EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Flexible Permit Number 18897

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)	Emission Rates * lb/hr	TPY**
VOC SOURCES:				
Flare 112 (6), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, Cooling Towers (4), Fugitive Emissions (4), Loading Racks, Fixed-Roof Storage Tank Groups, Floating Roof Storage Tank Groups, and Carbon Canister Systems				
EMISSIONS CAP: through 01/01/2009		VOC	698	1,118
EMISSIONS CAP: through 01/01/2011		VOC	494	930
EMISSIONS CAP: through 04/04/2013		VOC	488	930
EMISSIONS CAP: after 04/04/2013		VOC	403	930
NO_x SOURCES:				
Flare 112 (6), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, and Thermal Combustors				
EMISSIONS CAP: through 01/01/2009		NO_x	609	1,374
EMISSIONS CAP: through 01/01/2011		NO_x	377	937
EMISSIONS CAP: through 04/04/2013		NO_x	325	853
EMISSIONS CAP: after 04/04/2013		NO_x	205	535

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
CO SOURCES:				
Flare 112 (6), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, and Absorber				
EMISSIONS CAP:	through 01/01/2009	CO	270	630
EMISSIONS CAP:	through 01/01/2011	CO	203	556
EMISSIONS CAP:	through 04/04/2013	CO	187	526
EMISSIONS CAP:	after 04/04/2013	CO	171	479
PM SOURCES:				
Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, and Solid Waste Loading				
EMISSIONS CAP:	through 01/01/2009	PM	54	105
EMISSIONS CAP:	through 01/01/2011	PM	53	99
EMISSIONS CAP:	through 04/04/2013	PM	53	99
EMISSIONS CAP:	after 04/04/2013	PM	53	99

SO_2 SOURCES:

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
Flare 112 (6), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, and Thermal Combustors				
EMISSIONS CAP:	through 01/01/2009	SO_2	230	525
EMISSIONS CAP:	through 01/01/2011	SO_2	157	375
EMISSIONS CAP:	through 04/04/2013	SO_2	157	375
EMISSIONS CAP:	after 04/04/2013	SO_2	157	375

H_2S SOURCES:

Flare 112 (6), Boilers, Furnaces, Heaters, Absorber, Incinerator, Thermal Oxidizer, Thermal Combustors, Carbon Canister EPN PK-854, Fugitive Emission EPNs F-16N, F-39, F-71-72, F-1/2, F-11, and F-13 (4), and Sulfur Loading and Storage				
EMISSIONS CAP:	through 01/01/2009	H_2S	3	6
EMISSIONS CAP:	through 01/01/2011	H_2S	2	4
EMISSIONS CAP:	through 04/04/2013	H_2S	2	4
EMISSIONS CAP:	after 04/04/2013	H_2S	2	4

COS SOURCES:

Absorber

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA
AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
EMISSIONS CAP: through 01/01/2009		COS	1	5
EMISSIONS CAP: through 01/01/2011		COS	1	5
EMISSIONS CAP: through 04/04/2013		COS	1	5
EMISSIONS CAP: after 04/04/2013		COS	1	5
H_2SO_4 SOURCES:				
	FFCU/WGS			
EMISSIONS CAP: through 01/01/2009		H_2SO_4	4	18
EMISSIONS CAP: through 01/01/2011		H_2SO_4	4	18
EMISSIONS CAP: through 04/04/2013		H_2SO_4	4	18
EMISSIONS CAP: after 04/04/2013		H_2SO_4	4	18
NH_3 SOURCES:				
	Carbon Canister EPN PK-854			
EMISSIONS CAP: through 01/01/2009		NH_3	0.01	0.06
EMISSIONS CAP: through 01/01/2011		NH_3	0.01	0.06
EMISSIONS CAP: through 04/04/2013		NH_3	0.01	0.06
EMISSIONS CAP: after 04/04/2013		NH_3	0.01	0.06
HCl SOURCES:				
	pH Neutralization			
EMISSIONS CAP: through 01/01/2009		HCl	0.77	0.15
EMISSIONS CAP: through 01/01/2011		HCl	0.10	0.02
EMISSIONS CAP: through 04/04/2013		HCl	0.10	0.02
EMISSIONS CAP: after 04/04/2013		HCl	0.10	0.02

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA
AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
Benzene SOURCES:				
Fugitive Emissions EPNs LE-FUG, F-16N, F-39, F-41, TNK-FUG, F-1/2, F-3/4, F-8, F-11, F-16S, F-22, and FUG (4), Thermal Oxidizer, Carbon Canister PK-854, Carbon Canister CA-SK, Fixed-Roof Storage Tank Groups, Floating Roof Storage Tank Groups, and Cooling Towers.				
EMISSIONS CAP: through 01/01/2009		Benzene	1.75	5.90
EMISSIONS CAP: through 01/01/2011		Benzene	1.60	5.30
EMISSIONS CAP: through 04/04/2013		Benzene	1.60	5.27
EMISSIONS CAP: after 04/04/2013		Benzene	1.60	5.24
D-2914	Relief Gas Emergency Flare (5)	VOC	0.01	0.06
		NO_x	0.16	0.68
		CO	0.80	3.48
		SO_2	0.01	0.01
R-2911	Rheniformer Emergency Flare (7)	VOC	0.01	0.01
		NO_x	18.24	0.26
		CO	46.35	0.89
		SO_2	0.01	0.01
128	Sour Water Stripper Emergency Flare (5)	VOC	0.01	0.01
		NO_x	0.05	0.21
		CO	0.10	0.43
		SO_2	0.01	0.01
XF7104	Standby SRU Tailgas	VOC	0.01	0.04

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AIR CONTAMINANTS DATA
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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
	Incinerator (5)	NO_x	0.23	0.67
		CO	0.08	0.24
		PM	0.02	0.05
		SO_2	0.01	0.01
		H_2S	0.01	0.01
112	Plant Emergency/AAG/	VOC	0.01	0.01
	Main South Flare (5, 6)	NO_x	0.02	0.07
		CO	0.11	0.49
		SO_2	0.01	0.01
XF8801/2	Steam Reformer Heater F-8801	VOC	0.70	2.61
	Steam Reformer Heater F-8802	NO_x	4.52	16.96
		CO	4.52	16.96
		PM	0.96	3.61
		SO_2	3.81	1.92
		H_2S	0.08	0.04
XF3903	Diesel Charge Heater	VOC	0.57	2.48
		NO_x	3.68	16.10
		CO	3.68	16.10
		PM	0.79	3.45
		SO_2	3.05	4.64
		H_2S	0.03	0.01
XF3903	Diesel Charge Heater (9)	CO	73.50	0.22
H2FUG	Hydrogen Plant Fugitives (4)	CO	0.01	0.06
		VOC	1.54	1.69
		H_2S	0.01	0.01
9	Boiler No. 4	CO	1.05	3.51
		NO_x	3.95	13.22
		NH_3	0.64	2.17
		PM/PM_{10}	4.57	11.35

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AIR CONTAMINANTS DATA
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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY **
		SO_2	8.11	10.36
		H_2SO_4	1.99	2.54
		TRS	0.68	0.93
		VOC	1.43	4.88
		H_2S	0.03	0.11
9	Boiler No. 4 (8)	CO	25.62	1.43
		NO_x	57.95	3.25
		VOC	1.43	0.10
		PM	4.57	0.32
		SO_2	0.05	0.01
F-24	Boiler No. 4 Process Fugitives (4)	VOC	0.03	0.12
		H_2S	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.

(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
CO - carbon monoxide
PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

SO_2 - sulfur dioxide
COS - carbonyl sulfide
H_2S - hydrogen sulfide
H_2SO_4 - sulfuric acid
HCl - hydrochloric acid
NH_3 - ammonia
TRS - total reduced sulfur

(4) Emission rates are an estimate and enforceable through compliance with the applicable special condition(s) and permit application representations.
(5) Only pilot emissions are authorized for these combustion sources.
(6) The EPN 112 will be authorized for use as a process flare through September 2007. After that, only pilot emissions will be authorized for the flare, and the flare will no longer be included in the pollutant caps.
(7) Start-up, shutdown, and maintenance emissions associated with the hydrogen unit are authorized.
(8) Start-up and shutdown emissions for periods not to exceed 144 hours on a rolling 12-month basis only.
(9) Maintenance startup and shutdown emissions are based on 12 hours of startup time on a rolling 12-month basis.

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

_24_ Hrs/day _7_ Days/week _52_ Weeks/year or _____ Hrs/year

** Compliance with annual emission limits is based on a calendar year basis for the first eight years after this permit was issued, and a rolling 12-month basis thereafter.

Dated November 17, 2008