

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 18999

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**
104B	Waste Heat Boiler (Routine Operation)	NO _x	32.63	142.90
		CO	18.48	80.94
		VOC (5)	20.39	89.33
		SO ₂	6.95	30.44
		PM ₁₀	6.28	27.51
		NH ₃	13.07	57.25
		Ethylene	0.27	1.18
		Propylene	0.07	0.29
	Waste Heat Boiler (SSM Activities)	NO _x	5.78	1.30
		CO	1.13	0.25
		VOC	0.07	0.02
		SO ₂	0.28	0.06
		PM ₁₀	1.93	0.43
		NH ₃	13.07	0.31
		Ethylene	0.01	0.01
		Propylene	0.01	0.01
1-102B	Dryer Regenerator Heater	NO _x	1.59	3.48
		CO	1.41	3.09
		VOC (5)	0.05	0.11
		SO ₂	0.23	0.50
		PM ₁₀	0.11	0.25
		Ethylene	0.04	0.08
		Propylene	0.01	0.02

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

1-103B	Spare Regenerator Heater	NO _x	0.25	0.33
		CO	0.22	0.29
		VOC (5)	0.01	0.01
		SO ₂	0.04	0.05
		PM ₁₀	0.02	0.02
		Ethylene	0.01	0.01
		Propylene	0.01	0.01
B-4000	Propane Feed Heater	NO _x	2.56	11.21
		CO	19.20	84.10
		VOC (5)	0.96	4.20
		SO ₂	4.48	19.62
		PM ₁₀	2.24	9.81
		NH ₃	1.37	6.01
		Ethylene	0.74	3.22
		Propylene	0.16	0.68
2004-1	NCPI CAS	VOC (6)	0.01	0.01
2004-2	SCPI CAS	VOC (6)	1.55	3.27
2205-1	2200-F CAS	VOC (6)	0.40	0.83
2205-2	IGF CAS	VOC (6)	0.03	0.06
2101-1	SWCPI CAS	VOC (6)	0.01	0.01
2300-1	M-1003 and M-224 CAS	VOC (6)	0.38	0.54
2300-2	2300 Tanks CAS	VOC	0.01	0.01
M-222	Slop Oil Tank	VOC	0.31	0.26
M-223	Slop Oil Tank	VOC	0.31	0.26
1-105A	Main Flare (Routine Operation)	NO _x	170.78	0.79
		CO	883.21	5.69
		VOC	807.65	7.22
		SO ₂	46.36	0.01
		H ₂ S	0.49	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

	Main Flare (SSM Activities)	NO _x	87.70	11.50
		CO	447.00	58.60
		VOC	670.00	44.88
		SO ₂	24.00	2.77
		H ₂ S	0.27	0.02
TO-STK	RTO Stack (9) (Routine Operation)	NO _x	0.10	0.28
		CO	0.08	0.23
		VOC	0.13	0.48
		SO ₂	0.01	0.05
		PM ₁₀	0.15	0.58
	RTO Stack (9) (SSM Activities)	NO _x	0.10	0.01
		CO	0.08	0.01
		VOC	5.21	0.01
		SO ₂	0.01	0.01
		PM ₁₀	0.01	0.01
1-104BD	Auxiliary Boiler (227.5 MMBtu/hr, LHV)	NO _x (7) (PSD)	30.22	108.46
		CO (PSD)	21.18	76.04
		VOC	3.93	7.73
		SO ₂	0.15	0.54
		PM ₁₀ (PSD)	1.92	6.88
M-1002	Dripolene Tank	VOC	0.54	1.97
T-136A	Methanol Tank	VOC	1.89	0.08
T-136B	Methanol/Propanol Tank	VOC	1.21	0.04
F-1-101U	Main Cooling Tower	VOC	1.97	8.59
		PM ₁₀	0.01	0.01
F-2401-UL	Cold Box Cooling Tower	VOC	0.60	2.61
F-1-L4	Flare KO Pot Waste	VOC	0.57	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

LD-SLDGE	Loading CPI Sludge Loading	VOC	0.24	0.01
LD-TAR	Cracking Tar Loading	VOC	2.63	0.08
ENG-R	RTO Compressor	NO _x	2.43	10.62
		CO	0.24	2.12
		VOC	0.08	0.34
		SO ₂	0.49	0.99
		PM ₁₀	0.23	1.06
DC-TANK	Decoking Compressor Diesel Fuel Tank	VOC	0.06	0.01
TO-TANK	RTO Compressor Diesel Fuel Tank	VOC	0.06	0.01
185-F	Diesel Fuel Tank	VOC	0.02	0.01
187-F	Diesel Fuel Tank	VOC	0.02	0.01
ANA-VENT	Analyzer Vent	VOC (8)	0.24	0.01
V-1-L4	Propylene Truck Loading	VOC	0.24	0.40
V-2-L4	Propylene Rail Loading	VOC	0.12	0.03
267-F	Tank 267-F	VOC	0.02	0.01
M-102A	Wash Oil Tank	VOC	0.19	0.01
M-102B	Tank M-102B	VOC	0.26	0.01
137-F	Wash Oil Tank	VOC	0.01	0.01
179-F/797F	Diesel Tank	VOC	0.21	0.01
BLOW-VENT	Blow Down Vents (10)	VOC	4.94	0.98
F-1-GB	Wastewater Basins	VOC	6.75	1.23

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

MAINT-METER	Meter Calibration Vents	VOC	0.01	0.01
WW-FUG	WWU/RTO Fugitives	VOC (4)	0.13	0.56
PLANT	Fugitives	VOC (4) (11)	7.99	35.02
		Ethylene	0.03	0.13
		Propylene	5.44	23.83
		Butene	0.04	0.18
		1,3-Butadiene	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) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO₂ - sulfur dioxide
PM₁₀ - particulate matter equal to or less than 10 microns in diameter
NH₃ - ammonia
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (5) VOC includes HRVOC chemicals; ethylene and propylene.
- (6) Emissions vent to carbon canister when RTO is not in operation.
- (7) NO_x emission rate is based on the boiler firing plant fuel gas containing hydrogen.
- (8) Emissions for analyzer vents AT9056, AT9057, AT9058, AT9059, AT9090, and AT9095 are included in EPN ANA-VENT.
- (9) The following vents are routed to the RTO when the RTO is in operation: 2004-1, 2004-2, 2205-1, 2205-2, and 2300-1.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(10) The EPN BLOW-VENT (FINs 102C, 116J, 117J, 157F, and 210F) emissions represent normal operation values. Start-up, shutdown, and maintenance emissions are not authorized from this EPN.

(11) VOC includes HRVOC chemicals; ethylene, propylene, butane, and 1,3 butadiene.

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

___Hrs/day ___Days/week ____Weeks/year or 8,760 Hrs/year

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

Dated April 1, 2008