EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 46307

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**
EP-5	Plant Flare	VOC	194.00	124.88
		NO_x	29.29	11.52
		SO_2	0.01	0.01
		CO	149.24	58.69
		BD (7)	-----	4.42
EP-H21	No. 1 Dehydro Alcorn Heater	VOC	0.86	3.78
		NO_x	9.60	42.05
		SO_2	0.09	0.41
		PM	1.19	5.22
		CO	13.18	57.71
EP-1B905	Off Gas Incinerators	VOC	2.97	13.04
	1. Air Heater 1B-902	NO_x (6)	74.41	325.90
	2. No. 1 Dehydro Reactor 1B-905		SO_2 1.87	0.42
	3. Generator Turbine 1G-905	PM	4.20	18.41
	4. Generator Turbine 1G-906	CO	28.50	62.40
EP-4	OXO Incinerator/Boiler	VOC	0.86	3.78
		NO_x	32.94	144.28
		NO_x (5)	9.60	42.05
		SO_2	0.09	0.41
		PM	1.19	5.22
		CO	13.18	57.71
EP-H10	No. 1 Butylene Heater	VOC	0.30	1.30
		NO_x	5.15	22.57
		NO_x (5)	3.30	14.45
		SO_2	0.03	0.14
		PM	0.41	1.79
		CO	4.53	19.84

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
EP-H11	No. 1 C.E. Steam Superheater	VOC	0.51	2.24
		NO_x	15.55	68.11
		SO_2	0.06	0.24
		NO_x (5)	5.70	24.97
		PM	0.71	3.10
		CO	7.82	34.27
EP-H13	No. 2 OXO Butylene Heater	VOC	0.30	1.30
		NO_x	6.40	28.02
		NO_x (5)	3.30	14.45
		SO_2	0.03	0.14
		PM	0.41	1.79
		CO	4.53	19.84
EP-H14	No. 2 C.E. Steam Superheater	VOC	0.51	2.24
		NO_x	22.79	99.80
		NO_x (5)	5.70	24.97
		SO_2	0.06	0.24
		PM	0.71	3.10
		CO	7.82	34.27
12DG-15	Boilerhouse Emergency Generator	VOC	0.12	0.05
		NO_x	12.87	5.47
		SO_2	0.85	0.36
		PM	0.91	0.39
		CO	2.77	1.18
3DG-14	OXO Emergency Generator	VOC	0.04	0.02
		NO_x	4.62	1.96
		SO_2	0.31	0.13
		PM	0.33	0.14
		CO	1.00	0.42
20G-437	Dock Pump Engine 20G-437	VOC	0.06	0.03

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		NO_x	1.13	0.48
		SO_2	0.72	0.31
		PM	0.11	0.05
		CO	0.28	0.12
31G-2350	Diesel Water Blaster Engine	VOC	0.75	0.78
		NO_x	3.04	3.16
		SO_2	0.01	0.01
		PM	0.10	0.10
		CO	1.72	1.79
F-CT-1	Cooling Tower CT-1	VOC	50.40	22.08
F-CT-10	Cooling Tower CT-10	VOC	10.00	1.47
F-CT-11	Cooling Tower CT-11	VOC	10.00	0.55
F-CT-14	Cooling Tower CT-14	VOC	23.50	10.30
F-CT-3	Cooling Tower CT-3	VOC	24.40	10.67
F-CT-7	Cooling Tower CT-7	VOC	10.00	2.76
	Combined Cooling Towers CT-1 through CT-14 (8)	BD	-----	2.59
CAT-TFR	Catalyst Transfer Hopper	PM	0.01	0.01
CAT-BH	Catalyst Baghouse	PM	0.01	0.01
F-TTR	Truck Rack Loading Facility	VOC	6.47	0.26
T-32	No. 32 Tank	VOC	0.08	0.01
T-33	No. 33 Tank	VOC	0.58	0.01
T-34	No. 34 Tank	VOC	0.29	0.02

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
T-69-1	No. 69-1 Tank	VOC	0.29	<0.01
T-81	No. 81 Tank	VOC	0.58	0.05
T-82	No. 82 Tank	VOC	1.13	0.07
T-83	No. 83 Tank	VOC	1.13	0.04
T-84	No. 84 Tank	VOC	0.29	0.02
T-85	No. 85 Tank	VOC	0.29	0.01
T-86	No. 86 Tank	VOC	0.58	0.02
T-155	TEA Storage Tank	VOC	0.01	0.01
F-10A	Oil Separation	VOC	0.17	0.76
1A	Isomerization Unit- Fugitives (4)	VOC	2.70	11.83
1B	Hydrogenation Unit - Fugitives (4)	VOC	0.08	0.35
1C	Dimethyl Formamide Unit Fugitives (4)	VOC	10.15	44.48
1D	Diiso Unit - Fugitives (4)	VOC	2.91	12.72
2A	Fugitive Area No. 2 (4)	VOC	5.10	22.35
2B	Fugitive Area No. 2B (4)	VOC	2.30	10.08
FUG-2C	Tank Car Loading Fugitives (4)	VOC	1.38	6.06
FUG-2D	Truck Rack Loading Fugitives (4)	VOC	0.41	1.80
FUG-3	Fugitive Area No. 3 (4)	VOC	6.18	27.05
FUG-4	Fugitive Area No. 4 (4)	VOC	4.61	20.18

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
FUG-5	Fugitive Area No. 5 (4)	VOC	0.10	0.45
L-5	Ship and Barge Loading Dock Fugitives (4)	VOC	0.26	1.13

(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) BD - 1,3 butadiene
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 particulate matter 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) Emission rate is an estimate and is only enforceable through compliance with the applicable special condition(s) and permit application representations.
(5) This is the emission rate for NO_x once the emission control is installed no later than March 1, 2007.
(6) This is the emission rate for NO_x once the emission control is installed no later than March 1, 2008.
(7) Annual emissions of BD are limited as indicated. The VOC emission rate from the Plant Flare includes BD.
(8) The annual emissions of BD from all the cooling towers are limited as indicated. The VOC emission rate of each cooling tower includes BD. While short-term BD emission rates are not established, the hourly VOC emission rate of each cooling tower establishes a maximum BD short-term rate.

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

24 Hrs/day 7 Days/week 52 Weeks/year or ___ Hrs/year

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

Date November 23, 2009