

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 20485

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)
UWN6R1 and UWS6R1	North/South Flare (5)	VOC (7)	135.54	45.90
		VOC(8)	253.97	56.92
		1,3 butadiene	31.13	10.54
		1,3 butadiene (8)	100.16	31.83
		NO <sub>x</sub>	16.32	5.66
		NO <sub>x</sub> (8)	23.47	7.63
		CO	84.05	29.14
		CO(8)	120.90	39.30
		SO <sub>2</sub>	0.01	0.03
RSWLDFLR	Dock Flare	VOC (7)	85.82	27.86
		1,3 butadiene	46.10	8.24
		NO <sub>x</sub>	7.14	7.19
		CO	51.54	51.97
		SO <sub>2</sub>	0.22	0.96
UW6BB8	Boiler No. 8 285 MMBtu/hr	NO <sub>x</sub>	8.54	37.38
		CO	11.81	51.72
		SO <sub>2</sub>	4.04	17.71
		VOC	1.14	4.98
		PM <sub>10</sub>	2.15	9.42
UW6BB9	Boiler No. 9	NO <sub>x</sub>	5.70	24.92

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		CO	23.62	48.11
		SO <sub>2</sub>	4.04	14.99
		VOC	1.14	4.36
		PM <sub>10</sub>	2.15	7.97
UW6BB10	Boiler No. 10 285 MMBtu/hr	NO <sub>x</sub>	5.70	24.92
		CO	23.62	48.11
		SO <sub>2</sub>	4.04	14.99
		VOC	1.14	4.36
		PM <sub>10</sub>	2.15	7.97
UW6BB9 and UW6BB10	Boiler Nos. 9 and 10 Annual Cap	NO <sub>x</sub>	--	44.86
		CO	--	86.59
		SO <sub>2</sub>	--	26.98
		VOC	--	7.85
		PM <sub>10</sub>	--	14.35
BDMTS3BA	Air Heater	PM <sub>10</sub>	0.05	0.08
		VOC	0.04	0.06
		NO <sub>x</sub>	0.70	1.06
		SO <sub>2</sub>	0.01	0.01
		CO	0.59	0.89
BMDTS3F105	Regeneration Stack	VOC	15.40	4.89
WWCT1-6	Cooling Tower (4)	VOC (7)	83.87	146.94
		1,3 butadiene	37.57	65.83
6-TK-48	Storage Tank No. 48	VOC	0.08	0.01
6-TK-72	Storage Tank No. 72	VOC	0.08	0.01

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6-TK-73	Storage Tank No. 73	VOC	0.08	0.01
C4BUND	Bundle Furnaces	PM <sub>10</sub>	1.00	4.38
		VOC	0.02	0.10
		NO <sub>x</sub>	0.21	0.93
		SO <sub>2</sub>	0.01	0.01
		CO	3.42	14.99
C4FUG	Fugitives (4)	VOC	15.56	68.15
C4ICE	Internal Combustion Engines (6)	PM <sub>10</sub>	4.82	0.06
		VOC	5.41	0.07
		NO <sub>x</sub>	67.98	0.88
		SO <sub>2</sub>	4.49	0.06
		CO	14.65	0.19
C4ICEDFT	Diesel Fuel Tanks (6)	VOC	1.65	0.01
C4MCST	Miscellaneous Chemical Storage Tanks (6)	VOC	0.05	0.20
C4WW	C4 Wastewater	VOC	0.01	0.01
TK55	Tank No. 55	VOC	0.25	0.75
TK56	Tank No. 56	VOC	0.25	0.75
TK55 and TK56	Tank Nos. 55 and Tank 56 Annual Cap	VOC	--	0.75
MAINT-ALL	C4 Maintenance	VOC	27.72	4.30
MAINT - TO	Thermal Control Device	VOC	0.80	0.10
		NO <sub>x</sub>	0.68	0.08
		SO <sub>2</sub>	0.01	0.01

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		CO	0.39	0.05
		PM	0.04	0.01
		PM <sub>10</sub>	0.04	0.01
		PM <sub>2.5</sub>	0.04	0.01

- (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) CO - carbon monoxide  
NO<sub>x</sub> - total oxides of nitrogen  
PM<sub>10</sub> - particulate matter (PM) less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no PM greater than 10 microns is emitted.  
SO<sub>2</sub> - sulfur dioxide  
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (5) The north and south flares are connected to a header system that allows either flare to combust the waste streams.
- (6) Emissions from several small internal combustion engines and storage tanks.
- (7) The VOC emissions rates include the 1,3-butadiene emissions listed under them.
- (8) These emission rates only apply when MSS activities are being controlled by the flare.

\* 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 8,760 Hrs/year

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

Date: November 7, 2011