Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 155952 and PSDTX1556

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 (5)	TPY (4)(5)
Cracking Furnaces				
10-H-1100	Ethylene Cracking Furnace No. 10-H-1100	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
10-H-1200	Ethylene Cracking Furnace No. 10-H-1200	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-
10-H-1300	Ethylene Cracking Furnace No. 10-H-1300	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
10-H-1400	Ethylene Cracking Furnace No. 10-H-1400	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-
10-H-1500	Ethylene Cracking Furnace No. 10-H-1500	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
10-H-1600	Ethylene Cracking Furnace No. 10-H-1600	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-
10-H-1700	Ethylene Cracking Furnace No. 10-H-1700	NO_x	12.35	-
		NO_X (MSS)	37.04	-
		CO	30.07	-
		CO (MSS)	240.59	-
		VOC	4.44	-
		PM	6.13	-
		PM (MSS)	12.27	-
		PM_{10}	6.13	-
		PM_{10} (MSS)	12.27	-
		$PM_{2.5}$	6.13	-
		$PM_{2.5}$ (MSS)	12.27	-
		SO_2	4.61	-
		NH_3	3.65	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
FURNCAP	Ethylene Cracking Furnace Annual CAP	NO_x	-	214.53
		CO	-	783.17
		VOC	-	115.68
		PM	-	159.85
		PM_{10}	-	159.85
		$PM_{2.5}$	-	159.85
		SO_2	-	120.19
		NH_3	-	95.17
Steam Boilers				
50-X-5201A	Steam Boiler No. 50-X-5201A	NO_x	11.48	-
		NO_X (MSS)	34.43	
		CO	27.94	-
		CO (MSS)	223.53	
		VOC	4.13	-
		PM	5.70	-
		PM_{10}	5.70	-
		$PM_{2.5}$	5.70	-
		SO_2	4.29	-
		NH_3	3.39	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
50-X-5201B	Steam Boiler No. 50-X-5201B	NO_x	11.48	-
		NO_X (MSS)	34.43	
		CO	27.92	-
		CO (MSS)	223.53	
		VOC	4.13	-
		PM	5.70	-
		PM_{10}	5.70	-
		$PM_{2.5}$	5.70	-
		SO_2	4.29	-
		NH_3	3.39	-
50-X-5201C	Steam Boiler No. 50-X-5201C	NO_x	11.48	-
		NO_X (MSS)	34.43	
		CO	27.92	-
		CO (MSS)	223.53	
		VOC	4.13	-
		PM	5.70	-
		PM_{10}	5.70	-
		$PM_{2.5}$	5.70	-
		SO_2	4.29	-
		NH_3	3.39	-
BLRCAP	Steam Boiler Annual CAP	NO_x	-	50.26
		CO	-	183.43
		VOC	-	27.10
		PM	-	37.45
		PM_{10}	-	37.45
		$PM_{2.5}$	-	37.45
		SO_2	-	28.16
		NH_3	-	22.29

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
Heaters				
50-H7003A	Catalyst Activator Heater No. 50-H-7003A	NO_x	0.24	-
		NO_X (MSS)	0.39	
		CO	0.22	-
		CO (MSS)	1.75	
		VOC	0.03	-
		PM	0.04	-
		PM_{10}	0.04	-
		$PM_{2.5}$	0.04	-
		SO_2	0.03	-
50-H7003B	Catalyst Activator Heater No. 50-H-7003B	NO_x	0.24	-
		NO_X (MSS)	0.39	
		CO	0.22	-
		CO (MSS)	1.75	
		VOC	0.03	-
		PM	0.04	-
		PM_{10}	0.04	-
		$PM_{2.5}$	0.04	-
		SO_2	0.03	-
50-H7003C	Catalyst Activator Heater No. 50-H-7003C	NO_x	0.24	-
		NO_X (MSS)	0.39	
		CO	0.22	-
		CO (MSS)	1.75	
		VOC	0.03	-
		PM	0.04	-
		PM_{10}	0.04	-
		$PM_{2.5}$	0.04	-
		SO_2	0.03	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
CATACTCAP	Catalyst Activator Heater Annual CAP	NO_x	-	3.15
		CO	-	2.88
		VOC	-	0.43
		PM	-	0.59
		PM_{10}	-	0.59
		$PM_{2.5}$	-	0.59
		SO_2	-	0.44
Flares and Thermal Oxidizers (TO)				
10-XF-9001	Unit 10 Flare	NO_x	49.58	-
		NO_x (MSS)	5,342.05	-
		CO	197.47	-
		CO (MSS)	9,709.93	-
		VOC	47.94	-
		VOC (MSS)	5,817.85	-
		SO_2	5.25	-
		H_2S	0.06	-
20-XF-9101	Unit 20 Flare	NO_x	16.41	-
		NO_x (MSS)	119.17	-
		CO	65.36	-
		CO (MSS)	474.59	-
		VOC	22.89	-
		VOC (MSS)	761.29	-
		SO_2	1.27	-
		H_2S	0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
21-XF-9102	Unit 21 Flare	NO_x	16.41	-
		NO_x (MSS)	119.17	-
		CO	65.36	-
		CO (MSS)	474.59	-
		VOC	22.89	-
		VOC (MSS)	761.29	-
		SO_2	1.27	-
		H_2S	0.01	-
20-Z-8080	Unit 20 Extruder Hopper Vent TO	NO_x	0.35	-
		CO	0.35	-
		VOC	0.08	0.35
		SO_2	0.03	-
		H_2S	<0.01	
21-Z-8081	Unit 21 Extruder Hopper Vent TO	NO_x	0.35	-
		CO	0.35	-
		VOC	0.08	0.35
		SO_2	0.03	-
		H_2S	<0.01	
FLTOCAP	Flare and TO Annual Emission CAP Routine and MSS	NO_x	-	321.75
		CO	-	1,195.06
		VOC	-	573.74
		PM	-	0.39
		PM_{10}	-	0.39
		$PM_{2.5}$	-	0.39
		SO_2	-	14.64
		H_2S	-	0.15

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
10-XF-9001	Unit 10 Flare - Shakedown	NO_x	5,342.05	158.60
		CO	9,709.93	548.95
		VOC	5,817.85	293.63
		SO_2	5.25	4.32
		H_2S	0.06	0.05
20-XF-9101	Unit 20 Flare - Shakedown	NO_x	119.17	38.10
		CO	474.59	154.54
		VOC	761.29	101.74
		SO_2	1.27	1.42
		H_2S	0.01	0.02
21-XF-9102	Unit 21 Flare - Shakedown	NO_x	119.17	38.10
		CO	474.59	154.54
		VOC	761.29	101.74
		SO_2	1.27	1.42
		H_2S	0.01	0.02
Fugitives and Cooling Towers				
FUG10	Unit 10 Fugitives	VOC (6)	30.68	134.39
FUG20	Unit 20 Fugitives	VOC (6)	13.12	57.48
FUG21	Unit 21 Fugitives	VOC (6)	13.12	57.48
10-FD-3001	Unit 10 Cooling Tower	VOC	3.15	13.80
		PM	2.94	12.88
		PM_{10}	2.91	12.76
		$PM_{2.5}$	0.79	3.44
20-FD-3101	Unit 20 Cooling Tower	VOC	0.84	3.68
		PM	1.10	4.82
		PM_{10}	1.09	4.78
		$PM_{2.5}$	0.29	1.29

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
21-FD-3201	Unit 21 Cooling Tower	VOC	0.84	3.68
		PM	1.10	4.82
		PM_{10}	1.09	4.78
		$PM_{2.5}$	0.29	1.29
Storage Tanks				
50-T-1001A	Pygas Tank	VOC	0.24	-
50-T-1001A	Pygas Tank	VOC	0.24	-
50-TK-2002	Sodium Hypoclorite Tank	Inorganics	0.14	-
50-TK-2004	Sulfuric Acid Tank	H_2SO_4	0.14	-
50-TK-2005	Caustic Tank	Inorganics	0.14	-
50-TK-2018	Coagulant Tank	VOC	0.14	-
50-TK-3301	Corrosion Inhibitor Tank	VOC	0.26	-
50-TK-3302	Dispersent Tank	VOC	0.26	-
50-TK-3304	Corrosion Inhibitor Tank	VOC	0.26	-
50-TK-5008	Sulfuric Acid Tank	H_2SO_4	0.14	-
50-TK-5009	Caustic Tank	Inorganics	0.14	-
50-TK-5101	Oxygen Scavenger Tank	VOC	0.14	-
50-TK-5102	Amine Tank	VOC	0.14	-
50-TK-5103	Phosphate Tank	VOC	0.14	-
50-TK-5104	Phosphate Tank	VOC	0.14	-
50-TK-8104	Locomotive Diesel Tank	VOC	0.09	-
50-T-8105A	1-Hexane Tank	VOC	0.98	-
50-T-8105B	1-Hexane Tank	VOC	0.98	-
50-TK-8110	Caustic Tank	Inorganics	0.56	-
50-TK-8113	Sulfuric Acid Tank	H_2SO_4	0.56	-
50-TK-8112	Wash Oil Tank	VOC	0.56	-
50-T-8111A	Sodium Hypoclorite Tank	Inorganics	0.14	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
50-T-8111B	Sodium Hypoclorite Tank	Inorganics	0.14	-
50-TK-8205	Diesel Vehicle Tank	VOC	0.09	-
50-TK-8206	Gasoline Vehicle Tank	VOC	0.04	-
EMG-E-TK1	Emergency Engine Diesel Tank No. 1	VOC	0.09	-
EMG-E-TK2	Emergency Engine Diesel Tank No. 2	VOC	0.09	-
EMG-E-TK3	Emergency Engine Diesel Tank No. 3	VOC	0.09	-
EMG-E-TK4	Emergency Engine Diesel Tank No. 4	VOC	0.09	-
EMG-E-TK5	Emergency Engine Diesel Tank No. 5	VOC	0.09	-
EMG-E-TK6	Emergency Engine Diesel Tank No. 6	VOC	0.09	-
EMG-E-TK7	Emergency Engine Diesel Tank No. 7	VOC	0.09	-
EMG-E-TK8	Emergency Engine Diesel Tank No. 8	VOC	0.09	-
EMG-E-TK8	Emergency Engine Diesel Tank No. 9	VOC	0.09	-
EMG-E-TK10	Emergency Engine Diesel Tank No. 10	VOC	0.09	-
EMG-E-TK11	Emergency Engine Diesel Tank No. 11	VOC	0.09	-
FWP-E-TK	Emergency FWP Diesel Tank	VOC	0.02	-
ALLTANKS	Storage Tank Annual Emission CAP	VOC	-	3.26
		H_2SO_4	-	0.01
		Inorganics		0.04
Emergency Equipment				
EMG-ENG1	Emergency Generator No. 1	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
EMG-ENG2	Emergency Generator No. 2	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG3	Emergency Generator No. 3	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG4	Emergency Generator No. 4	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG5	Emergency Generator No. 5	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
EMG-ENG6	Emergency Generator No. 6	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG7	Emergency Generator No. 7	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG8	Emergency Generator No. 8	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG9	Emergency Generator No. 9	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
EMG-ENG10	Emergency Generator No. 10	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
EMG-ENG11	Emergency Generator No. 11	NO_x	17.77	--
		CO	10.42	--
		VOC	1.28	--
		PM	0.60	--
		PM_{10}	0.60	--
		$PM_{2.5}$	0.60	--
		SO_2	0.01	--
FWP-1	Emergency Firewater Pump	NO_x	1.00	--
		CO	0.40	--
		VOC	0.08	--
		PM	0.04	--
		PM_{10}	0.04	--
		$PM_{2.5}$	0.04	--
		SO_2	<0.01	--
FWP-2	Emergency Firewater Pump	NO_x	1.00	--
		CO	0.40	--
		VOC	0.08	--
		PM	0.04	--
		PM_{10}	0.04	--
		$PM_{2.5}$	0.04	--
		SO_2	<0.01	--

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
FWP-3	Emergency Firewater Pump	NO_x	1.00	--
		CO	0.40	--
		VOC	0.08	--
		PM	0.04	--
		PM_{10}	0.04	--
		$PM_{2.5}$	0.04	--
		SO_2	<0.01	--
EMERCAP	Emergency Generator & Firewater Pump Annual Emission CAP	NO_x	-	9.87
		CO	-	5.77
		VOC	-	0.71
		PM	-	0.33
		PM_{10}	-	0.33
		$PM_{2.5}$	-	0.33
		SO_2	-	0.01
Miscellaneous and MSS				
TRUDCKLOAD	Uncollected Truck Loading	VOC	14.61	0.36
50-F-7004A	Area 100 Catalyst Activator Filters	VOC	2.50	0.37
		PM	0.05	0.21
		PM_{10}	0.05	0.21
		$PM_{2.5}$	0.05	0.21
50-F-7004B	Area 100 Catalyst Activator Filters	VOC	2.50	0.37
		PM	0.05	0.21
		PM_{10}	0.05	0.21
		$PM_{2.5}$	0.05	0.21
50-F-7004C	Area 100 Catalyst Activator Filters	VOC	2.50	0.37
		PM	0.05	0.21
		PM_{10}	0.05	0.21
		$PM_{2.5}$	0.05	0.21

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
20-D-6041	Unit 20 Pellet Dewatering Dryer	VOC	23.20	-
50-F-7511	Unit 20 Load Out Storage Silos	VOC	23.20	-
		PM	0.15	-
		PM_{10}	0.15	-
		$PM_{2.5}$	0.15	-
50-Z-7511	Unit 20 Pellet Loading	VOC	23.20	-
		PM	0.01	-
		PM_{10}	0.01	-
		$PM_{2.5}$	0.01	-
20PELETCAP	Unit 20 Pellet CAP	VOC	-	40.62
		PM	-	0.54
		PM_{10}	-	0.54
		$PM_{2.5}$	-	0.54
REGENVNT20	Unit 20 Regeneration Vent	VOC	0.30	0.44
20-Z-6015	Unit 20 Additive Dump Station Filters	PM	0.09	0.08
		PM_{10}	0.09	0.08
		$PM_{2.5}$	0.09	0.08
21-D-6041	Unit 21 Pellet Dewatering Dryer	VOC	23.20	-
50-F-7611	Unit 21 Load Out Storage Silos	VOC	23.20	-
		PM	0.15	-
		PM_{10}	0.15	-
		$PM_{2.5}$	0.15	-
50-Z-7611	Unit 21 Pellet Loading	VOC	23.20	-
		PM	0.01	-
		PM_{10}	0.01	-
		$PM_{2.5}$	0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour (5)	TPY (4)(5)
21PELETCAP	Unit 21 Pellet CAP	VOC	-	40.62
		PM	-	0.54
		PM_{10}	-	0.54
		$PM_{2.5}$	-	0.54
REGENVNT21	Unit 21 Regeneration Vent	VOC	0.30	0.44
21-Z6015	Unit 21 Additive Dump Station Filters	PM	0.09	0.08
		PM_{10}	0.09	0.08
		$PM_{2.5}$	0.09	0.08
VEH DISP	Motor Vehicle Refueling	VOC	0.78	0.19
AMMSYS	Ammonia Handling System	NH_3	0.09	0.01
AMMFUG	Ammonia Handling System Fugitives	NH_3	0.11	0.48
WWT	Wastewater Treatment	VOC	3.86	1.11
MSS-ATM	Uncontrolled MSS	VOC	287.11	12.24
MSS-CONT	Controlled MSS	NO_x	2.42	0.27
		CO	6.89	0.42
		VOC	11.01	0.10
		PM	0.26	0.02
		PM_{10}	0.26	0.02
		$PM_{2.5}$	0.26	0.02
		SO_2	0.26	0.02
		H_2S	1.09	0.01

(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) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
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 $PM_{2.5}$
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
NH_3 - ammonia
H_2S - hydrogen sulfide

Emission Sources - Maximum Allowable Emission Rates

H_2SO_4 - sulfuric acid

(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Planned maintenance, startup and shutdown (MSS) emissions for all pollutants are authorized even if not specifically identified as MSS.
(6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: April 23, 2020

Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX192

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized 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 authorized by this permit.

Air Contaminants Data

Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**
			TPY (4)
FURNCAP	Ethylene Cracking Furnace Cap	CO_2 (5)	2,818,879
		CH_4 (5)	142
		N_2O (5)	28
		CO_2e	2,830,875
BLRCAP	Steam Boiler CAP	CO_2 (5)	660,399
		CH_4 (5)	33
		N_2O (5)	7
		CO_2e	663,215
CATACTCAP	Catalyst Activator Heater CAP	CO_2 (5)	10,349
		CH_4 (5)	<1
		N_2O (5)	< 1
		CO_2e	10,399
FLTOCAP	Flare and TO Emissions Cap	CO_2 (5)	384,929
		CH_4 (5)	16
		N_2O (5)	3
		CO_2e	386,250
FUG10	Unit 10 Fugitives (6)	CO_2e	67
FUG20	Unit 20 Fugitives (6)	CO_2e	29
FUG21	Unit 21 Fugitives (6)	CO_2e	29

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates
			TPY (4)
10-FD-3001	Unit 10 Cooling Tower	CO_2e	7
20-FD-3101	Unit 20 Cooling Tower	CO_2e	2
21-FD-3201	Unit 21 Cooling Tower	CO_2e	2
ALLTANKS	Storage Tank Emission Cap	CO_2e	2
EMERCAP	Emergency Generator and Firewater Cap	CO_2 (5)	565
		CH_4 (5)	<1
		N_2O (5)	<1
		CO_2e	567
TRUCKLOAD	Uncollected Truck Loading	CO_2e	<1
VEH DISP	Motor Vehicle Refueling	CO_2e	<1
WWT	Wastewater Treatment	CO_2e	<1
MSS-ATM	Uncontrolled MSS	CO_2e	265
MSS-CONT	Controlled MSS	CO_2e	278

(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) N_2O - nitrous oxide
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015): CO_2 (1), N_2O (298), CH_4 (25), SF_6 (22,800).
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.
(5) Emission rate is given for informational purposes only and does not constitute enforceable limit.
(6) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations of Permit Nos. 155952, PSDTX1556, and GHGPSDTX175.

Emission Sources - Maximum Allowable Emission Rates

Date: April 23, 2020