Emission Sources - Maximum Allowable Emission Rates

Permit Number 19168/PSDTX760M8

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 (4)
Olefins I Unit				
1001	Pyrolysis Furnace	CO	12.23	35.97
		CO MSS (8)	47.23	-
		NO_x	31.03	132.73
		NO_x MSS (8)	34.03	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	4.69	12.43
1002	Pyrolysis Furnace	CO	12.23	35.97
		CO MSS (8)	47.23	-
		NO_x	31.03	132.73
		NO_x MSS (8)	34.03	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	4.69	12.43
1003	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16

Emission Sources - Maximum Allowable Emission Rates

		SO_2	0.38	1.66
		VOC	2.67	11.69
1004	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1005	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1006	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1007	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-

Emission Sources - Maximum Allowable Emission Rates

		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1008	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1009	Decoke Drum (6)	CO	153.20	27.04
		PM/PM_{10}	14.10	2.48
		VOC	0.03	0.01
1009B	Pyrolysis Furnace	CO	8.20	35.92
		CO MSS (8)	43.20	-
		NO_x	30.30	132.71
		NO_x MSS (8)	33.30	-
		PM_{10}	3.69	16.16
		SO_2	0.38	1.66
		VOC	2.67	11.69
1010B	Pyrolysis Furnace	CO	8.75	28.47
		CO MSS (8)	43.75	-
		NO_x	18.75	65.70

Emission Sources - Maximum Allowable Emission Rates

		NO_x MSS (8)	21.75	-
		PM_{10}	3.96	17.34
		SO_2	0.41	1.78
		VOC	2.31	10.13
1001-1008, 1009B, 1010B	Pyrolysis Furnace Cap	CO MSS	-	19.40
		NO_x MSS	-	-
1010	Cooling Tower	VOC	5.46	23.92
1011	CPI Oil/Water Separator	VOC	2.76	12.09
1012	MAPD Regenerator 3418F	CO	7.58	0.03
		VOC	0.24	0.01
1018	Olefins 1 Flare (7)	CO	14.41	61.83
		CO MSS	6221.16	155.46 (9)
		NO_x	2.77	12.13
		NO_x MSS	861.34	21.82 (9)
		SO_2	0.10	0.05
		VOC	3.96	13.30
		VOC MSS	765.51	155.07 (9)
1020	Naphtha Tank 6401F	VOC	5.99	25.80
1028	Olefins 1 Fugitives (5)	VOC	28.04	122.83
OL1-MAINT	Olefins 1 Process MSS	VOC MSS	258.12	4.10
1048	Stormwater Filter Backwash Tank 7408F	VOC	1.18	0.03
1050	H_2SO_4 Tank	H_2SO_4	0.58	0.01
1051	Olefins 1 Tank Flare	CO	9.84	23.77
		CO MSS	-	0.01

Emission Sources - Maximum Allowable Emission Rates

		NO_x	1.93	5.97
		NO_x MSS	-	0.02
		SO_2	0.02	0.05
		VOC	0.40	1.23
		VOC MSS	6.73	0.30
7900LJD	Diesel Emergency Generator (52 hours per rolling 12-months)	CO	0.44	0.01
		NO_x	13.40	0.35
		PM_{10}	0.50	0.01
		SO_2	2.79	0.07
		VOC	0.08	0.01
7900LJDF	Diesel Storage Tank	VOC	0.06	0.01
PGCLUBE	Lube Oil Reservoir	VOC	0.21	0.01
PRCERCLUBE	Lube Oil Reservoir	VOC	0.16	0.01
3602J1/J2L	Lube Oil Reservoir	VOC	0.21	0.01
PGCSEAL	Seal Oil Reservoir	VOC	0.21	0.01
PRCERCSEAL	Seal Oil Reservoir	VOC	0.21	0.01
2412FCC	Sump Carbon Canister	VOC	0.01	0.01
C29600	Additive Tank	VOC	1.94	0.01
C29601	Additive Tank	VOC	2.01	0.01
N83070	Additive Tank	VOC	0.05	0.01
N83071	Additive Tank	VOC	0.06	0.01
N79134	Additive Tank	VOC	6.08	0.01
Olefins II Unit				
1054	Pyrolysis Furnace	CO	12.57	-
		CO MSS (8)	47.57	-

Emission Sources - Maximum Allowable Emission Rates

		NO_x	20.02	-
		NO_x MSS (8)	23.02	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	4.82	-
1055	Pyrolysis Furnace	CO	12.57	-
		CO MSS (8)	47.57	-
		NO_x	20.02	-
		NO_x MSS (8)	23.02	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	4.82	-
1056	Pyrolysis Furnace	CO	12.57	-
		CO MSS (8)	47.57	-
		NO_x	20.02	-
		NO_x MSS (8)	23.02	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	4.82	-
1057	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-

Emission Sources - Maximum Allowable Emission Rates

		VOC	2.80	-
1058	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1059	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1060	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1061	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-

Emission Sources - Maximum Allowable Emission Rates

		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1062	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1091	Pyrolysis Furnace	CO	8.54	-
		CO MSS (8)	43.54	-
		NO_x	19.29	-
		NO_x MSS (8)	22.29	-
		PM_{10}	3.86	-
		SO_2	0.40	-
		VOC	2.80	-
1054-1062, 1091	Pyrolysis Furnaces Annual Caps	CO	-	319.07
		NO_x	-	720.58
		PM_{10}	-	144.32
		SO_2	-	14.81
		VOC	-	106.66
N1011	Pyrolysis Furnace	CO	8.75	28.47

Emission Sources - Maximum Allowable Emission Rates

		CO MSS (8)	43.75	-
		NO_x	18.75	65.70
		NO_x MSS (8)	21.75	-
		PM_{10}	3.96	17.34
		SO_2	0.41	1.78
		VOC	2.31	10.13
N1012	Pyrolysis Furnace	CO	8.75	28.47
		CO MSS (8)	43.75	-
		NO_x	18.75	65.70
		NO_x MSS (8)	21.75	-
		PM_{10}	3.96	17.34
		SO_2	0.41	1.78
		VOC	2.31	10.13
1054-1062, 1091, N1011, N1013	Pyrolysis Furnace Cap	CO MSS	-	12.90
		NO_x MSS	-	-
1063	Decoke Drum (6)	CO	167.90	34.69
		PM/PM_{10}	15.42	3.18
		VOC	0.03	0.01
1064	Cooling Tower	VOC	5.28	23.15
1065	CPI Oil/Water Separator	VOC	2.76	12.09
1066	MAPD Regenerator	CO	7.58	0.03
		VOC	0.24	0.01
1067	Olefins 2 Flare	CO	22.39	98.09
		CO MSS	6221.16	155.46 (9)
		NO_x	4.40	19.25

Emission Sources - Maximum Allowable Emission Rates

		NO_x MSS	861.34	21.82 (9)
		SO_2	0.02	0.11
		VOC	7.55	14.90
		VOC MSS	761.65	155.07 (9)
1068	Olefins 2 Fugitives (5)	VOC	27.28	119.47
OL2-MAINT	Olefins 2 Process MSS	VOC MSS	237.61	2.40
1085	Fuel Oil Tank N6499FA	VOC	0.83	0.49
1086	Fuel Oil Tank N6499FB	VOC	0.83	0.49
1087	Olefins 2 Tank Flare	CO	12.48	8.70
		CO MSS	16.08	0.39
		NO_x	1.46	6.35
		NO_x MSS	3.12	0.08
		SO_2	0.02	0.08
		VOC	0.26	0.66
		VOC MSS	45.90	1.13
1088	Wash Oil Day Tank 2410F	VOC	0.91	0.09
1089	Stormwater Recycle Tank N7408F	VOC	1.18	0.03
1090	H_2SO_4 Tank	H_2SO_4	0.58	0.01
N7900LJD	Diesel Emergency Generator (52 hours per rolling 12-months)	CO	4.16	0.11
		NO_x	9.13	0.24
		PM_{10}	0.58	0.02
		SO_2	1.85	0.05
		VOC	0.10	0.01
NPGCLUBE	Lube Oil Reservoir	VOC	0.21	0.01

Emission Sources - Maximum Allowable Emission Rates

NPRCERCLUB	Lube Oil Reservoir	VOC	0.16	0.01
N3602JLUBE	Lube Oil Reservoir	VOC	0.21	0.01
NPGCSEAL	Seal Oil Reservoir	VOC	0.21	0.01
N2412FCC	Sump Carbon Canister	VOC	0.01	0.01
N5704LF3CC	Zimpro Carbon Canister	VOC	0.04	0.01
N7460LFCC	Polymer Inhibitor Tank Carbon Canister	VOC	0.01	0.01
N920766	Additive Tank	VOC	1.94	0.01
N920425	Additive Tank	VOC	2.01	0.01
N1705L2F	Additive Tank	VOC	0.22	0.01
N1705L5F	Additive Tank	VOC	0.22	0.01
Gasoline Hydrotreater Unit				
8001B	Regeneration Heater (1,000 hours per year)	CO	1.92	0.96
		NO_x	0.66	0.33
		PM_{10}	0.17	0.09
		SO_2	0.02	0.01
		VOC	0.13	0.07
8002B	Second Stage Feed Heater	CO	0.70	3.09
		NO_x	0.24	1.05
		PM_{10}	0.06	0.28
		SO_2	0.01	0.01
		VOC	0.05	0.20
8003B	GHU Flare	CO	9.07	26.71
		CO MSS	6.58	0.37
		NO_x	2.28	6.71

Emission Sources - Maximum Allowable Emission Rates

		NO_x MSS	1.28	0.07
		SO_2	0.01	0.02
		VOC	3.43	10.09
		VOC MSS	18.78	1.07
8801U	Cooling Tower	VOC	1.32	5.79
8801F	Process Fugitives (5)	VOC	1.00	4.38
Propylene Purification Unit				
PPUFUG-1	Unloading Station Fugitives (5)	VOC	0.23	1.01
PPUFUG-2	Process Fugitives (5)	VOC	9.24	40.46
PPUFUG-3	Storage Spheres Fugitives (5)	VOC	2.12	9.26
PPULUBE	Lube Oil Reservoir	VOC	0.01	0.01
West Metering Station				
WMS-1	UCC West Metering Station Analyzer Purge	VOC	0.25	1.10
Natural Gas Liquids Fractionation Unit				
FRACII-FUG	Process Fugitives (5)	VOC	1.32	5.80
FRACII-CT	Cooling Tower	VOC	1.50	6.58
		PM	0.75	3.29
		PM_{10}	0.42	1.83
		$PM_{2.5}$	0.01	0.01
FRACII-VO	Vessel Opening	VOC MSS	3.02	0.10
1067	Olefins 2 Flare FRACII Sources Normal Operation	CO	0.66	2.88
		NO_x	0.09	0.40
		SO_2	0.01	0.01
		VOC	0.05	0.23

Emission Sources - Maximum Allowable Emission Rates

1067	Olefins 2 Flare FRACII Sources Startup/Shutdown	CO MSS	4.79	0.36
		NO_x MSS	0.66	0.05
		SO_2 MSS	0.01	0.01
		VOC MSS	8.19	0.61
1067	Olefins 2 Flare FRACII Sources Flare Purging MSS	CO MSS	4.29	0.70
		NO_x MSS	0.59	0.10
		SO_2 MSS	0.01	0.01
		VOC MSS	8.67	1.56

(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 - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$
$PM_{2.5}$ - total particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
H_2SO_4 - sulfuric acid (98 percent)
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) No more than 6 pyrolysis furnaces shall be decoked at any one time: two furnaces to decoke drum EPN 1009, two furnaces to decoke drum EPN 1063, and two furnaces to either decoke drum EPN 1009 or to decoke drum EPN 1063.
(7) Only one flare may be used to control startup emissions at one time.
(8) Only two pyrolysis furnaces may emit at these maximum lb/hr CO and NO_x allowable emission rates simultaneously.
(9) TPY allowable emission rates for CO, NO_x and VOC MSS reflect combined cap for flares 1018 and 1067.

Date: July 3, 2013