

## EMISSION SOURCES – MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4682B/PSDTX761M2

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)
1A	USC Furnace A	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44
1B	USC Furnace B	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44
1C	USC Furnace C	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44
1D	USC Furnace D	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44
1E	USC Furnace E	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44
1F	USC Furnace F	CO (9)	11.98	52.48
		NO <sub>x</sub>	27.10	118.71
		PM <sub>10</sub>	1.08	4.75
		SO <sub>2</sub>	0.09	0.39
		VOC	0.78	3.44

Emission Sources – Maximum Allowable Emission Rates

1G	USC Furnace G	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44
1H	USC Furnace H	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44
1J	USC Furnace J	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44
1K	USC Furnace K	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44
1L	USC Furnace L	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	11.98 27.10 1.08 0.09 0.78	52.48 118.71 4.75 0.39 3.44
1M	USC Furnace M	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	20.36 27.30 1.84 0.15 1.33	89.19 119.58 8.07 0.67 5.84
1N	USC Furnace N	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	20.36 27.30 1.84 0.15 1.33	89.19 119.58 8.07 0.67 5.84
3A	VMR Furnace A	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	7.28 8.67 0.66 0.05 0.48	31.90 37.98 2.89 0.24 2.09

Emission Sources – Maximum Allowable Emission Rates

3B	VMR Furnace B	CO (9) NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	7.28 8.67 0.66 0.05 0.48	31.90 37.98 2.89 0.24 2.09
4A	HP Steam Boiler A	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> SO <sub>3</sub> VOC	23.65 94.63 23.14 284.48 10.33 1.56	103.59 414.46 101.33 1246.04 25.24 6.78
4B	HP Steam Boiler B	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78
4C	HP Steam Boiler C	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78
4D	HP Steam Boiler D	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	23.65 53.50 2.14 0.18 1.56	103.59 234.32 9.37 0.78 6.78
5A	Steam Superheater A	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	5.25 6.25 0.47 0.04 0.34	22.98 27.36 2.08 0.17 1.50
5B	Steam Superheater B	CO NO <sub>x</sub> PM <sub>10</sub> SO <sub>2</sub> VOC	5.25 6.25 0.47 0.04 0.34	22.98 27.36 2.08 0.17 1.50
6	HDA Feed Heater	CO NO <sub>x</sub>	7.08 8.42	31.00 36.90

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		PM <sub>10</sub>	0.64	2.80
		SO <sub>2</sub>	0.05	0.23
		VOC	0.46	2.03
7	HDA Recycle Heater	CO	0.49	2.15
		NO <sub>x</sub>	0.59	2.56
		PM <sub>10</sub>	0.04	0.19
		SO <sub>2</sub>	0.01	0.02
		VOC	0.03	0.14
8	Dryer Regeneration Heater	CO	1.61	7.05
		NO <sub>x</sub>	1.92	8.39
		PM <sub>10</sub>	0.15	0.64
		SO <sub>2</sub>	0.01	0.05
		VOC	0.11	0.46
8A	Cat. Reactivation Furnace	CO	2.12	9.30
		NO <sub>x</sub>	2.53	11.07
		PM <sub>10</sub>	0.19	0.84
		SO <sub>2</sub>	0.02	0.07
		VOC	0.14	0.61
9A	Decoking Cyclone	CO (10)	1674.80	80.06
		PM	9.91	0.80
		PM <sub>10</sub>	3.05	0.25
		VOC	0.03	0.02
9B	Decoking Cyclone	CO (10)	906.86	66.37
		PM	6.82	0.66
		PM <sub>10</sub>	2.01	0.21
		VOC	0.03	0.02
10	Hot Flare	CO	1092.65	37.00
		NO <sub>x</sub>	209.76	8.21
		SO <sub>2</sub>	64.68	2.51
		VOC	369.22	6.94
11	Cold Flare	CO	100.84	13.84
		NO <sub>x</sub>	19.39	2.92
		SO <sub>2</sub>	0.08	0.13
		VOC	76.88	2.61
12	Cooling Tower (5)	VOC	2.92	12.79
13C	Carbon Canisters in Series	VOC	0.04	0.01
16	Naphtha Feedstock Day Tank	VOC	1.52	2.52
17	Kerosene Feedstock Day Tank	VOC	1.52	2.47

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18	Light Fuel Oil Tank	VOC	3.07	4.30
19	Raw Pyrolysis Gasoline Tank	VOC	1.74	4.90
20A	Heavy Oil Fuel Tank	VOC	4.30	5.10
20B	Heavy Oil Fuel Tank	VOC	4.30	5.10
23A	Benzene Tank	VOC	0.17	0.31
24	HDA Tank	VOC	1.45	3.94
30A	Feedstock Tank	VOC	3.37	10.01
30B	Feedstock Tank	VOC	3.37	10.04
30C	Feedstock Tank	VOC	3.39	10.13
31	Second Stage Feed Heater	CO	1.27	5.55
		NO <sub>x</sub>	1.51	6.60
		PM <sub>10</sub>	0.11	0.50
		SO <sub>2</sub>	0.01	0.04
		VOC	0.08	0.36
32	Lube Oil Tank	VOC	16.27	0.15
33	Wash Oil Tank	VOC	0.23	0.43
39A	Spent Caustic Gasoline Wash Tank	VOC	0.64	1.07
39B	Spent Caustic Gasoline Wash Tank	VOC	0.41	0.85
40	Recovered Oil Tank	VOC	0.30	0.87
42	Methanol Tank	VOC	4.08	0.04
43	Fuel Oil Truck Loading	VOC	29.63	7.04
50	Spent Caustic Wastewater	VOC	0.03	0.06
51	Spent Caustic Wastewater	VOC	0.06	0.12
52	Wastewater Tank	VOC	0.75	1.15
53	Slop Oil Tank	VOC	0.26	0.77
55	Hot Water Belt Tank	VOC	1.01	3.19
AC-1	Air Compressor Engine No. 1 (8)	CO	2.74	2.05
		NO <sub>x</sub>	3.03	2.27
		PM <sub>10</sub>	0.16	0.12
		SO <sub>2</sub>	0.97	0.73
		VOC	0.12	0.09

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AC-2	Air Compressor Engine No. 2 (8)	CO	2.74	2.05
		NO <sub>x</sub>	3.03	2.27
		PM <sub>10</sub>	0.16	0.12
		SO <sub>2</sub>	0.97	0.73
		VOC	0.12	0.09
F2602A	Vehicle Diesel Tank	VOC	0.70	0.01
F2603	Vehicle Gasoline Tank	VOC	51.22	1.26
FA1665	Diesel Tank	VOC	0.22	0.01
FU-1	EMACT Process Fugitive (5)	VOC	23.13	101.36
FU-2	HON Process Fugitive (5)	VOC	0.93	4.08
FU-3	Process Fugitive (5)	VOC (11)	17.90	78.41
		VOC (12)	13.73	60.13
FU-4	NESHAP FF Fugitive (5)	VOC	0.02	0.10
FWDIESELA	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELB	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELC	Firewater Diesel Tank	VOC	0.02	0.01
FWDIESELD	Firewater Diesel Tank	VOC	0.02	0.01
J-2019-A	Olefin Firewater Engine (7)	CO	2.87	0.36
		NO <sub>x</sub>	13.33	1.67
		PM <sub>10</sub>	0.95	0.12
		SO <sub>2</sub>	0.88	0.11
		VOC	1.06	0.13
J-2019-B	Olefin Firewater Engine (7)	CO	2.87	0.36
		NO <sub>x</sub>	13.33	1.67
		PM <sub>10</sub>	0.95	0.12
		SO <sub>2</sub>	0.88	0.11
		VOC	1.06	0.13
J-2019-C	Olefin Firewater Engine (7)	CO	2.87	0.36
		NO <sub>x</sub>	13.33	1.67
		PM <sub>10</sub>	0.95	0.12
		SO <sub>2</sub>	0.88	0.11
		VOC	1.06	0.13
J-2019-D	Olefin Firewater Engine (7)	CO	2.87	0.36
		NO <sub>x</sub>	13.33	1.67
		PM <sub>10</sub>	0.95	0.12

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		SO <sub>2</sub>	0.88	0.11
		VOC	1.06	0.13
L-1697	Emergency Generator (6)	CO	0.85	0.02
		NO <sub>x</sub>	10.37	0.27
		PM <sub>10</sub>	0.06	0.01
		SO <sub>2</sub>	1.65	0.04
		VOC	0.02	0.01
PAINT	Painting	VOC	7.39	4.81
WWC-1	Wastewater Collection	VOC	1.37	0.22

- (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<sub>x</sub> - total oxides of nitrogen  
PM - particulate matter  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
SO<sub>2</sub> - sulfur dioxide  
SO<sub>3</sub> - sulfur trioxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (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) 52 hours per rolling twelve months of operation
- (7) 250 hours per rolling twelve months of operation
- (8) 1,500 hours per rolling twelve months of operation
- (9) PSDTX761M1 pollutant
- (10) PSDTX761M2 pollutant
- (11) Pre-control emissions
- (12) Post control emissions

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

Date: July 19, 2013