

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Nos. 4682B and PSD-TX-761M1

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
1A	USC Furnace A	VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		PM	1.37	6.0
		CO	12.32	53.96
1B	USC Furnace B	VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		PM	1.37	6.0
		CO	12.32	53.96
1C	USC Furnace C	VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		PM	1.37	6.0
		CO	12.32	53.96
1D	USC Furnace D	VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		PM	1.37	6.0
		CO	12.32	53.96
1E	USC Furnace E	VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		PM	1.37	6.0

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		CO	12.32	53.96

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1F	USC Furnace F	PM ₁₀	1.37	6.0
		VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		CO	12.32	53.96
1G	USC Furnace G	PM ₁₀	1.37	6.0
		VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		CO	12.32	53.96
1H	USC Furnace H	PM ₁₀	1.37	6.0
		VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		CO	12.32	53.96
1K	USC Furnace K	PM ₁₀	1.37	6.0
		VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		CO	12.32	53.96
1L	USC Furnace L	PM ₁₀	1.37	6.0
		VOC	0.74	3.24
		NO _x	29.70	130.09
		SO ₂	51.40	225.13
		CO	12.32	53.96
1M	USC Furnace M	PM ₁₀	1.8	7.9
		VOC	0.5	2.2
		NO _x	27.3	119.6
		SO ₂	0.21	0.92
		CO	14.1	61.8

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1N	USC Furnace N	PM ₁₀	1.8	7.9
		VOC	0.5	2.2
		NO _x	27.3	119.6
		SO ₂	0.21	0.92
		CO	14.1	61.8
3A	VMR Furnace A	PM ₁₀	0.92	4.03
		VOC	0.50	2.19
		NO _x	20.00	87.6
		SO ₂	34.50	151.11
		CO	8.25	36.14
3B	VMR Furnace B	PM ₁₀	0.92	4.03
		VOC	0.50	2.19
		NO _x	20.00	87.6
		SO ₂	34.50	151.11
		CO	8.25	36.14
4A	HP Steam Boiler A	PM ₁₀	32.20	141.04
		VOC	2.23	9.77
		NO _x	133.70	585.6
		SO ₂	324.30	1420.4
		CO	7.2	31.54
4B	HP Steam Boiler B	PM ₁₀	32.20	141.04
		VOC	2.23	9.77
		NO _x	133.70	585.6
		SO ₂	324.30	1420.4
		CO	7.2	31.54
4C	HP Steam Boiler C	PM ₁₀	32.20	141.04
		VOC	2.23	9.77
		NO _x	133.70	585.6
		SO ₂	324.30	1420.4

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
		CO	7.2	31.54
4D	HP Steam Boiler D	PM ₁₀	32.20	141.04
		VOC	2.23	9.77
		NO _x	133.70	585.6
		SO ₂	324.30	1420.4
		CO	7.2	31.54
5A	Steam S. Heater A	PM ₁₀	9.61	42.1
		VOC	0.67	2.93
		NO _x	39.90	174.80
		SO ₂	96.80	423.98
		CO	2.6	11.39
5B	Steam S. Heater B	PM ₁₀	9.61	42.1
		VOC	0.67	2.93
		NO _x	39.90	174.80
		SO ₂	96.80	423.98
		CO	2.6	11.39
6	HDA Feed Heater	VOC	1.77	7.75
		NO _x	18.00	78.80
		SO ₂	0.07	0.31
		PM	1.50	6.57
		CO	3.75	16.43
7	HDA Recycle Heater	VOC	0.03	0.13
		NO _x	1.30	5.69
		SO ₂	0.01	0.02
		PM	0.09	0.39
		CO	0.16	0.70
8	Dryer Regeneration Heater 0.35	VOC		0.08
		NO _x	4.70	20.59

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
8A	Cat. Reactivation Furnace 0.45	SO ₂	0.02	0.09
		PM	0.40	1.75
		CO	0.99	4.34
		VOC		0.10
		NO _x	6.30	27.59
		SO ₂	0.02	0.10
		PM	0.52	2.28
		CO	1.30	5.70
9A	Decoking Cyclone	TSP	9.0	3.7
		CO	29.2	4.5
9B	Decoking Cyclone	TSP	9.0	3.9
		CO	29.2	5.1
10	Hot Flare	NO _x	0.01	0.04
		CO	0.05	0.23
11	Cold Flare	NO _x	0.01	0.04
		CO	0.05	0.23
12	Cooling Tower	VOC		3.00
13A	Oily Separator	VOC	0.12	0.53
13B	Wastewater Separator	VOC	<0.01	0.02
16	Naptha Feedstock Day Tank+ 8.77		VOC	4.10
17	Kerosene Feedstock Day Tank+ 8.77		VOC	4.10
18	Light Fuel Oil Tank+	VOC	2.73	3.80

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
19	Raw Pyrolysis Gasoline Tank+ 13.47		VOC	4.44
20A	Heavy Oil Fuel Tank+	VOC	5.43	3.88
20B	Heavy Oil Fuel Tank+	VOC	5.43	3.88
23A	Benzene Tank+	VOC	0.14	0.32
23B	Benzene Tank+	VOC	0.14	0.32
24	HDA Tank+	VOC	1.08	2.92
30A	Feedstock Tank+	VOC	8.04	19.71
30B	Feedstock Tank+	VOC	8.04	19.71
30C	Feedstock Tank+	VOC	8.04	19.71
31	Second Stage Feed Heater	PM ₁₀	0.27	1.18
		VOC	0.05	0.24
		NO _x	3.3	14.45
		SO ₂	0.01	0.05
		CO	0.68	2.98
32	Lube Oil Tank+	VOC	17.85	0.07
33	Wash Oil Tank+	VOC	0.27	0.43
39A	Spent Caustic Gasoline Wash Tank+	VOC	0.54	0.86
39B	Spent Caustic Gasoline Wash Tank+	VOC	0.54	0.86

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
40	Recovered Oil Tank+	VOC	0.54	0.84
41	Froth Holding Tank+	VOC	0.04	0.01
42	Methanol Tank+	VOC	21.08	0.05
43	Fuel Oil Truck Loading+	VOC	-	4.90
50	Spent Caustic Wastewater+ <0.01		VOC	<0.01
51	Spent Caustic Wastewater+ <0.01		VOC	<0.01
52	Wastewater Tank+	VOC	3.68	8.33
53	Slop Oil Tank+	VOC	0.11	0.27
54	Oily Water Hold Tank+	VOC	1.60	21.16
55	Hot Water Belt Tank+	VOC	2.13	6.45
AC-1	Air Compressor Engine No. 1	PM ₁₀	0.11	0.21
		VOC	0.21	0.39
		NO _x	6.64	12.43
		SO ₂	0.61	1.14
		CO	0.83	1.55
AC-2	Air Compressor Engine No. 2	PM ₁₀	0.11	0.21
		VOC	0.21	0.39
		NO _x	6.64	12.43
		SO ₂	0.61	1.14
		CO	0.83	1.55

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
AC-3	Air Compressor Engine No. 3	PM ₁₀	0.11	0.21
		VOC	0.21	0.39
		NO _x	6.64	12.43
		SO ₂	0.61	1.14
		CO	0.83	1.55
FU-1	Olefins Unit Fugitive	VOC	19.27	84.40
FU-2	Olefins Fugitive - HON	VOC	1.49	6.53
FU-3	Olefins Fugitive - NESHAPS 62.54	VOC		14.28
FU-4	M&N Furnace Fugitive	VOC	0.12	0.51
FU-5	NESHAPS Stripper Fugitive 0.18	VOC		0.04
WWT-1	Wastewater Tank A+	VOC	0.19	0.83
WWT-2	Wastewater Tank B+	VOC	0.12	0.52
WWC-1	Wastewater Collection+	VOC	<0.01	0.02

(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) PM - particulate matter

PM₁₀ - 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.

VOC - volatile organic compounds as defined in General Rule 101.1

NO_x - total oxides of nitrogen

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>

SO₂ - sulfur dioxide

CO - carbon monoxide

TSP - total suspended particulate matter

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

+ The individual TPY emission rates for each storage tank may be exceeded by such tank so long as the aggregate emissions from all storage tanks do not exceed 145.96 TPY.

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

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

Dated _____