5006	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	374.5288175	lb/month	0.169883616	MT/month	4.2470904
Apr	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11312	bbl	5006	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	74.9057635	lb/month	0.033976723	MT/month	10.12506351
May	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8712	bbl	5045	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6590971.108	lb/month	2989.617761	MT/month	2989.617761
May	2009	WSR Combustion Sources	Stationary Comb	Methane	8712	bbl	5045	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	290.6926393	lb/month	0.13185612	MT/month	3.296403
May	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8712	bbl	5045	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	58.13852785	lb/month	0.026371224	MT/month	7.858624752

Attachment V
GHG Calculations 2006-2010.xlsx
WSR Comb

Jun	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9204	bbl	5046	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6964568.7	lb/month	3159.07898	MT/month	3159.07898
Jun	2009	WSR Combustion Sources	Stationary Comb	Methane	9204	bbl	5046	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	307.1700397	lb/month	0.139330152	MT/month	3.4832538
Jun	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9204	bbl	5046	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	61.43400794	lb/month	0.02786603	MT/month	8.304077059
Jul	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6502	bbl	5018	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4892693.3	lb/month	2219.290989	MT/month	2219.290989
Jul	2009	WSR Combustion Sources	Stationary Comb	Methane	6502	bbl	5018	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	215.7906483	lb/month	0.097881108	MT/month	2.4470277
Jul	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6502	bbl	5018	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	43.15812966	lb/month	0.019576222	MT/month	5.833714037
Aug	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6333	bbl	5063	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4808258.256	lb/month	2180.991852	MT/month	2180.991852
Aug	2009	WSR Combustion Sources	Stationary Comb	Methane	6333	bbl	5063	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	212.0666681	lb/month	0.096191937	MT/month	2.404798425
Aug	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6333	bbl	5063	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	42.41333363	lb/month	0.019238387	MT/month	5.733039445
Sep	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10866	bbl	5009	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8161896.87	lb/month	3702.178548	MT/month	3702.178548
Sep	2009	WSR Combustion Sources	Stationary Comb	Methane	10866	bbl	5009	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	359.9778096	lb/month	0.163283382	MT/month	4.08208455
Sep	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10866	bbl	5009	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	71.99556192	lb/month	0.032656676	MT/month	9.731689567
Oct	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10849	bbl	4992	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8121470.225	lb/month	3683.841308	MT/month	3683.841308
Oct	2009	WSR Combustion Sources	Stationary Comb	Methane	10849	bbl	4992	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	358.1948056	lb/month	0.162474624	MT/month	4.0618656
Oct	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10849	bbl	4992	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	71.63896111	lb/month	0.032494925	MT/month	9.68348759
Nov	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11055	bbl	5034	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8345307.21	lb/month	3785.372177	MT/month	3785.372177
Nov	2009	WSR Combustion Sources	Stationary Comb	Methane	11055	bbl	5034	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	368.0670631	lb/month	0.16695261	MT/month	4.17381525
Nov	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11055	bbl	5034	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	73.61341261	lb/month	0.033390522	MT/month	9.950375556
Dec	2009	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	16053	bbl	5012	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	12065286.49	lb/month	5472.728401	MT/month	5472.728401
Dec	2009	WSR Combustion Sources	Stationary Comb	Methane	16053	bbl	5012	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	532.1355404	lb/month	0.241372908	MT/month	6.0343227
Dec	2009	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	16053	bbl	5012	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	106.4271081	lb/month	0.048274582	MT/month	14.38582532
Jan	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9132	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7059353.713	lb/month	3202.072789	MT/month	3202.072789
Jan	2008	WSR Combustion Sources	Stationary Comb	Methane	9132	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	311.3505019	lb/month	0.14122638	MT/month	3.5306595
Jan	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9132	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	62.27010038	lb/month	0.028245276	MT/month	8.417092248
Feb	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6836	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5284465.832	lb/month	2396.996232	MT/month	2396.996232
Feb	2008	WSR Combustion Sources	Stationary Comb	Methane	6836	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	233.0696486	lb/month	0.10571874	MT/month	2.6429685

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WSR Comb

Feb	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6836	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	46.61392972	lb/month	0.021143748	MT/month	6.300836904
Mar	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10206	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7889593.078	lb/month	3578.663479	MT/month	3578.663479
Mar	2008	WSR Combustion Sources	Stationary Comb	Methane	10206	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	347.9679393	lb/month	0.15783579	MT/month	3.94589475
Mar	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10206	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	69.59358787	lb/month	0.031567158	MT/month	9.407013084
Apr	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9546	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7379390.116	lb/month	3347.239033	MT/month	3347.239033
Apr	2008	WSR Combustion Sources	Stationary Comb	Methane	9546	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	325.4656035	lb/month	0.14762889	MT/month	3.69072225
Apr	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9546	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	65.09312069	lb/month	0.029525778	MT/month	8.798681844
May	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9989	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7721844.529	lb/month	3502.573926	MT/month	3502.573926
May	2008	WSR Combustion Sources	Stationary Comb	Methane	9989	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	340.5694441	lb/month	0.154479885	MT/month	3.861997125
May	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9989	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	68.11388881	lb/month	0.030895977	MT/month	9.207001146
Jun	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	5839	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4513750.145	lb/month	2047.405061	MT/month	2047.405061
Jun	2008	WSR Combustion Sources	Stationary Comb	Methane	5839	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	199.0774836	lb/month	0.090300135	MT/month	2.257503375
Jun	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	5839	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	39.81549672	lb/month	0.018060027	MT/month	5.381888046
Jul	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10414	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8050384.315	lb/month	3651.597243	MT/month	3651.597243
Jul	2008	WSR Combustion Sources	Stationary Comb	Methane	10414	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	355.0595846	lb/month	0.16105251	MT/month	4.02631275
Jul	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10414	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	71.01191692	lb/month	0.032210502	MT/month	9.598729596
Aug	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8243	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6372125.783	lb/month	2890.351073	MT/month	2890.351073
Aug	2008	WSR Combustion Sources	Stationary Comb	Methane	8243	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	281.0405373	lb/month	0.127477995	MT/month	3.186949875
Aug	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8243	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	56.20810747	lb/month	0.025495599	MT/month	7.597688502
Sep	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8599	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6647326.169	lb/month	3015.180017	MT/month	3015.180017
Sep	2008	WSR Combustion Sources	Stationary Comb	Methane	8599	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	293.1781609	lb/month	0.132983535	MT/month	3.324588375
Sep	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8599	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	58.63563219	lb/month	0.026596707	MT/month	7.925818686
Oct	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6073	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4694640.286	lb/month	2129.455546	MT/month	2129.455546
Oct	2008	WSR Combustion Sources	Stationary Comb	Methane	6073	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	207.0555845	lb/month	0.093918945	MT/month	2.347973625
Oct	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6073	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	41.41111691	lb/month	0.018783789	MT/month	5.597569122
Nov	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	9534	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7370113.699	lb/month	3343.031315	MT/month	3343.031315

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WSR Comb

Nov	2008	WSR Combustion Sources	Stationary Comb	Methane	9534	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	325.0564701	lb/month	0.14744331	MT/month	3.68608275
Nov	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	9534	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	65.01129402	lb/month	0.029488662	MT/month	8.787621276
Dec	2008	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	14858	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	11485750.93	lb/month	5209.85518	MT/month	5209.85518
Dec	2008	WSR Combustion Sources	Stationary Comb	Methane	14858	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	506.5753128	lb/month	0.22977897	MT/month	5.74447425
Dec	2008	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	14858	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	101.3150626	lb/month	0.045955794	MT/month	13.69482661
Jan	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10128	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	7829296.364	lb/month	3551.313317	MT/month	3551.313317
Jan	2007	WSR Combustion Sources	Stationary Comb	Methane	10128	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	345.3085724	lb/month	0.15662952	MT/month	3.915738
Jan	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10128	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	69.06171448	lb/month	0.031325904	MT/month	9.335119392
Feb	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10879	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8409845.493	lb/month	3814.646285	MT/month	3814.646285
Feb	2007	WSR Combustion Sources	Stationary Comb	Methane	10879	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	370.9135031	lb/month	0.168243735	MT/month	4.206093375
Feb	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10879	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	74.18270061	lb/month	0.033648747	MT/month	10.02732661
Mar	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8456	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6536782.194	lb/month	2965.038054	MT/month	2965.038054
Mar	2007	WSR Combustion Sources	Stationary Comb	Methane	8456	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	288.3026548	lb/month	0.13077204	MT/month	3.269301
Mar	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8456	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	57.66053096	lb/month	0.026154408	MT/month	7.794013584
Apr	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	11514	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8900722.585	lb/month	4037.304653	MT/month	4037.304653
Apr	2007	WSR Combustion Sources	Stationary Comb	Methane	11514	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	392.5634777	lb/month	0.17806401	MT/month	4.45160025
Apr	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	11514	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	78.51269555	lb/month	0.035612802	MT/month	10.612615
May	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	12031	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	9300381.572	lb/month	4218.587136	MT/month	4218.587136
May	2007	WSR Combustion Sources	Stationary Comb	Methane	12031	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	410.1903075	lb/month	0.186059415	MT/month	4.651485375
May	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	12031	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	82.0380615	lb/month	0.037211883	MT/month	11.08914113
Jun	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8585	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6636503.682	lb/month	3010.271014	MT/month	3010.271014
Jun	2007	WSR Combustion Sources	Stationary Comb	Methane	8585	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	292.7008387	lb/month	0.132767025	MT/month	3.319175625
Jun	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8585	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	58.54016773	lb/month	0.026553405	MT/month	7.91291469
Jul	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6426	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4967521.568	lb/month	2253.232561	MT/month	2253.232561
Jul	2007	WSR Combustion Sources	Stationary Comb	Methane	6426	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	219.0909248	lb/month	0.09937809	MT/month	2.48445225
Jul	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6426	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	43.81818496	lb/month	0.019875618	MT/month	5.922934164

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WSR Comb

Aug	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	7260	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5612232.584	lb/month	2545.668906	MT/month	2545.668906
Aug	2007	WSR Combustion Sources	Stationary Comb	Methane	7260	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	247.5256947	lb/month	0.1122759	MT/month	2.8068975
Aug	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	7260	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	49.50513893	lb/month	0.02245518	MT/month	6.69164364
Sep	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6617	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5115171.213	lb/month	2320.205393	MT/month	2320.205393
Sep	2007	WSR Combustion Sources	Stationary Comb	Methane	6617	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	225.6029644	lb/month	0.102331905	MT/month	2.558297625
Sep	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6617	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	45.12059288	lb/month	0.020466381	MT/month	6.098981538
Oct	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6964	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5383414.285	lb/month	2441.878548	MT/month	2441.878548
Oct	2007	WSR Combustion Sources	Stationary Comb	Methane	6964	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	237.433738	lb/month	0.10769826	MT/month	2.6924565
Oct	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6964	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	47.48674759	lb/month	0.021539652	MT/month	6.418816296
Nov	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	7110	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5496277.365	lb/month	2493.072441	MT/month	2493.072441
Nov	2007	WSR Combustion Sources	Stationary Comb	Methane	7110	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	242.4115274	lb/month	0.10995615	MT/month	2.74890375
Nov	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	7110	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	48.48230548	lb/month	0.02199123	MT/month	6.55338654
Dec	2007	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	5591	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4322037.517	lb/month	1960.445572	MT/month	1960.445572
Dec	2007	WSR Combustion Sources	Stationary Comb	Methane	5591	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	190.6220604	lb/month	0.086464815	MT/month	2.161620375
Dec	2007	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	5591	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	38.12441209	lb/month	0.017292963	MT/month	5.153302974
Jan	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	12713	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	9827591.3	lb/month	4457.72573	MT/month	4457.72573
Jan	2006	WSR Combustion Sources	Stationary Comb	Methane	12713	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	433.4427212	lb/month	0.196606545	MT/month	4.915163625
Jan	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	12713	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	86.68854425	lb/month	0.039321309	MT/month	11.71775008
Feb	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	14358	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	11099233.53	lb/month	5034.53363	MT/month	5034.53363
Feb	2006	WSR Combustion Sources	Stationary Comb	Methane	14358	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	489.5280887	lb/month	0.22204647	MT/month	5.55116175
Feb	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	14358	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	97.90561774	lb/month	0.044409294	MT/month	13.23396961
Mar	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	17053	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	13182562.29	lb/month	5979.516784	MT/month	5979.516784
Mar	2006	WSR Combustion Sources	Stationary Comb	Methane	17053	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	581.4126269	lb/month	0.263724645	MT/month	6.593116125
Mar	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	17053	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	116.2825254	lb/month	0.052744929	MT/month	15.71798884
Apr	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	10694	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	8266834.056	lb/month	3749.777311	MT/month	3749.777311
Apr	2006	WSR Combustion Sources	Stationary Comb	Methane	10694	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	364.6060301	lb/month	0.16538271	MT/month	4.13456775

Attachment V
GHG Calculations 2006-2010.xlsx
WSR Comb

Apr	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	10694	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	72.92120602	lb/month	0.033076542	MT/month	9.856809516
May	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	5997	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	4635889.642	lb/month	2102.806671	MT/month	2102.806671
May	2006	WSR Combustion Sources	Stationary Comb	Methane	5997	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	204.4644065	lb/month	0.092743605	MT/month	2.318590125
May	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	5997	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	40.89288129	lb/month	0.018548721	MT/month	5.527518858
Jun	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6636	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5129858.874	lb/month	2326.867612	MT/month	2326.867612
Jun	2006	WSR Combustion Sources	Stationary Comb	Methane	6636	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	226.2507589	lb/month	0.10262574	MT/month	2.5656435
Jun	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6636	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	45.25015178	lb/month	0.020525148	MT/month	6.116494104
Jul	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6739	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5209481.457	lb/month	2362.983851	MT/month	2362.983851
Jul	2006	WSR Combustion Sources	Stationary Comb	Methane	6739	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	229.7624871	lb/month	0.104218635	MT/month	2.605465875
Jul	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6739	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	45.95249742	lb/month	0.020843727	MT/month	6.211430646
Aug	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	6956	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5377230.007	lb/month	2439.073404	MT/month	2439.073404
Aug	2006	WSR Combustion Sources	Stationary Comb	Methane	6956	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	237.1609824	lb/month	0.10757454	MT/month	2.6893635
Aug	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	6956	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	47.43219647	lb/month	0.021514908	MT/month	6.411442584
Sep	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	7047	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5447576.173	lb/month	2470.981926	MT/month	2470.981926
Sep	2006	WSR Combustion Sources	Stationary Comb	Methane	7047	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	240.2635772	lb/month	0.108981855	MT/month	2.724546375
Sep	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	7047	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	48.05271543	lb/month	0.021796371	MT/month	6.495318558
Oct	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8684	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6713034.126	lb/month	3044.98468	MT/month	3044.98468
Oct	2006	WSR Combustion Sources	Stationary Comb	Methane	8684	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	296.076189	lb/month	0.13429806	MT/month	3.3574515
Oct	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8684	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	59.21523781	lb/month	0.026859612	MT/month	8.004164376
Nov	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	7108	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	5494731.295	lb/month	2492.371155	MT/month	2492.371155
Nov	2006	WSR Combustion Sources	Stationary Comb	Methane	7108	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	242.3433385	lb/month	0.10992522	MT/month	2.7481305
Nov	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	7108	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	48.4686677	lb/month	0.021985044	MT/month	6.551543112
Dec	2006	WSR Combustion Sources	Stationary Comb	Carbon Dioxide	8814	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	6813528.649	lb/month	3090.568283	MT/month	3090.568283
Dec	2006	WSR Combustion Sources	Stationary Comb	Methane	8814	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	300.5084673	lb/month	0.13630851	MT/month	3.40771275
Dec	2006	WSR Combustion Sources	Stationary Comb	Nitrogen Oxide	8814	bbl	5155	mbtu/bbl	FuelUsage*HHV*EF * ConvLbKg * ConvMmbtuMbtu	60.10169346	lb/month	0.027261702	MT/month	8.123987196

Appendix B

August 31, 2018 IES Response to DOH Email dated July 24, 2018

From: Chung, Anna S.
To: "McFall, Keith"
Cc: Madsen, Michael A; Peak, Mark
Subject: RE: [*EXTERNAL*] Status question: Monday email: IES GHG Reduction Plan Discussion
Date: Friday, August 31, 2018 4:42:00 PM
Attachments: image002.png
IES Response to DOH July 24 Email Request.docx
Item 1 2016 Refinery eGGRT GHG Calc Workbook.xlsx
Item 1 2017 Refinery eGGRT GHG Calc Summary.xlsx
Item 2 2010 FCC CO2 Calculation Differences.xlsx
Item 3 2009 FO FG WSR Calculation Difference.xlsx

Hi Keith,

Please find attached our response to your emailed request on July 24, 2018 and supporting documentation. Let me know if you have any questions.

Thank you,

ISLAND ENERGY

Anna S. P. T. Chung
Environmental Engineer
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From: McFall, Keith [mailto:Keith.McFall@doh.hawaii.gov]
Sent: Tuesday, August 28, 2018 1:51 PM
To: Chung, Anna S. <AChung@islandenergyservices.com>
Cc: Madsen, Michael A <michael.madsen@doh.hawaii.gov>; Peak, Mark <MPeak@islandenergyservices.com>
Subject: RE: [*EXTERNAL*] Status question: Monday email: IES GHG Reduction Plan Discussion

IES Response to DOH Email Request on July 24, 2018

Prepared by Anna Chung
August 31, 2018

REQUEST:

While it sounded like the GHGERP outlined the reasons for the emissions differences highlighted in the "IES-chev-ref-ref-SLEIS-2016-16.xlsx" file, we would like to have the detailed calculations to document the reasons.

We think this can be accomplished if we received:

1) *annual emissions inventory calculations that follow the requirements of EPA's e-GGRT reporting for the 2016 and 2017 emissions years. These calculations would be consistent with the information already provided for the proposed 2006 – 2010 emission years.*
2) *calculations that document the difference between FCC CO2 emission calculations for 2010 as reported to EPA and provided in the GHGERP supporting spreadsheet; I believe we talked about the ~3.5% difference in the meeting, and I may have forgotten the explanation for the difference, but I think it would be good to document this if the data is available.*
3) *calculations that compare the results of facility reporting requirements for EPA e-GGRT & CAB annual emissions for annual fuel throughputs, higher heating values (HHVs), and annual heats associated with fuel oil combustion, fuel gas combustion, and WSR combustion for the 2009 baseline year.*
4) *corrections for any errors in annual emissions reporting to CAB for 2006 – 2017 of fuel oil, fuel gas, or WSR combustion throughputs or HHVs; as I recall from the meeting, the 2010 fuel gas combustion throughputs reported to DOH were in error. These would be errors, not differences caused by conflicting e-GGRT and DOH annual emissions reporting requirements.*

RESPONSE:

1) ***annual emissions inventory calculations that follow the requirements of EPA's e-GGRT reporting for the 2016 and 2017 emissions years. These calculations would be consistent with the information already provided for the proposed 2006 – 2010 emission years.***

The following excel spreadsheets were used for inputting GHG data in eGGRT for RY2016 and RY 2017.

- 2016 Refinery eGGRT GHG Calc Workbook
- 2017 Refinery eGGRT GHG Calc Summary

2016 emission data were collected and calculations completed using formulas in the workbook "2016 Refinery eGGRT GHG Calc Workbook.xlsx". The data was then reentered into EPA's eGGRT website, calculations completed using the online IVT calculator and verified against the workbook calculations prior to submittal.

In 2017, IES worked with Sphera to configure Essential Suite, the GHG software program that Chevron used for calculating RY2015 and RY2016 GHG emissions, to complete the GHG calculations instead of using the excel workbook. Emission reports were configured by Sphera to replicate the workbook tabs to facilitate data entry into eGGRT. The file "2017 Refinery eGGRT GHG Calc Summary.xlsx" gathers the various reports into one file with a summary sheet listing all the process units and their emissions. Included in the summary are comments comparing the Essential Suite and IVT calculations.

2) ***calculations that document the difference between FCC CO2 emission calculations for 2010 as reported to EPA and provided in the GHGERP supporting spreadsheet;***

Three calculation methods documenting the 2010 CO2e emission results obtained by using different averaging periods of the same data are presented in the file "FCC 2010 CO2 Calculation Differences.xls." Method 1 presents the results from the GHGERP supporting spreadsheet, submitted to the DOH in 2016, which calculates the monthly CO2e and sums the emissions to get the annual CO2e emitted. Calculating the FCC's CO2e monthly provides more accurate emissions results because it is more sensitive to operational data fluctuations (the FCC was shut down in December for ~12 days). As a result, calculation method 1 is 3.5% lower than what was reported to the EPA. Recalculating the 2010 FCC data using the GHG Emission Calculation Summary spreadsheet, method 3, which replicates the eGGRT IVT yields a result nearly equivalent to the eGGRT FLIGHT report result. The eGGRT IVT uses an average of the hourly data over the year (8760 data points) to calculate a single average for the annual CO2e. This smooths out the effects of outlier data, resulting in higher emissions. Method 2 shows that averaging the average monthly data, provided in 2016, also results in emissions much lower than IVT calculations. Method 4 recalculates annual emissions using data from the EPA Flight report and shows the difficulty of recalculating the same number as eGGRT.

3) ***calculations that compare the results of facility reporting requirements for EPA e-GGRT & CAB annual emissions for annual fuel throughputs, higher heating values (HHVs), and annual heats associated with fuel oil combustion, fuel gas combustion, and WSR combustion for the 2009 baseline year.***

The results of facility reporting requirements for EPA e-GGRT & CAB annual emissions for annual fuel throughputs, higher heating values (HHVs), and annual heats associated with fuel oil combustion, fuel gas combustion, and whole straight run (WSR) combustion for the 2009 baseline year differ from each other for several reasons. In 2009, CAB annual emission calculations were prepared by the refinery's Environmental department to reflect air emissions from permitted refinery equipment. GHG reporting was managed at a corporate level and calculations were completed by the refinery's process engineering department to reflect overall refinery GHG emissions. Two independent groups with different emissions reporting purposes contributed to the differences in data used for calculating air and GHG emissions.

A comparison of annual emissions and GHG reported results are on the attached spreadsheet "FO FG WSR Calculation Difference.xlsx", tab "FO FG WSR Summary." These calculations were compiled by DOH in a spreadsheet titled "IES-chev-ref-SLEIS-2016-15.xlsx" and summarizes the 2006-2010 GHG data submitted by Chevron in 2016 with annual emissions data submitted to CAB.

Fuel Oil Combustion

Fuel oil throughput data for 2009 annual emissions used pi tags that measure low sulfur fuel oil (LSFO) flow to each emission unit identified in the covered source permit (CSP). This meets DOH HAR 11-60.1-111 definition of "verifiable documentation". Fuel oil throughput data for 2009 EPA GHG emissions used tank drop to calculate daily fuel oil use from the LSFO tank that feeds the refinery. This meets the EPA 40 CFR 98.6 definition of "company record". As a result, two valid but, different methods were used for gathering fuel use. The difference in pi data and tank drop can be attributed to a delta between the meter readings and pi, which averages ~65 bpd more (6%). Calculating GHG emissions using fuel oil tank drop is more conservative and reflects a slightly higher fuel consumption resulting in greater CO2e emissions.

The 2009 fuel oil HHVs used in the both calculations come from lab StarLIMs data however, the averaging period used by each method is different causing a slight 0.06% difference in the number. Annual emissions use the average gross-BTU (higher heating value) of all the lab samples taken throughout the year while GHG emissions uses a weighted average gross-BTU (higher heating value) based on the monthly average HHV and fuel usage.

<u>Fuel Gas Combustion</u>

Fuel gas throughput data for 2009 annual emissions used the pi tags that measure fuel gas for each process unit identified in the CSP. 2009 EPA GHG emission calculations used the pi tag for the fuel gas mix drum which is upstream of the process units. This tag captures additional fuel gas use that was not used for combustion in an air-permitted combustion unit, for example, use of fuel gas for insignificant activities like furnace pilot flames. Thus, the GHG calculation has a 22.86% higher throughput.

The 2009 annual emission HHVs use the average HHV of all the lab StarLIMs samples taken throughout the year whereas, the GHG HHVs uses the default Natural Gas HHV per 40 CFR 98 Table C-1. This results in a 0.78% lower HHV used for GHG emissions.

<u>WSR Combustion</u>

Like fuel oil, 2009 WSR throughput data for annual emissions used pi tags that measure WSR flow to each emission unit identified in the CSP. WSR throughput data for 2009 EPA GHG emissions used tank drop to calculate daily WSR use from the WSR tank that feeds the refinery. The difference in pi data and tank drop can be attributed to a delta between the meter readings and pi, which averages ~4.5 bpd more (~1%).

The 2009 WSR HHVs used in the both calculations come from the lab StarLIMs data however, the annual emissions use the net-BTU (Lower Heating Value) and the EPA GHG emissions calculations use the gross-BTU (Higher Heating Value). Net-BTU is ~11 MMscfs lower than the gross-BTU. In addition to this, the averaging period used for the annual HHV is different. Annual emissions use the average HHV of all the lab samples taken throughout the year while GHG emissions uses a weighted average HHV based on the monthly average HHV and fuel usage. This results in a 6.7% higher HHV used for GHG emissions. Starting from RY2015, the annual emissions calculations use the gross-BTU value so, there should be no significant differences in the HHVs.

4) ***corrections for any errors in annual emissions reporting to CAB for 2006 – 2017 of fuel oil, fuel gas, or WSR combustion throughputs or HHVs; as I recall from the meeting, the 2010 fuel gas combustion throughputs reported to DOH were in error. These would be errors, not differences caused by conflicting e-GGRT and DOH annual emissions reporting requirements.***

IES has not conducted a separate audit to validate the numbers that were submitted from 2006 through 2015 by the former owner, Chevron, however, upon review of past submittals from 2006 -2017, we can confirm that the reported fuel gas throughput in 2010 is overstated by a magnitude of 110% due to a unit conversion error for the crude furnace throughput. The crude furnace throughput was overstated by a factor of 1000 compared to 2009 throughput, as shown in Figure 2 below. No other errors for fuel oil, fuel gas, WSR throughput or HHV are suspected.

Figure 1. 2010 Fuel Gas Throughput

Emission Unit ID	Emission Unit Description (78 characters max.)	Fuel Type	Annual Process Thruput	CORRECTED-Annual Throughput	Process Thruput Units
F5103	01 crude furnace	RFG	1119.34	1.11934	E6FT3S
F5153	02 crude furnace	RFG	461.77	0.46177	E6FT3S
F5201	01 boiler	RFG	151.11	151.11	E6FT3S
F5202	02 boiler	RFG	171.58	171.58	E6FT3S
F5203	03 boiler	RFG	107.1	107.1	E6FT3S
F5300	FCC Furnace	RFG	58.404	58.404	E6FT3S
F5600	Hydrogenation	RFG	11.272	11.272	E6FT3S
F5700	H2 Manufac.	RFG	94.237	94.237	E6FT3S
F5930	Isom Furnace 01	RFG	51.158	51.158	E6FT3S
F5950	Isom Furnace 02	RFG	12.614	12.614	E6FT3S
F6003	Asphalt Furnace	RFG	0	0	E6FT3S
F6200	Acid Plant CC	RFG	43.322	43.322	E6FT3S
F6262	Acid Pt Furnace	RFG	40.455	40.455	E6FT3S
KC6701	01 cogen, combined cycle	RFG	146.92	146.92	E6FT3S
KS6701	01 cogen, simple cycle	RFG	20.03	20.03	E6FT3S
KC6702	02 cogen, combined cycle	RFG	220.6	220.6	E6FT3S
KS6702	02 cogen, simple cycle	RFG	35.91	35.91	E6FT3S
KC6703	03 cogen, combined cycle	RFG	273.76	273.76	E6FT3S
KS6703	03 cogen, simple cycle	RFG	0	0	E6FT3S
			3019.6	1440	

Figure 2. 2009 Fuel Gas Throughput

Emission Unit ID	Process ID No. (Fuel ID No.)	Emission Unit Description (78 characters max.)	Fuel Type	Fuel Material Code	Annual Process Thruput	Daily Process Thruput	Process Thruput Units
F5103	2	01 crude furnace	RFG	553	1.072	0.00	E6FT3S
F5153	2	02 crude furnace	RFG	553	0.442	0.00	E6FT3S
F5201	2	01 boiler	RFG	553	151.111	0.41	E6FT3S
F5202	2	02 boiler	RFG	553	134.965	0.37	E6FT3S
F5203	2	03 boiler	RFG	553	142.757	0.39	E6FT3S
F5300	2	FCC Furnace	RFG	553	57.816	0.16	E6FT3S
F5600	2	Hydrogenation	RFG	553	17.832	0.05	E6FT3S
F5700	2	H2 Manufac.	RFG	553	94.595	0.26	E6FT3S
F5930	2	Isom Furnace 01	RFG	553	35.434	0.10	E6FT3S
F5950	2	Isom Furnace 02	RFG	553	14.194	0.04	E6FT3S
F6003	2	Asphalt Furnace	RFG	553	0.000	0.00	E6FT3S
F6200	2	Acid Plant CC	RFG	553	40.847	0.11	E6FT3S
F6262	2	Acid Pt Furnace	RFG	553	41.863	0.11	E6FT3S
KC6701	2	01 cogen, combined cycle	RFG	553	230	0.63	E6FT3S
KS6701	2	01 cogen, simple cycle	RFG	553	0	0.00	E6FT3S
KC6702	2	02 cogen, combined cycle	RFG	553	230	0.63	E6FT3S
KS6702	2	02 cogen, simple cycle	RFG	553	0	0.00	E6FT3S
KC6703	2	03 cogen, combined cycle	RFG	553	212	0.58	E6FT3S
KS6703	2	03 cogen, simple cycle	RFG	553	18	0.05	E6FT3S
					1424		

Item 1. 2016 Refinery eGGRT GHG Calc Workbook

Last Updated: 9/14/2016 by Diana Kelterborn

General Information:

• This workbook was built to calculate Greenhouse Gas (GHG) emissions for Hawaii Refinery and to list and organize all of the data elements required for EPA reporting under the US EPA's Greenhouse Gas Reporting Program (GHGRP). The rule can be found here: http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=32e4ac2218a9c45a4f794c4b868e1e75&n=pt40.21.98&r=PART&ty=HTML#se40.23.98_136

• The orange tabs summarize the data for each Subpart and the blue tabs are calculation spreadsheets.

• The blue tabs are modified versions of the 'Optional Calculation Spreadsheets' provided by the EPA. Instructions and original copies of the EPA's 'Optional Calculation Spreadsheets' can be found here: https://www.ccdsupport.com/confluence/display/help/Optional+Calculation+Spreadsheet+Instructions

• As noted on each tab, the calculation spreadsheets are locked to avoid inadvertent changes. If modifications need to be made, they can be unlocked using the password "GHG".

• All emissions calculations are done using these EPA spreadsheets except for Subpart MM emissions because no EPA spreadsheet was available for Subpart MM.

• Subpart C and Subpart MM use emission factors from Tables C-1, C-2, MM-1, and MM-2. For reference these are included in dark blue tabs at the end of this workbook.

Instructions:

• Enter activity data into light green boxes on the blue tabs. Type in the data or **paste values**. The emissions results should automatically appear once all activity data has been pasted.

• Enter non-emissions data into data tables on the orange tabs.

• Enter data into EPA's Electronic Greenhouse Gas Tool (e-GGRT). All data for both the Webform sections and the Inputs Verifier Tool (IVT) sections will be found in this workbook.

Data Entry Notes:

• The calculation spreadsheets assume all gas volumes are measured using 60F as standard temperature, so the spreadsheets use a Molar Conversion Volume of 836.6 scf/kg-mole in emissions calculations. However, the EPA requires that for Subpart P calculations are done using gas volume measured using 68F as standard temperature. The calculation spreadsheet converts the gas volume from 60F to 68F and uses a Molar Conversion Volume of 849.5 scf/kg-mole in emissions calculations. **Therefore you should enter all gas volumes using 60F as standard temperature.**

• If data is collected more frequently than the calculation spreadsheet requires, average data arithmetically (straight average). For example, daily HHVs should be averaged to a single monthly value using the following formula.

$$A = \frac{1}{n} \cdot \sum_{i=1}^{n} x_i$$

GHG Reporting Year Summary: 2016

Subpart	Process Unit	CO2 Equation	CH4 Equation	N2O Equation	Tier	CO2 Emissions (tonnes)	CH4 Emissions (tonnes)	N2O emissions (tonnes)	2016 Total CO2e Emissions	2015 Total CO2e Emissions
C	GP - 4 Diesel Engines	C-2a and C2b	C-9a	C-9a	1	31,777.46551	1.28897	0.25779	31,886.513	1,018.577
C	GP - 1 Fuel Oil Combustion Sources	C-2a and C2b	C-9a	C-9a	2	115,303.51461	4.60600	0.92120	115,693.182	155,004.802
C	GP - 3 WSR Combustion Sources	C-2a and C2b	C-9a	C-9a	2	57,140.22510	2.52015	0.50403	57,353.430	52,761.570
C	GP - 2 Mix Drum Fuel Gas	C-3	C-8	C-8	3	107,796.31020	1.67386	0.16739	107,888.037	122,710.386
P	Unit 57 - Hydrogen Manufacturing	P-1	N/A	N/A		5,433.02432			5,433.024	5,838.766
Y	Sweet Flare	Y-3	Y-4	Y-5		23.93552	0.07225	0.00024	25.813	0.000
Y	Sour Flare	Y-3	Y-4	Y-5		437.55485	1.32074	0.00438	471.877	35.244
Y	FCC Unit - Plant 53	Y-6 and Y-7a	Y-9	Y-10		184,685.97483	5.41019	1.08204	185,143.677	182,740.232
Y	Unit 62 - Acid Plant	Y-12	N/A	N/A		588.77907			588.779	641.270
Y	Equipment Leaks	N/A	Y-21	N/A			14.50000		362.500	362.500
Y	Storage Tanks	N/A	Y-22	N/A			1.64523		41.131	36.535
								TOTAL CO2e:	504,887.964	521,149.883

Subpart A - Facility Information

	Hawaii Refinery
Plant Code	None
Primary NAICS Code	324110
Did you use BAMM?	No
Do you have a cogen unit?	No
Total CO2e Emissions	504,887.96

Item 1. 2017 Refinery eGGRT GHG Calc Summary

Last Updated: 3/21/17 Anna Chung

General Information:
- This workbook is used to summarize the GHG emissions calculations from reports created in Essential Suite
- All emissions calculations are done in Essential Suite.
- Subpart C and Subpart MM use emission factors from Tables C-1, C-2, MM-1, and MM-2. For reference these are included in **dark blue** tabs at the end of this workbook. These factors are built into the Essential Suite calculations.

Instructions:
- Copy/paste value the prior year emissions into a new column for comparision with current reporting year emissions.
- Copy/paste the Essential Suite Reports into this spreadsheet and verify links are working properly.

- Enter data into EPA's Electronic Greenhouse Gas Tool (e-GGRT). All data for both the Webform sections and the Inputs Verifier Tool (IVT) sections will be found in this workbook.

Data Entry Notes:
- The EPA calculation spreadsheets (and Essential Suite) assume all gas volumes are measured using 60F as standard temperature, so the spreadsheets use a Molar Conversion Volume of 836.6 scf/kg-mole in emissions calculations. However, the EPA requires that for Subpart P calculations are done using gas volume measured using 68F as standard temperature. The calculation spreadsheet (and Essential Suite report) converts the gas volume from 60F to 68F and uses a Molar Conversion Volume of 849.5 scf/kg-mole in emissions calculations. **Therefore you should enter all gas volumes using 60F as standard temperature in the calculation spreadsheet/Essential Suite but, enter the eGGRT IVT gas volumes using the 68F column.**
- If data is collected more frequently than the calculation spreadsheet requires, average data arithmetically (straight average). For example, daily HHVs should be averaged to a single monthly value using the following formula. $A = \frac{1}{n} * \sum_{i=1}^{n} x_i$

GHG Reporting Year Summary: 2017

Subpart	Process Unit	CO2 Equation	CH4 Equation	N2O Equation	Tier	CO2 Emissions (tonnes)	CH4 Emissions (tonnes)	N2O emissions (tonnes)	2017 Total CO2e Emissions	2016 Total CO2e Emissions
C	GP - 4 Diesel Engines	C-2a and C2b	C-9a	C-9a	1	37,498.197	1.5210	0.3042	37,626.875	31,886.513
C	GP - 1 Fuel Oil Combustion Sources	C-2a and C2b	C-9a	C-9a	2	95,728.568	3.8240	0.7648	96,052.082	115,693.182
C	GP - 3 WSR Combustion Sources	C-2a and C2b	C-9a	C-9a	2	54,023.549	2.3827	0.4765	54,225.124	57,353.430
C	GP - 2 Mix Drum Fuel Gas	C-3	C-8	C-8	3	120,172.440	1.5278	0.1528	120,256.163	107,888.037
C	Catalytic Oxidizer	C-3	C-8	C-8	3	105.815	0.0042	0.0004	106.044	5,433.024
P	Unit 57 - Hydrogen Manufacturing	P-1	N/A	N/A		4,881.102			4,881.102	
Y	Sweet Flare	Y-3	Y-4	Y-5		0.000	0.0000	0.0000	0.000	25.813
Y	Sour Flare	Y-3	Y-4	Y-5		130.335	0.3934	0.0013	140.558	471.877
Y	FCC Unit - Plant 53	Y-6 and Y-7a	Y-9	Y-10		161,852.057	4.7413	0.9483	162,253.170	185,143.677
Y	Unit 62 - Acid Plant	Y-12	N/A	N/A		581.045			581.045	588.779
Y	Equipment Leaks	N/A	Y-21	N/A			14.5000		362.500	362.500
Y	Storage Tanks	N/A	Y-22	N/A			1.5506		38.765	41.131
								TOTAL CO2e:	476,523.430	504,887.964
								eGGRT IVT CO2e:	476,522.800	

Subpart A - Facility Information

	Hawaii Refinery
Plant Code	None
Primary NAICS Code	324110
Did you use BAMM?	No
Do you have a cogen unit?	No
Total CO2e Emissions	476,523.43

Item 2. FCC CO2 Calculation Differences

YEAR	2010
Process Unit	FCC Unit- Plant 53

Method	Data Source	Flow Rate (Gas Volume) [FlowRateAir]	Flow Rate (O2 Enriched) [FlowRtO2Enrich]	Concentration, Enriched (ppmv) - Oxygen [MolPctO2Enrich]	Concentration (ppmv) - Carbon Dioxide [MolPctCO2]	Concentration (ppmv) - Carbon Monoxide [MolPctCO]	Concentration (ppmv) - Oxygen [MolPctO2]	Annual Tons CO2e	Annual Tons CH4e	Annual Tons NO2e	Annual Tons CO2e	DIFFERENCE	Data Input Methodology
1	Submitted 2016 Data	DATA INPUT: monthly data						177,398.82	129.92	309.72	177,838.46	-3.50%	Calculated monthly emissions using the average monthly data. Sum monthly emissions to get annual emissions.
2	Average of 2016 Submitted Data	DATA INPUT: annual average of the monthly d						179,613.04	131.54	313.59	180,058.17	-2.30%	Calculated annual emission using average of the average monthly data.
3	GHG Calculation Spreadsheet	DATA INPUT: annual average of hourly data						183,848.07	134.64	320.98	184,303.70	0.00%	Calculated using the GHG Spreadsheet used for 2016 & 2017 emissions using annual average of hourly data
4	eGGRT GHG Report Summary	DATA INPUT: Flight Report						183,876.52	134.66	321.03	184,332.21	0.02%	Used data as summarized on GHG Summary Report to recalculate annual emissions.
5	eGGRT Flight Report	eGGRT IVT calculator results						183,841.50	134.75	320.95	184,297.20	0.00%	From eGGRT FLIGHT Report

Item 3. FO FG WSR Calculation Difference

2009 FO FG WSR Summary

		Throughput Unit	2009 Throughput	HHV	HHV Unit Num	HHV Unit Denom	Conversion factor to Throughput Unit	Throughput in HHV Unit Denom	Heat (MMBTU)
Fuel Oil	**AEI**	BBL	381,694.0	150.262	E6BTU	E3GAL	0.0420	16,031.1	2,408,872
	GHG	BBL	406,304.0	150.359	E6BTU	E3GAL	0.0420	17,064.8	2,565,841
			6.06%	0.06%				6.06%	6.12%
Refinery Fuel Gas	**AEI**	E6FT3S	1,423.8	1.036	E6BTU	E3FT3S	1,000.00	1,423,848.0	1,475,107
	GHG	E6FT3S	1,845.8	1.028	E6BTU	E3FT3S	1,000.00	1,845,824.9	1,897,508
			22.86%	-0.78%				22.86%	22.26%
Whole Straight Run	**AEI**	BBL	129,991.0	111.143	E6BTU	E3GAL	0.0420	5,459.6	606,799
	GHG	BBL	131,668.0	119.150	E6BTU	E3GAL	0.0420	5,530.1	658,905
			1.27%	6.72%				1.27%	7.91%

ISLAND ENERGY

Appendix C

CAB Letter dated July 22, 2019

DAVID Y. IGE
GOVERNOR OF HAWAII

BRUCE S. ANDERSON, Ph.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O Box 3378
HONOLULU, HAWAII 96801-3378

In reply please refer to
File:

19-445E CAB
File No. 0863

July 22, 2019

Mr. Jon Mauer
President & CEO
IES Downstream, LLC
91-480 Malakole Street
Kapolei, Hawaii 96707

Dear Mr. Mauer:

SUBJECT: Greenhouse Gas (GHG) Emission Reduction Plan
Covered Source Permit (CSP) No. 0863-01-C
IES Downstream, LLC
Kapolei Refinery
Located At: 91-480 Makakole Street, Kapolei, Oahu

The Department of Health, Clean Air Branch (CAB), has reviewed the IES Downstream, LLC (IES) Greenhouse Gas Emission Reduction Plan (GHGERP) dated December 14, 2018. The plan well documents and accurately projects the planned division of equipment ownership at the Kapolei Refinery. The plan also provides sufficient justification that calendar year 2010 is unrepresentative of normal operations for the baseline year, calendar year 2009 is a more suitable baseline year, and that the calendar year 2009 actual GHG emissions are the most recent representative emissions of normal operations.

The CAB identified minor concerns with respect to the documentation of GHG emissions estimates for calendar years 2006 – 2010 in Sections 2.1 and 2.2 of the GHGERP. The facility-wide emission estimates included in several of the tables did not match those calculated in Attachment V from Appendix B of the GHGERP. For example, in Table 1 of the GHGERP, the proposed 2009 baseline is 581,734 metric tons of CO_2e while Attachment V presents a calculated value of 577,945 metric tons of CO_2e. Based on the information currently available, the CAB has concluded that 577,945 metric tons of CO_2e is the most accurate estimate for 2009 GHG emissions. While Attachment V also notes that the associated approximate 1% difference is due to the "Difference in Averaging Periods, GWP and EF Changes", the CAB cannot concur with the larger 581,734 metric tons of CO_2e value without additional justification.

The CAB also had questions related to calculations in Section 2.3 of the GHGERP that determine the baseline emission split between equipment that IES owns and the equipment that IES sold. The two spreadsheet files that Gail Godenzi of IES sent in a March 13, 2019 email and a follow-up email on March 25, 2019, provided the information needed to document the split in emissions. However, the CAB cannot concur with the proposed CO_2e baseline emission level of 347,277 metric tons for the IES Terminal as it is associated with a total combined CO_2e emissions level of 581,734 metric tons. As stated above, IES should provide additional information to justify use of the 581,734 metric ton value or alternatively propose a revised baseline emission split using the 2009 total combined baseline CO_2e emissions level of 577,945 metric tons from Attachment V in Appendix B of the GHGERP.

Section 3.0 of the GHGERP proposes a facility-wide GHG emissions cap for the IES Terminal of 291,713 metric tons per year. This value results from the application of a 16% reduction from the proposed IES Terminal CO_2e baseline emissions level of 347,277 metric tons. The CAB cannot concur with the proposed facility-wide GHG emissions cap without the larger 581,734 metric tons of CO_2e combined total being adequately justified. Alternatively, IES could also propose a revised facility-wide GHG emissions cap for the IES Terminal based on the 2009 total combined baseline CO_2e emissions level of 577,945 metric tons from Attachment V in Appendix B of the GHGERP.

Sections 4.0 and 5.0 of the GHGERP presents a GHG Control Assessment, and Proposed Control Strategy, respectively, that are based on a facility-wide GHG emissions cap that is 16% less than the proposed IES Terminal baseline. The CAB cannot currently concur with the contents of these sections because of issues raised with respect to Sections 2.0 and 3.0 of the GHGERP. However, if the CAB had been able to concur with the facility-wide GHG emissions cap for the IES Terminal that represented a 16% reduction from an approved IES Terminal baseline, the contents of these sections would have met the requirements of the HAR.

Please note that CAB appreciates the consistent use of metric tons for quantifying emissions throughout the IES documentation. However, in future updates, please also include the corresponding values in short tons for the IES Terminal proposed baseline emission rate and facility-wide GHG emissions cap.

Based on the results of this review, it appears that relatively minor revisions to technical content in the GHGERP are needed. However, because of the business transactions that have occurred since submitting the GHGERP, a comprehensive revision to the GHGERP could require a significant amount of effort for marginal, if any, addition in clarity. Another option would be for IES to resubmit the GHGERP with an errata document, and the updated information. This would include the contents of the two spreadsheet files provided on March 13, 2019 and clarification in the March 25, 2019 email.

In accordance with HAR §11-60.1-204(e), the CAB requests that a revised GHG Emission Reduction Plan or errata document be provided by **August 23, 2019**.

If there are any questions regarding this matter, please contact Mr. Keith McFall of my staff at (808) 586-4200.

Sincerely,

Marianne Rossio

MARIANNE ROSSIO, P.E.
Manager, Clean Air Branch

KM:rkb

DAVID Y. IGE
GOVERNOR OF HAWAII

FILE COPY

BRUCE S. ANDERSON, Ph.D.
DIRECTOR OF HEALTH

Initials KH MM 7-22-2
Mailed Out JUL 22 2019

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

19-445E CAB
File No. 0863

July 22, 2019

Mr. Jon Mauer
President & CEO
IES Downstream, LLC
91-480 Malakole Street
Kapolei, Hawaii 96707

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Covered Source Permit (CSP) No. 0863-01-C
IES Downstream, LLC
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Located At: 91-480 Makakole Street, Kapolei, Oahu

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In accordance with HAR §11-60.1-204(e), the CAB requests that a revised GHG Emission Reduction Plan or errata document be provided by **August 23, 2019**.

If there are any questions regarding this matter, please contact Mr. Keith McFall of my staff at (808) 586-4200.

Sincerely,

MARIANNE ROSSIO, P.E.
Manager, Clean Air Branch

KM:rkb

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Sincerely,

Marianne Rossio

MARIANNE ROSSIO, P.E.
Manager, Clean Air Branch

KM:rkb

Appendix D

IES Email response sent March 25, 2019

FEB 1 1 2021

From: McFall, Keith
To: Godenzi, Gail
Subject: RE: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf
Date: Monday, March 25, 2019 4:01:10 PM
Attachments: image001.png
image002.png
image003.png

Hi Gail,

This answers the question very well.

Thank you,

Keith

Keith McFall, PE, PhD
Environmental Engineer, Clean Air Branch
Environmental Management Division
Tel: (808) 586-4200

From: Godenzi, Gail <Gail.Godenzi@islandenergyservices.com>
Sent: Monday, March 25, 2019 3:40 PM
To: McFall, Keith <Keith.McFall@doh.hawaii.gov>
Subject: RE: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf

FCC Startup heater was never used in the 2009 baseline year

From: McFall, Keith <Keith.McFall@doh.hawaii.gov>
Sent: Tuesday, March 19, 2019 2:29 PM
To: Godenzi, Gail <Gail.Godenzi@islandenergyservices.com>
Cc: Lum, Darin W C <darin.lum@doh.hawaii.gov>; Madsen, Michael A <michael.madsen@doh.hawaii.gov>
Subject: RE: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf

Hi Gail,

Thank you again for the information. It provides the information needed to document the emission split between the two owners.

I only have one minor follow-up, and you probably mentioned this in our conversations. It seems likely that these are presumed insignificant for the purposes of the split, but I would like clarification on emissions associated with the "FCC Startup Air Heater". They do not appear to be included in the "Fuel Gas to Refinery 2009 HDOH Request" file.

Thank you,

Keith

Keith McFall, PE, PhD
Environmental Engineer, Clean Air Branch
Environmental Management Division
Tel: (808) 586-4200

From: McFall, Keith
Sent: Wednesday, March 13, 2019 11:14 AM
To: 'Godenzi, Gail' <Gail.Godenzi@islandenergyservices.com>
Cc: Lum, Darin W C <darin.lum@doh.hawaii.gov>; Madsen, Michael A <michael.madsen@doh.hawaii.gov>
Subject: RE: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf

Hi Gail,

Thank you. I will review and get back to you ASAP.

Keith

Keith McFall, PE, PhD
Environmental Engineer, Clean Air Branch
Environmental Management Division
Tel: (808) 586-4200

From: Godenzi, Gail <Gail.Godenzi@islandenergyservices.com>
Sent: Wednesday, March 13, 2019 10:33 AM
To: McFall, Keith <Keith.McFall@doh.hawaii.gov>; Madsen, Michael A <michael.madsen@doh.hawaii.gov>
Cc: Lum, Darin W C <darin.lum@doh.hawaii.gov>
Subject: RE: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf

Keith, see attached spreadsheets for the calculations of the below requested emissions. Emission factors are included.

Let me know when you have some time and we can walk thru these calculations over the phone, or I can come to you and we can do it FTF.

LMK

Gail

ISLAND ENERGY

Gail Godenzi
Environmental and Process Engineer
gail.godenzi@islandenergyservices.com

IES Downstream, LLC
91-480 Malakole Street
Kapolei, HI 96707
Tel +1 808. 682.3113
Mobile +1 808.352.7840

Official Licensee of the Texaco Brand in Hawai`i

TEXACO
TECHRON

From: McFall, Keith <Keith.McFall@doh.hawaii.gov>
Sent: Tuesday, March 12, 2019 1:51 PM
To: Godenzi, Gail <Gail.Godenzi@islandenergyservices.com>; Madsen, Michael A <michael.madsen@doh.hawaii.gov>
Cc: Lum, Darin W C <darin.lum@doh.hawaii.gov>
Subject: [*EXTERNAL*] follow-up to 2/7/2019 meeting-: Emailing - GHG Partnering Request.pdf

Hi Gail,

Thank you for the update and letter for reference.

As we discussed in our last telcon, a partnership with a 16% reduction from the combined baseline would remove the need for the information we requested on 2/7/2019 (attached). However, as I recall from our conversations and your 2/28/2019 email (also attached) , there should not be a lot of effort needed on your part to respond to that request. I agreed that the emissions by individual unit by process were not needed, but that emissions from groups of units by process for each owner would be needed. So, in the four examples below (taken from the "2009 Baseline Info") sheet, we are requesting the calculation details associated with the

A. 103,699 CO2e Metric Ton combined emissions associated with units F-5103 & F-5153 from Fuel Oil Combustions
B. 89,647 CO2e Metric Ton combined emissions associated with units F-5201, F-5202, & F-5203 from Fuel Oil Combustion
C. 76,598 CO2e Metric Ton combined emissions associated with units F-5103 through F-6704 from Fuel Gas Combustion
D. 27,391 CO2e Metric Ton combined emissions associated with units F-5300 through F-5203 from Fuel Gas Combustion.

Sub - part	Emission Group for "IES 2009 Summary" & "Summary Data" (e.g., Crude, FCC, FO Comb, FG Comb, Flare P1, Flare P2, Fugitives, H2 Manufac, AP, WSR Comb)	Owner	Equipment	Equipment Desc.	Permit	Process / Fuel Info	CO2e Metric Ton	Supporting Calculation Reference
C	FO Comb	Eagle Ref.	F-5103	Crude Atm Furnace	CSP 0088-01-C	Fuel Oil Combustion	103,699	?
C	FO Comb	Eagle Ref.	F-5153	Crude Vac Furnace	CSP 0088-01-C	Fuel Oil Combustion		?
C	FO Comb	IES Term.	F-5201	Boiler	Retired	Fuel Oil Combustion	89,647	?
C	FO Comb	IES Term.	F-5202	Boiler	Retired	Fuel Oil Combustion		?
C	FO Comb	IES Term.	F-5203	Boiler	Retired	Fuel Oil Combustion		?
C	FG Comb	Eagle Ref.	F-5103	Crude Atm Furnace	CSP 0088-01-C	Fuel Gas Combustion	76,598	?
C	FG Comb	Eagle Ref.	F-5153	Crude Vac Furnace	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-5700	Hydrogen Furnace	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-5930	Isomerization Furnace	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-5950	Isomerization Furnace	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-5600	Hydrogenation Furnace	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6200	Acid Plant Combustion Chamber	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6260	Acid Plant Pre-heater	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6701	Cogen	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6702	Cogen	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6703	Cogen	CSP 0088-01-C	Fuel Gas Combustion		?
C	FG Comb	Eagle Ref.	F-6704	Cogen	CSP 0088-02-C	Fuel Gas Combustion		?
C	FG Comb	IES Term.	F-5300	FCC Furnace	TBD	Fuel Gas Combustion	27,391	?
C	FG Comb	IES Term.	F-5310	FCC Startup Air Heater	TBD	Fuel Gas Combustion		?
C	FG Comb	IES Term.	F-5201	Boiler	Retired	Fuel Gas Combustion		?
C	FG Comb	IES Term.	F-5202	Boiler	Retired	Fuel Gas Combustion		?
C	FG Comb	IES Term.	F-5203	Boiler	Retired	Fuel Gas Combustion		?

Could you propose a delivery date for the information in the spreadsheet "IES-DS-GHGERP-Dec2018-1.xlsx" if indication of a tentative agreement between the two owners cannot be presented by that time?

Thank you,

Keith

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ISLAND ENERGY

GHGERP Change Log

Date	Description of Review/ Amendment
06/2018	Start of Change Log
12/18/18	GHG plan submitted to HDOH with split between IES and Par
8/22/19	Revised 12/18/18 plan to IES only with Lower FCC Combustion based on HDOH request (Rev 1)
1/24/21	Revised 8/22/19 plan - Transferred Boilers 1/2/3 equipment ownership to Par, updated Sections 2,3,4,5, and added Section 6 regarding partnering (Rev 2).