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, sources, and related activities. 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	
			lbs/hour	TPY (10)
ALLTUR	10 Turbines and 1 Spare Solar Saturn T-1200 (T-1 through T-8, T-11,and T-12)	CO	33. 80	148.04
		NO_x	32.62	142.87
		PM_{10}	5.49	24.04
		SO_2	3.94	17.26
		VOC	0.52	2.29
CAN-DEGASS	Aerosol Can Degassing Unit	VOC	0.25	0.10
CT-1	Cooling Tower 1	PM/PM_{10}	0.99	4.34
		VOC (8)	1.68	7.36
CT-2	Cooling Tower 2	PM/PM_{10}	1.24	5.43
		VOC (8)	1.26	5.52
CT-3	Cooling Tower 3	PM/PM_{10}	1.57	6.88
		VOC (8)	1.03	4.49
DEGREASE	Degreasing Unit	VOC	0.04	0.19
E-1E, E-1M, and E-1W	Heater H-1 (199 MMBtu/hr)	CO	50.00	16.47
		CO (9)	128.00	—
		NO_x	6.97	28.82
		NO_x (9)	8.60	—
		PM_{10}	1.00	4.12
		SO_2 (4)	8.92	38.78
		VOC	1.07	4.44

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E-2E, E-2M, and E-2W	Heater H-2 (188 MMBtu/hr)	CO	50.00	16.47
		CO (9)	128.00	—
		NO_x	6.97	28.82
		NO_x (9)	8.60	—
		PM_{10}	1.00	4.12
		SO_2 (4)	8.92	38.78
		VOC	1.07	4.44
E-3E and E-3W	Heater H-3 (39 MMBtu/hr)	CO	3.21	12.26
		NO_x	3.82	14.60
		PM_{10}	0.29	1.11
		SO_2	0.22	0.85
		VOC	0.21	0.80
EG-1	Emergency Generator (6)	CO	0.70	0.30
		NO_x	0.43	0.18
		PM_{10}	0.01	0.01
		SO_2	0.01	0.01
		VOC	0.01	0.01
EG-2	Emergency Generator (6)	CO	0.61	0.27
		NO_x	0.36	0.16
		PM_{10}	0.01	0.01
		SO_2	0.01	0.01
		VOC	0.01	0.01
		Formaldehyde	0.01	0.01
ETEG-1	TEG Still Vent No. 1	VOC	1.35	5.93
ETEG-2	TEG Still Vent No. 2	VOC	0.39	1.73

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FL-1	Flare (Normal Operation Only)	CO	9.57	0.76
		NO_x	4.79	0.38
		SO_2	0.01	0.01
		VOC	20.00	0.15
FW-2	Fire Water Engine (5)	CO	3.07	0.31
		NO_x	14.30	1.43
		PM_{10}	1.01	0.10
		SO_2	0.33	0.03
		VOC	1.16	0.12
LOAD	Loading	VOC	1.57	0.02
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
S-T13	Turbine Solar Centaur T-4700	CO	5.86	25.65
		NO_x	8.06	35.32
		PM_{10}	2.01	8.81

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		SO_2	1.44	6.32
		VOC	0.17	0.73
S-T14	Turbine Solar Centaur T-4700	CO	5.86	25.65
		NO_x	8.06	35.32
		PM_{10}	2.01	8.81
		SO_2	1.44	6.32
		VOC	0.17	0.73
SV-1	Tank SV-1	VOC	0.96	0.12
SV-3	Tank SV-3	VOC	0.03	0.01
SV-4	Tank SV-4	VOC	4.80	4.33
SV-5	Tank SV-5	VOC	10.14	0.01
SV-7	Tank SV-7	VOC	0.01	0.01
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	0.01	0.01
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
PLANT-FUG	Plant Process Fugitives (7) (8)	VOC	7.01	30.69
MSS-FL01	Maintenance Startup,Shutdown (MSS) Flaring	VOC	1,614.13	8.78
		NO_x	434.93	2.24
		CO	868.28	4.85
		SO_2	3.91	0.02
MSS-FUG	MSS-Degassing to Atm. (8)	VOC	196.27	0.45
MSS-FUG	MSS-Frac Tank emissions to Atm. (8)	VOC	0.02	0.01
MSS-FUG	MSS-Vacuum Truck Loading Emissions to	VOC	2.65	0.07

Emission Sources - Maximum Allowable Emission Rates

	Atm. (8)			

(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) CO - carbon monoxide
NO_x - total oxides of nitrogen
PM - particulate matter, suspended in the atmosphere, including PM_{10}
PM_{10} - 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.
SO_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code §101.1
(4) Short-term and annual SO_2 emissions are based on the assumption that all acid gas and Merox vent streams (including MINALK related vent streams) are routed to either Heater Nos. 1 or 2. This is the worst case SO_2 emission scenario for each heater and SO_2 emission rate from each heater can not emit at the same time from Heater Nos. H-1 and H-2.
(5) This engine is limited to 200 hours of operation per year.
(6) Maximum operating hours for the emergency generators 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.
(8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(9) Emissions that are authorized for transient periods as described under Special Condition No.7(B).
(10) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

Dated November 19, 2015