

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 3295

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
TK-1	Tank 1	VOC	0.22	0.96
TK-2	Tank 2	VOC	1.40	4.00
TK-4	Tank 4	VOC	0.66	2.89
TK-7	Tank 7	VOC	3.12	0.27
TK-8	Tank 8	NaOH	0.11	0.02
TK-9	Tank 9	NaHS	0.06	0.02
TK-11	Tank 11	VOC	0.69	0.41
TK-12	Tank 12	VOC	0.69	0.41
TK-13	Tank 13	VOC	0.69	0.41

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			lb/hr	TPY
TK-14	Tank 14	VOC	3.20	0.56
TK-40	Tank 40	VOC	0.36	1.56
TK-41	Tank 41	VOC	0.36	1.56
TK-48	Tank 48	VOC	0.42	1.83
TK-52	Tank 52	VOC	5.02	8.26
TK-54	Tank 54	VOC	0.99	4.30
TK-55	Tank 55	VOC	1.7	4.66
TK-56	Tank 56	VOC	1.2	3.53
TK-57	Tank 57	VOC	1.37	5.98
TK-61	Tank 61	VOC	1.37	5.87
TK-62	Tank 62	VOC	1.01	1.40
TK-63	Tank 63	VOC	0.65	0.94
TK-64	Tank 64	VOC	1.11	4.51
TK-65	Tank 65	VOC	0.12	1.49
TK-66	Tank 66	VOC	0.91	3.98
TK-67	Tank 67	NaOH	<0.01	<0.01
TK-68	Tank 68	NaHS	<0.01	<0.01
H-110	T-1- Reboiler	PM	<0.01	0.02
		SO ₂	<0.04	<0.01
		NO _x	0.20	0.88
		CO	0.05	0.22
		VOC	<0.01	0.02

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			lb/hr	TPY
H-2	Hex Treater Preheater	PM	<0.01	0.04
		SO ₂	0.08	<0.01
		NO _x	0.40	1.77
		CO	0.10	0.44
		VOC	<0.01	0.04
H-111	T-11 Reboiler	PM	<0.01	0.02
		SO ₂	0.04	<0.01
		NO _x	0.20	0.88
		CO	0.05	0.22
		VOC	<0.01	0.02
F-3/F-4	Aromatic Reactor Preheater	PM	<0.01	0.02
		SO ₂	0.05	<0.01
		NO _x	0.24	1.06
		CO	0.06	0.26
		VOC	<0.01	0.02
H-1	HDS Preheater	PM	0.04	0.15
		SO ₂	0.31	0.03
		NO _x	1.61	7.06
		CO	0.40	1.77
		VOC	0.03	0.14
H3	Hot Oil Heater	PM	0.04	0.20
		SO ₂	0.40	0.04
		NO _x	2.08	9.11
		CO	0.52	2.28
		VOC	0.04	0.18
B-1	Boiler	PM	0.04	0.18
		SO ₂	0.37	0.04
		NO _x	1.94	8.48
		CO	0.48	2.12
		VOC	0.04	0.17

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			lb/hr	TPY
H-108	T-3 Reboiler	PM	<0.01	0.02
		SO ₂	0.03	<0.01
		NO _x	0.16	0.71
		CO	0.04	0.18
		VOC	<0.01	0.01
H-105	T-17 Reboiler	PM	<0.01	0.02
		SO ₂	0.03	<0.01
		NO _x	0.16	0.71
		CO	0.04	0.18
		VOC	<0.01	0.01
H-107	T-9 Reboiler	PM	0.01	0.04
		SO ₂	0.07	0.01
		NO _x	0.37	1.62
		CO	0.09	0.41
		VOC	0.01	0.03
H-101	T-15 Reboiler	PM	0.06	0.28
		SO ₂	0.57	0.06
		NO _x	2.97	13.00
		CO	0.74	3.25
		VOC	0.07	0.29
H-102	T-16 Reboiler	PM	0.04	0.17
		SO ₂	0.34	0.03
		NO _x	1.78	7.77
		CO	0.44	1.94
		VOC	0.04	0.16
H-103	Hot Oil Heater	PM	0.04	0.17
		SO ₂	0.35	0.04
		NO _x	1.77	7.77
		CO	0.45	1.94
		VOC	0.04	0.16

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
RH-1	Reformer Reactor Preheater	PM	0.04	0.17
		SO ₂	0.35	0.04
		NO _x	1.84	8.05
		CO	0.46	2.01
		VOC	0.04	0.16
RH-2	Reformer Reactor Preheater	PM	0.03	0.12
		SO ₂	0.25	0.03
		NO _x	1.26	5.51
		CO	0.32	1.38
		VOC	0.03	0.11
RH-3	Reformer Reactor Preheater	PM	0.02	0.06
		SO ₂	0.13	0.02
		NO _x	0.65	2.83
		CO	0.16	0.71
		VOC	0.02	0.06
H-104	T-4 Reboiler	PM	0.02	0.08
		SO ₂	0.16	0.02
		NO _x	0.81	3.53
		CO	0.21	0.88
		VOC	0.02	0.07
F-1	Aromax Reactor Preheater	PM	0.04	0.15
		SO ₂	0.30	0.03
		NO _x	1.53	6.71
		CO	0.39	1.68
		VOC	0.04	0.13
H-106	T-8 Reboiler	PM	0.01	0.04
		SO ₂	0.08	0.01
		NO _x	0.41	1.77
		CO	0.11	0.44
		VOC	0.01	0.04

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
F-2	Aromax Reactor Preheater	PM	0.02	0.07
		SO ₂	0.13	0.02
		NO _x	0.65	2.83
		CO	0.17	0.71
		VOC	0.02	0.06
H-113	T-13 Reboiler	PM	0.04	0.15
		SO ₂	0.31	0.03
		NO _x	1.61	7.06
		CO	0.40	1.77
		VOC	0.03	0.14
H-109	Sieve Regeneration Heater	PM	<0.01	<0.01
		SO ₂	0.02	<0.01
		NO _x	0.08	0.35
		CO	0.02	0.09
		VOC	<0.01	0.01
F-10	Flare	NO _x	0.10	0.40
		CO	0.10	0.40
		VOC	0.95	0.61
DR-1	Drum Filling	VOC	1.60	0.40
FUG	Fugitives (4)	VOC	8.81	38.7

(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.

(3) VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not

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listed, it shall be
assumed that no PM
greater than 10 microns
is emitted.

CO - carbon monoxide
NaOH - sodium hydroxide

NaHS - sodium hydrosulfide

(4) Fugitive emissions are an estimate only and should not be considered as maximum allowable
emission
rates.

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

Hrs/day ____ Days/week ____ Weeks/year ____ or Hrs/year 8,760

Dated_____