Emission Sources - Maximum Allowable Emission Rates

Permit Number 18978, PSDTX752M5, N162M1

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)
QE1001B	Furnace 1	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1002B	Furnace 2	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1003B	Furnace 3	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50

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QE1004B	Furnace 4	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1005B	Furnace 5	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1006B	Furnace 6	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1007B	Furnace 7	NO_X	30.30	121.26
		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1008B	Furnace 8	NO_X	30.30	121.26

Emission Sources - Maximum Allowable Emission Rates

		CO	24.71	31.34
		SO_2	0.30	1.31
		VOC	0.30	0.75
		PM	1.00	3.50
		PM_{10}	1.00	3.50
		$PM_{2.5}$	1.00	3.50
QE1009B	Furnace 9	NO_X	31.75	126.58
		CO	33.92	34.45
		SO_2	0.36	1.56
		VOC	0.30	0.75
		PM	2.10	6.57
		PM_{10}	2.10	6.57
		$PM_{2.5}$	2.10	6.57
QE1010B	Furnace 10	NO_X (Routine)	9.00	24.09
		NO_X (Decoke / Hot stand by)	12.50	
		NO_X (MSS)	14.00	
		CO	20.36	81.76
		SO_2	0.35	1.42
		VOC	0.61	1.50
		PM	4.30	17.25
		PM_{10}	4.30	17.25
		$PM_{2.5}$	4.30	17.25
		NH_3	3.11	13.62
QE1011B	Furnace 11	NO_X (Routine)	9.00	24.09
		NO_X (Decoke / Hot stand by)	12.50	
		NO_X (MSS)	14.00	
		CO	20.36	81.76
		SO_2	0.35	1.42
		VOC	0.61	1.50

Emission Sources - Maximum Allowable Emission Rates

		PM	4.30	17.25
		PM_{10}	4.30	17.25
		$PM_{2.5}$	4.30	17.25
		NH_3	3.11	13.62
QE5802UA	Boiler A	NO_X	22.50	89.70
		CO	20.14	30.27
		SO_2	0.14	0.61
		VOC	1.43	1.91
		PM	0.34	1.49
		PM_{10}	0.34	1.49
		$PM_{2.5}$	0.34	1.49
QE5802UB	Boiler B	NO_X	22.50	89.70
		CO	20.14	30.27
		SO_2	0.14	0.61
		VOC	1.43	1.91
		PM	0.34	1.49
		PM_{10}	0.34	1.49
		$PM_{2.5}$	0.34	1.49
QE6410F	Pyrolysis Gasoline IFR Tank	VOC	2.12	5.95
QE2410F	Wash Oil Drum	VOC	0.52	0.02
QE1416F	Decoking Drum	CO (PSD)	877.90	—
		PM	33.41	—
		PM_{10} (PSD)	33.41	—
		$PM_{2.5}$ (PSD)	16.37	—
		VOC	2.05	—
QE1423F	Decoking Drum	CO	877.90	—
		PM	33.41	—
		PM_{10}	33.41	—
		$PM_{2.5}$	16.37	—

Emission Sources - Maximum Allowable Emission Rates

		VOC	2.05	—
QE1416F and QE1423F	QE1416F and QE1423F	CO	—	388.47
		PM	—	10.46
		PM_{10}	—	10.46
		$PM_{2.5}$	—	6.30
		VOC	—	3.78
QE7801U	Cooling Tower (5)	VOC	7.88	5.34
		PM	2.67	11.69
		PM_{10}	1.31	5.73
		$PM_{2.5}$	0.01	0.02
QE3418F	MAPD Decoke Pot	CO	17.30	0.31
QE3050B	ARU Flare	CO (PSD)	21.00	8.98
		NO_X (PSD)	4.04	1.73
		SO_2	0.10	0.10
		VOC	15.02	1.38
QE3050MAINT	ARU Flare Maintenance	CO	50.65	1.27
		NO_X	9.74	0.24
		SO_2	0.10	0.10
		VOC	78.63	1.97
QE8050B	Elevated Flare	CO (PSD)	266.80	87.66
		NO_X (PSD)	85.21	30.11
		SO_2	81.32	4.25
		VOC	50.83	11.89
QE8050MAINT	Elevated Flare Maintenance	CO	82.50	0.30
		NO_X	16.16	0.10
		SO_2	101.78	0.06
		VOC	58.18	0.15
QEH2FLARE	Hydrogen Flare	CO	93.84	56.31
		NO_X	32.87	19.72

Emission Sources - Maximum Allowable Emission Rates

		VOC	5.99	3.59
		SO_2	0.01	0.01
QE7412F	Wash Oil Tank	VOC	0.70	0.08
QELOAD	Organic Loading	VOC	0.16	0.03
QESTORE	Organic Storage	VOC	1.33	1.01
QE8001A	Wastewater System	VOC	0.35	1.55
QELAB	Sampling	VOC	7.04	2.25
QEFUG	Process Fugitives (6)	VOC	19.76	86.45
		NH_3	0.12	0.54
		Chlorine	0.04	0.17
QEANALYZ5	Main Flare Analyzer	VOC	<0.01	<0.01
QEANALYZ2	Main Flare HRVOC Analyzer	NO_X	0.01	0.01
		CO	0.01	0.01
		VOC	0.01	0.01
QE1ANLYZR4	Furnace 10-11 Analyzers	NO_X	0.01	0.01
		CO	0.01	0.01
		VOC	0.04	0.17
QEUNIT	Dock Thermal Oxidizer (7)	NO_X (PSD)	14.68	4.70
		CO (PSD)	17.73	6.25
		VOC	23.77	7.22
		PM	0.01	0.02
		PM_{10}	0.01	0.02
		$PM_{2.5}$	0.01	0.02
PW7614JA	Emergency Engine	NO_X	15.10	1.70
		CO	3.25	0.37
		VOC	1.22	0.14
		SO_2	1.00	0.11
		PM	1.07	0.12
		PM_{10}	1.07	0.12

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	1.07	0.12
PW7605JB	Emergency Engine	NO_X	15.84	6.94
		CO	3.63	1.59
		VOC	0.47	0.20
		SO_2	5.34	2.34
		PM	0.46	0.20
		PM_{10}	0.46	0.20
		$PM_{2.5}$	0.46	0.20
PW7605JC	Emergency Engine	NO_X	15.84	6.94
		CO	3.63	1.59
		VOC	0.47	0.20
		SO_2	5.34	2.34
		PM	0.46	0.20
		PM_{10}	0.46	0.20
		$PM_{2.5}$	0.46	0.20
7407F	Sulfuric Acid Tank	H_2SO_4	0.01	0.01
7701LL3F	Sulfuric Acid Tank	H_2SO_4	0.01	0.01
QEPGCIN	PGC Seal Oil/Lube Oil	VOC	0.32	1.38
QENH3SC	Ammonia Clearing	NH_3	1.00	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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
NH_3 - ammonia
H_2SO_4 - sulfuric acid
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate only and is enforceable through compliance with the permit Special Conditions applicable to the cooling tower and with cooling water circulation flow rates represented in the permit application.
(6) Emission rate is an estimate only and is enforceable through compliance with the permit Special Conditions applicable to fugitives and with representations in the permit application.
(7) The dock thermal oxidizer is owned and operated by LyondellBasell Acetyls, LLC, under Permit Number 4751.

Emission Sources - Maximum Allowable Emission Rates

Date: January 24, 2022