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	Source	Air Contaminant	Emission Rates *	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
VOC Cap:				
Flare 112 (7), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, Cooling Towers (4), Fugitive Emissions (4), Loading Racks, Fixed Roof Tanks, Floating Roof Tanks, and Carbon Canister Systems				
		Initial VOC Cap	697	1114
		Final VOC Cap (6)	403	930
NO_x Cap:				
Flare 112 (7), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, and Thermal Combustors				
		Initial NO_x Cap	603	1346
		Final NO_x Cap (6)	205	535

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
CO Cap:				
Flare 112 (7), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, and Absorber				
		Initial CO Cap	266	613
		Final CO Cap (6)	171	479
PM Cap:				
Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, Thermal Combustors, and Solid Waste Loading				
		Initial PM Cap	53	99
		Final PM Cap (6)	53	99
SO_2 Cap:				
Flare 112 (7), Boilers, Furnaces, Heaters, Compressors, Incinerator, Thermal Oxidizer, FCCU/WGS, Fire Water Pump, and Thermal Combustors				
		Initial SO_2 Cap	227	521
		Final SO_2 Cap (6)	157	375
H_2S Cap:				

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
Flare 112 (7), 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				
		Initial H_2S Cap	3	6
		Final H_2S Cap (6)	2	4
<u>COS Cap:</u> Absorber				
		Initial COS Cap	1	5
		Final COS Cap (6)	1	5
<u>H_2SO_4 Cap:</u> FFCU/WGS				
		Initial H_2SO_4 Cap	4	18
		Final H_2SO_4 Cap (6)	4	18
<u>NH_3 Cap:</u> Carbon Canister EPN PK-854				
		Initial NH_3 Cap	0.01	0.06
		Final NH_3 Cap (6)	0.01	0.06
<u>HCl Cap:</u> pH Neutralization				

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		Initial HCl Cap	0.77	0.15
		Final HCl Cap (6)	0.10	0.02
Benzene Cap: 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, Fixed-Roof Tanks, Floating Roof Tanks, and Cooling Towers				
		Initial Benzene Cap	1.75	5.90
		Final Benzene Cap (6)	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 (8)	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 Incinerator (5)	VOC	0.01	0.04
		NO_x	0.23	0.67
		CO 0.08	0.24	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		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, 7)	NO_x	0.02	0.07
		CO	0.11	0.49
		SO_2	0.01	0.01
XF8301/2	Steam Reformer Heater F-8301	VOC	0.70	2.61
	Steam Reformer Heater F-8302	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
H2FUG	Hydrogen Plant Fugitives (4)	CO	0.01	0.06
		VOC	0.01	0.06
		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.

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(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
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.
CO - carbon monoxide
H_2S - hydrogen sulfide
HCl - hydrochloric acid
H_2SO_4 - sulfuric acid
COS - carbonyl sulfide
NH_3 - ammonia

(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 final caps will be implemented eight years after permit issuance.

(7) 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.

(8) Startup, shutdown, and maintenance emissions associated with the hydrogen unit are authorized.

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

** 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.

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

Dated ____June 23, 2006_____