

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 21878

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
1	Hyco-1 Reformer Furnace Stack	NO _x (5)	6.68	29.25
		NO _x (6)	11.75	51.44
		CO	4.59	20.10
		PM	0.68	2.96
		SO ₂	1.93	8.45
		VOC	0.19	0.83
VENT-11	Deaerator Vent	CO	0.85	3.70
PSA-FUG	Pressure Swing Adsorption (PSA) Unit Fugitives (4)	CO	0.95	4.20
7	HYCO-1 Flare	Upset or Maintenance Use Only		
12	HYCO-2 Flare	NO _x **	10.5**	23.0**
		CO**	17.6**	38.6**
12	HYCO-2 Flare	Upset or Maintenance Use Only		
A	Fired Gas Preheater A	NO _x	1.92	8.4
		PM	0.48	2.1
		SO ₂	0.46	2.0
		CO	1.15	5.1
		VOC	0.09	0.4
		Ammonia	0.007	0.03

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		Cyanide	0.0007	0.003
B	Fired Gas Preheater B	NO _x	1.92	8.4
		PM	0.48	2.1
		CO	1.15	5.1
		SO ₂	0.46	2.0
		VOC	0.09	0.4
		Ammonia	0.007	0.03
		Cyanide	0.0007	0.003
C	Auxiliary Boiler	NO _x (7)	6.00	26.3
		NO _x (8)	10.0	43.8
		PM	1.5	6.6
		SO ₂	1.43	6.3
		CO	3.60	15.8
		VOC	0.28	1.2
D	Warm Flare	NO _x	5.28	2.5
		CO	80.6	39.1
		SO ₂	1.05	0.11
E	Cold Flare	Upset or Maintenance Use Only		
F	Plant Fugitives (4)	CO	4.42	19.4
		VOC	0.28	1.2
G	Liquid Oxygen Vaporizer	NO _x (9)	2.04	
		NO _x	1.21	5.3
		PM	0.24	1.1
		SO ₂	0.23	1.0
		CO	0.55	2.4
		VOC	0.05	0.2
H	Wastewater Equalization Tank	VOC	0.002	0.007
		Cyanide	0.001	0.002
		Ammonia	0.020	0.088

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		CO	0.14	0.6
I	Temperature Swing Adsorption (TSA) Driers	CO	0.29	1.3
J	MEA Storage Tank (3)	VOC	0.02	0.07

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources use area name or fugitive source name.

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- (3) PM - particulate matter
 VOC - volatile organic compounds as defined in General Rule 101.1
 NO_x - total oxides of nitrogen
 SO₂ - sulfur dioxide
 CO - carbon monoxide
 MEA - monoethanolamine

- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Firing natural gas only.
- (6) Firing a combination of PSA purge gas and natural gas.
- (7) Firing natural gas or tail gas only.
- (8) Firing a combination of PSA purge gas and natural gas or tail gas.
- (9) Firing propane (Only used during upset or routine maintenance periods).

* Emission rates are based on 8,760 hrs/yr operation.

** These rates are permitted from May 1, 1996 through November 15, 1996 ONLY. This flare is limited to upset or maintenance use after November 15, 1996.

Dated_____