

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**

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Permit Number 3956B

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.

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
ALL TUR	Existing (10) Turbines Solar Saturn T-1200 (T-1 through T-8, T-11, and T-12)	VOC	0.52	2.29
		NO _x	32.62	142.90
		CO	33.80	148.00
		SO ₂	3.94	17.26
		PM ₁₀	5.49	24.04
S-T13	New Turbine Solar Centaur T-4700	VOC	0.17	0.73
		NO _x	8.06	35.32
		CO	5.86	25.65
		SO ₂	1.44	6.32
		PM ₁₀	2.01	8.81
S-T14	New Turbine Solar Centaur T-4700	VOC	0.17	0.73
		NO _x	8.06	35.32
		CO	5.86	25.65
		SO ₂	1.44	6.32
		PM ₁₀	2.01	8.81

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			lb/hr	TPY**
H-1	Process Heater No. 1 (199 MMBtu/hr)	VOC	1.07	4.44
		NO _x	6.97	28.82
		CO	3.98	16.47
		SO ₂ (4)	13.15	59.80
		PM ₁₀	1.00	4.12
H-2	Process Heater No. 2 (199 MMBtu/hr)	VOC	1.07	4.44
		NO _x	6.97	28.82
		CO	3.98	16.47
		SO ₂ (4)	13.15	59.80
		PM ₁₀	1.00	4.12
H-3	Process Heater No. 3 (39 MMBtu/hr)	VOC	0.21	0.80
		NO _x	3.82	14.60
		CO	3.21	12.26
		SO ₂	0.11	0.43
		PM ₁₀	0.29	1.11
FL-1	Flare	VOC	42.86	10.98
		NO _x	9.77	15.50
		CO	19.51	57.34
		PM ₁₀	2.49	10.92
EFWN	Fire Water Engine (5)	VOC	0.34	0.08
		NO _x	4.22	1.05
		CO	0.91	0.23
		SO ₂	0.28	0.07
		PM	0.30	0.07
ESPNAOH	Spent Caustic Tank Vent	VOC	0.77	3.37
EHOTOIL	Hot Oil Storage Tank	VOC	0.01	0.01
EMEABG	Methy Di-Ethanol Amine Storage Tank	VOC	0.01	0.01

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			lb/hr	TPY**
EDEGBG	Di-Ethylene Glycol Storage Tank	VOC	0.01	0.01
EDEABG	Di-Ethanol Amine Storage Tank	VOC	0.01	0.01
EDSO	Di-Sulfide Oil Storage Tank	VOC	0.01	0.01
EMEROXI	Process Tank	VOC	0.02	0.10
EMINALK	Process Tank	VOC	0.02	0.10
EMEOH	Methanol Storage Tank	VOC	0.01	0.01
ETEGBG	Triethylene Glycol Storage Tank	VOC	0.01	0.01
EMOTOR	Unleaded Gasoline Tank	VOC	0.03	0.14
AMINE-FUG	Amine Area Fugitives (6)	VOC	0.03	0.14
STOR-FUG	Storage Area Fugitives (6)	VOC	0.28	1.21
DEBUT-FUG	Debutanizer Addition Fugitives (6)	VOC	0.08	0.33
PROC-FUG	Plant Process Fugitives (6)	VOC	0.82	3.58
		H ₂ S	0.04	0.14
TURBIN-FUG	New Turbine Fugitives (6) (T-13 and T-14)	VOC	0.77	3.37

(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 Title 30 Texas Administrative Code § 101.1 (30 TAC § 101.1)

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NO_x - total oxides of nitrogen

CO - carbon monoxide

SO₂ - sulfur dioxide

PM - particulate matter, suspended in the atmosphere, including PM₁₀.

PM₁₀ - 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.

H₂S - hydrogen sulfide

- (4) Short-term and annual SO₂ emissions are based on the assumption that all acid gas and Merox vent streams (including MINALK related vent streams) are routed to either Heater No.1 or Heater No.2. This is the worst case SO₂ emission scenario for each heater. If acid gas and Merox vent streams are split equally between Heaters H-1 and H-2, annual SO₂ emission rate from each heater will be a maximum of 29.90 TPY.

- (5) This engine is limited to 500 hours of operation per year.

- (6) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule except as specified in note (5):

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

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

Dated April 10, 2003