

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

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

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Permit Number 18978/PSD-TX-752M3

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	Source	Air Contaminant	<u>Emission Rates *</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY **
QE1001B	Furnace 1	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1002B	Furnace 2	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1002B	Furnace 3	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
QE1004B	Furnace 4	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1005B	Furnace 5	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1006B	Furnace 6	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1007B	Furnace 7	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1008B	Furnace 8	NO <sub>x</sub>	30.30	121.26
		CO	24.71	31.34
		SO <sub>2</sub>	0.30	1.31
		VOC	0.70	3.00
		PM <sub>10</sub>	1.00	3.50
QE1009B	Furnace 9	NO <sub>x</sub>	31.75	126.58

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Emission	Source	Air Contaminant	Emission Rates *	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY**
		CO	33.92	34.45
		SO <sub>2</sub>	0.36	1.56
		VOC	0.83	3.63
		PM <sub>10</sub>	2.10	6.57
QE5802UA	Boiler A	NO <sub>x</sub>	22.50	-
		CO	20.14	-
		SO <sub>2</sub>	0.14	-
		VOC	1.43	-
		PM <sub>10</sub>	0.34	-
QE5802UB	Boiler B	NO <sub>x</sub>	22.50	-
		CO	20.14	-
		SO <sub>2</sub>	0.14	-
		VOC	1.43	-
		PM <sub>10</sub>	0.34	-
QE5802UA/B	Boiler A and B combined annual limit	NO <sub>x</sub>	-	89.70
		CO	-	30.27
		SO <sub>2</sub>	-	0.61
		VOC	-	1.91
		PM <sub>10</sub>	-	1.49
QECOMP1	Diesel Compressor	NO <sub>x</sub> (PSD)	6.10	17.21
		CO (PSD)	0.05	0.14
		SO <sub>2</sub>	0.13	0.37
		VOC	0.14	0.41
		PM <sub>10</sub> (PSD)	0.07	0.19
QECOMP2A/B	Diesel Compressor	NO <sub>x</sub> (PSD)	6.10	17.21
		CO (PSD)	0.05	0.14

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
		SO <sub>2</sub>	0.13	0.37
		VOC	0.14	0.41
		PM <sub>10</sub> <b>(PSD)</b>	0.07	0.19
QECOMP3	Diesel Compressor	NO <sub>x</sub>	2.33	9.39
		CO	0.50	2.02
		SO <sub>2</sub>	0.15	0.62
		VOC	0.19	0.76
		PM <sub>10</sub>	0.17	0.67
QE6410F	Pyrolysis Gasoline Tank	VOC	2.10	7.90
QE6411F	Pyrolysis Fuel Oil Tank	VOC	0.02	0.09
QE2410F	Wash Oil Drum	VOC	0.60	0.07
QE3416F	Methanol Tank	VOC	19.20	0.34
QE1416F	Decoking Drum	CO <b>(PSD)</b>	519.00	101.60
		PM <sub>10</sub> <b>(PSD)</b>	4.14	0.90
QE7801U	Cooling Tower Fugitives (4)	VOC	7.14	31.27
QE3418F	MAPD Decoke Pot	CO <b>(PSD)</b>	17.30	1.45
QE3050B	ARU Flare	CO <b>(PSD)</b>	15.10	6.00
		NO <sub>x</sub> <b>(PSD)</b>	2.90	1.10
		SO <sub>2</sub>	0.10	0.10
		VOC	12.50	1.10
QE3050MAINT	ARU Flare Maintenance	CO	44.80	1.12
		NO <sub>x</sub>	7.90	0.20
		SO <sub>2</sub>	0.10	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
		VOC	78.60	1.97
QE8050B	Elevated Flare	CO <b>(PSD)</b>	174.00	54.00
		NO <sub>x</sub> <b>(PSD)</b>	77.00	24.00
		SO <sub>2</sub>	10.30	0.30
		VOC	45.00	14.00
QE8050MAINT	Elevated Flare Maintenance	CO	62.10	0.10
		NO <sub>x</sub>	12.00	0.20
		SO <sub>2</sub>	10.30	0.01
		VOC	58.00	0.10
QE7412F	Wash Oil Tank	VOC	0.67	0.13
QELOAD	Organic Loading	VOC	1.40	1.24
QESTORE	Organic Storage	VOC	0.98	1.01
QE8001A	Wastewater System	VOC	3.18	13.94
QELAB	Analyzers and Sampling	VOC	7.04	2.25
QEFUG	Process Fugitives (4)	VOC	18.57	81.34
QEANALYZ2	Analyzer's Control Devices (Thermal Oxidizer)	VOC	0.01	0.01
		CO <b>(PSD)</b>	0.01	0.01
		NO <sub>x</sub> <b>(PSD)</b>	0.01	0.01
QEUNIT	Dock Thermal Oxidizer (5)	NO <sub>x</sub> <b>(PSD)</b>	14.68	4.70
		CO <b>(PSD)</b>	17.73	6.23
		VOC	23.77	7.22
		PM <sub>10</sub> <b>(PSD)</b>	0.01	0.02
PW7614JA	Emergency Engine	NO <sub>x</sub>	11.69	5.12
		CO	2.68	1.17
		VOC	0.34	0.15
		SO <sub>2</sub>	3.94	1.73

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		PM <sub>10</sub>	0.34	0.15	
PW7605JB	Emergency Engine	NO <sub>x</sub>		15.84	6.94
		CO	3.63	1.59	
		VOC	0.47	0.20	
		SO <sub>2</sub>	5.34	2.34	
		PM <sub>10</sub>	0.46	0.20	
PW7605JC	Emergency Engine	NO <sub>x</sub>		15.84	6.94
		CO	3.63	1.59	
		VOC	0.47	0.20	
		SO <sub>2</sub>	5.34	2.34	
		PM <sub>10</sub>	0.46	0.20	
7407F	Sulfuric Acid Tank	H <sub>2</sub> SO <sub>4</sub>		0.01	0.01
7701LL3F	Sulfuric Acid Tank	H <sub>2</sub> SO <sub>4</sub>		0.01	0.01
7803UL1F	Sulfuric Acid Tank	H <sub>2</sub> SO <sub>4</sub>		0.01	0.01
8703LF5	Sulfuric Acid Tank	H <sub>2</sub> SO <sub>4</sub>		0.01	0.01
QEPRCIN	PRC/ERC Inert Vent	VOC		0.05	0.22
QEPGCIN	PGC Inert Vent	VOC		0.32	1.38

(1) Emission point identification - either specific equipment designation or emission point number (EPN) from a plot plan.

(2) Specific point source names. For fugitive sources use area name or fugitive source name.

(3) NO<sub>x</sub> - total oxides of nitrogen

CO - carbon monoxide

SO<sub>2</sub> - sulfur dioxide

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

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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.

- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) The dock thermal oxidizer is owned and operated by Millenium Petrochemicals, Inc., under Permit Number 4751.

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

Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year \_\_\_\_\_ or Hrs/year 8,760

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

Dated September 15, 2006