

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 56473

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates*</u>	
			lb/hr	TPY**
116S-B101	Steam Boiler 101 (6) Natural Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07
	Natural Gas and (6) Regeneration Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix (6)	CO	12.38	54.21
		NO _x	52.00	227.76
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (6) Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	52.00	227.76
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Natural Gas (7)	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
116S-B102	Natural Gas and (7) Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix (7)	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (7) Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Steam Boiler 102 (6) Natural Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07
	Natural Gas and (6) Regeneration Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix (6)	CO	12.38	54.21
		NO _x	52.00	227.76
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (6)	CO	12.38	54.21

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
116S-B103	Mix and Regeneration Gas	NO _x	52.00	227.76
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Natural Gas (7)	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07
	Natural Gas and (7) Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix (7)	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (7) Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Steam Boiler 103 Natural Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
	Natural Gas and Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
116S-B104		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Steam Boiler 104 (6) Natural Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07
	Natural Gas and (6) Regeneration Gas	CO	12.38	54.21
		NO _x	78.00	341.64
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel Mix (6)	CO	12.38	54.21
		NO _x	52.00	227.76
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (6) Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	52.00	227.76
		PM ₁₀	2.87	5.90

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
		SO ₂	5.76	5.28
		VOC	2.72	3.97
	Natural Gas (7)	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	0.70	3.07
	Natural Gas and (7) Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix (7)	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel (7) Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	20.80	40.01
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
116S-B105	Steam Boiler 105 Natural Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33
	Natural Gas and Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	0.97	4.24
		SO ₂	0.08	0.33

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
		VOC	2.83	4.07
	Natural Gas/Liquid Fuel Mix	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	0.59	2.97
	Natural Gas/Liquid Fuel Mix and Regeneration Gas	CO	12.38	54.21
		NO _x	7.80	34.16
		PM ₁₀	2.87	5.90
		SO ₂	5.76	5.28
		VOC	2.72	3.97
116S-B106	Steam Boiler 106 Natural Gas	CO	19.53	85.52
		NO _x	15.84	69.38
		PM ₁₀	2.01	8.79
		SO ₂	0.16	0.69
		VOC	1.45	6.36
	Natural Gas and Regeneration Gas	CO	19.53	85.52
		NO _x	15.84	69.38
		PM ₁₀	2.01	8.79
		SO ₂	0.16	0.69
		VOC	3.58	7.36
116CT-MAIN	Cooling Tower (5)	VOC	1.78	7.80
130WF	Isoprene Wastewater (5)	Acetone	0.64	2.58
		VOC (6)	9.40	19.24
		VOC (7)	3.30	7.36
	Maintenance Emissions	VOC (8)	8.13	0.63

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
	(336 hours per rolling 12 months)			
116F	830 Refrigeration Process Fugitives (4)	VOC	1.45	6.33
116F-BH	830 Boiler House Process Fugitives (4)	VOC	0.67	2.93

PLANNED MAINTENANCE, STARTUP, AND SHUTDOWN (MSS) EMISSIONS

130FL-Q501	Utilities Flare (9) MSS Activities	VOC (10)	61.23	21.34
		CO (10)	20.35	7.08
		NO _x (10)	4.03	1.40
280FL-Q504	Budene Flare (11) MSS Activities	VOC (10)	37.01	10.29
		CO (10)	15.13	3.95
		NO _x (10)	2.76	0.77
850FL-Q504	850 Flare (12) Startup Operations	VOC	53.99	7.77
		CO	21.35	3.07
		NO _x	2.96	0.43
850FL-Q504	850 Flare (12) MSS Activities other than Startup	VOC (13)	53.99	13.92
		CO (13)	21.35	4.81
		NO _x (13)	2.96	0.77
PLT-MSS	Uncontrolled Emissions from All Other Planned	VOC	53.09	4.59
		PM ₁₀	0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*	
			lb/hr	TPY**
	MSS Activities	PM _{2.5}	0.01	0.01
116S-B101	Steam Boiler 101 MSS activities	CO	24.76	(14)
116S-B102	Steam Boiler 102 MSS activities	CO	24.76	(14)
116S-B103	Steam Boiler 103 MSS activities	CO	24.76	(14)
116S-B104	Steam Boiler 104 MSS activities	CO	24.76	(14)
116S-B105	Steam Boiler 105 MSS activities	CO	24.76	(14)

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- (1) Emission point identification - either specific equipment designation or emission point number (EPN) from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3)
 - CO - carbon monoxide
 - HCl - hydrochloric acid
 - NO_x - total oxides of nitrogen
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - SO₂ - sulfur dioxide
 - VOC - volatile organic compounds as defined in the Title 30 Texas Administrative Code § 101.1.
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) Emissions from this permitted facility are emitted from this EPN.
- (6) Pre-emission control.
- (7) Post emission control.
- (8) Emissions are only from process wastewater stream 1D-303.
- (9) The Utilities Flare is authorized under Standard Permit Number 84420 which will be incorporated into the New Source Review (NSR) Permit Number 22110.
- (10) Annual MSS emissions are already included in the total caps of normal operations.
- (11) The Budene Flare is authorized under Standard Permit Numbers 75848 and 70810 which will be incorporated into the NSR Permit Number 9481.
- (12) The 850 Flare is authorized under Permit Number 38755.
- (13) Annual non-startup MSS emissions are already included in the total caps of normal operations.
- (14) Annual MSS emissions are already included in the total caps of normal operations.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

8,760 Hours/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated August 4, 2010