

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**

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
ALLTUR	10 Turbines and 1 spare Solar Saturn T-1200 (T-1 through T-8, T-11, and T-12)	VOC	0.52	2.29
		NO _x	32.62	142.87
		CO	33.80	148.04
		SO ₂	3.94	17.26
		PM ₁₀	5.49	24.04
S-T13	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	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

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**
E-1E, E-1M, and E-1W	Heater H-1 (199 MMBtu/hr)	VOC	1.07	4.44
		NO _x	6.97	28.82
		CO	3.98	16.47
		SO ₂ (4)	13.72	32.25
		PM ₁₀	1.00	4.12
E-2E, E-2M, and E-2W	Heater H-2 (199 MMBtu/hr)	VOC	1.07	4.44
		NO _x	6.97	28.82
		CO	3.98	16.47
		SO ₂ (4)	13.72	32.25
		PM ₁₀	1.00	4.12
E-3E, E-3W	Heater H-3 (39 MMBtu/hr)	VOC	0.21	0.80
		NO _x	3.82	14.60
		CO	3.21	12.26
		SO ₂	0.22	0.85
		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
		SO ₂	0.15	
		PM ₁₀	2.49	10.92
EFWN and EFWS	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
SV-1	Tank SV-1	VOC	0.96	0.12
SV-3	Tank SV-3	VOC	0.03	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY**</u>
SV-4	Tank SV-4	VOC	4.80	4.33
SV-5	Tank SV-5	VOC	10.14	0.06
SV-7	Tank SV-7	VOC	0.13	0.01
SV-26	Tank SV-26	VOC	12.60	0.49
SV-41	Tank SV-41	VOC	0.09	0.01
SV-50	Tank SV-50	VOC	4.80	2.70
SV-51	Tank SV-51	VOC	0.96	0.14
SV-56	Tank SV-56	VOC	0.02	0.01
SV-58	Tank SV-58	VOC	0.01	0.01
SV-59	Tank SV-59	VOC	0.01	0.01
SV-60	Tank SV-60	VOC	0.01	0.01
LOAD	Loading	VOC	0.11	0.01
CAN-DEGASS	Aerosol Can Degassing Unit	VOC	0.25	0.10
DEGREASE	Degreasing Unit	VOC	0.04	0.19
CT-1	Cooling Tower 1	VOC	1.68	7.36
		PM/PM ₁₀	0.99	4.34
CT-2	Cooling Tower 2	VOC	1.26	5.52
		PM/PM ₁₀	1.24	5.43

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY**</u>
CT-3	Cooling Tower 3	VOC	1.03	4.49
		PM/PM ₁₀	1.57	6.88
ETEG-1	TEG Still Vent No. 1	VOC	1.35	5.93
ETEG-2	TEG Still Vent No. 2	VOC	0.39	1.73
OILVT-1	Lube Oil Vent No. 1	VOC	0.08	0.35
OILVT-2	Lube Oil Vent No. 2	VOC	0.08	0.35
OILVT-3	Lube Oil Vent No. 3	VOC	0.08	0.35
OILVT-4	Lube Oil Vent No. 4	VOC	0.08	0.35
OILVT-5	Lube Oil Vent No. 5	VOC	0.08	0.35
OILVT-6	Lube Oil Vent No. 6	VOC	0.08	0.35
OILVT-7	Lube Oil Vent No. 7	VOC	0.08	0.35
OILVT-8	Lube Oil Vent No. 8	VOC	0.08	0.35
OILVT-11	Lube Oil Vent No. 11	VOC	0.08	0.35
OILVT-12	Lube Oil Vent No. 12	VOC	0.08	0.35
OILVT-13	Lube Oil Vent No. 13	VOC	0.08	0.35
OILVT-14	Lube Oil Vent No. 14	VOC	0.08	0.35
EG-1	Emergency Generator (6)	NO _x	0.43	0.18
		CO	0.70	0.30
		VOC	0.01	0.01
		SO ₂	0.01	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

		PM/PM ₁₀	0.01	0.01
PLANT-FUG	Plant Fugitives (7)	VOC	6.03	26.42

- (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
 - 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 32.25 tpy.
- (5) This engine is limited to 500 hours of operation per year.
- (6) Maximum operating hours for the emergency generator will not exceed 10 percent (876 hours) of the normal 8,760 hour annual operating time.
- (7) Plant fugitives include Amine Area, Storage Area, Debutanizer, Turbine, and Plant Process fugitives. The fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- * 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 August 12, 2003