

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 1176

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)	<u>Emission Rates*</u>	
			lb/hr	TPY
<u>Paraxylene Unit 2</u>				
HF-451	H-1101 150.0 MM Btu/hr Isomerization Heater	VOC	0.4	1.9
		NOx	21.5	94.1
		SO2	0.4	1.8
		PM	0.6	2.7
		CO	5.4	23.5
HF-452	H-1102 217.0 MM Btu/hr Stabilization Tower Reboiler	VOC	0.6	2.7
		NOx	31.1	136.2
		SO2	0.6	2.6
		PM	0.9	3.9
		CO	7.8	34.0
HF-453**	H-1103 116.0 MM Btu/hr Xylene Tower Reboiler	VOC	0.3	1.5
		NOx	16.6	72.8
		SO2	0.3	1.4
		PM	0.5	2.1
		CO	4.2	18.2
HF-453**	H-1104 15.0 MM Btu/hr Rerun Tower Reboiler	VOC	0.04	0.2
		NOx	2.15	9.4
		SO2	0.04	0.2
		PM	0.06	0.3
		CO	0.54	2.4
ST-451	Tank F-1117	VOC	0.3	0.7
ST-452	Tank F-1111 (6)	VOC	23.1	2.4
ST-453	Tank F-1112 (6)	VOC	23.1	2.4
ST-454	Tank F-1113	VOC	0.08	0.2

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*		
			lb/hr	TPY	
ST-455	Tank F-1114	VOC	0.06		0.1
ST-457	Tank F-1118	VOC	0.4		0.6
CT-451	Cooling Tower (4)	VOC	0.2		0.9
S-451	API Separator	VOC	1.1		4.5
<u>Paraxylene Unit 2 (continued)</u>					
FU-451	Fugitives (4)	VOC	12.6		55.3
FL-401	Flare M-301 (5)	VOC	2.1		9.1
		NOx	2.5		10.8
		CO	12.6		55.1
LPV-452	Regeneration Vent	VOC	<0.01		0.01
<u>Paraxylene Unit 1</u>					
HF-201	H-101 95.0 MM Btu/hr Isomerization Heater	VOC	0.2		1.0
		NOx	11.7		51.1
		SO2	0.2		1.0
		PM	0.3		1.5
		CO	2.9		12.8
HF-202	H-102 127.2 MM Btu/hr Stabilizer Tower Reboiler	VOC	0.3		1.4
		NOx	15.6		68.4
		SO2	0.3		1.3
		PM	0.4		2.0
		CO	3.9		17.1
HF-203**	H-103 114.5 MM Btu/hr Xylene Tower Reboiler	VOC	0.3		1.2
		NOx	14.1		61.6
		SO2	0.3		1.2
		PM	0.4		1.8
		CO	3.5		15.4
HF-203**	H-104 10.3 MM Btu/hr Rerun Tower Reboiler	VOC	0.03		0.1
		NOx	1.27		5.5
		SO2	0.02		0.1

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates*		
			lb/hr	TPY	
			PM	0.04	0.2
			CO	0.32	1.4
ST-201	Tank F-111 (6)		VOC	44.3	1.9
ST-202	Tank F-112 (6)		VOC	38.6	1.9
ST-203	Tank F-113		VOC	0.03	0.1
ST-204	Tank F-114		VOC	0.03	0.1
ST-205	Tank F-115		VOC	0.2	0.1
ST-206	Tank F-117		VOC	0.2	0.6
<u>Paraxylene Unit 1 (continued)</u>					
ST-207	Tank F-118		VOC	0.2	0.6
ST-208	Tank F-120		VOC	0.02	<0.01
ST-209	Tank F-121		VOC	40.7	11.2
FS-201	API Separator		VOC	1.0	3.6
FU-201	Fugitives (4)		VOC	12.3	53.9
FL-201	Flare M-1501 (5)		VOC	8.1	35.6
			NOx	3.4	14.7
			CO	17.1	75.0
SP-201	Truck Loading Rack		VOC	10.1	0.53
<u>Light Aromatics Fractionation/Toluene Disproportionation Unit:</u>					
F-204	H-501 10.0 MM Btu/hr LAF/TDP Furnace		VOC	0.03	0.1
			NOx	1.23	5.4
			SO2	0.02	0.1
			PM	0.04	0.2
			CO	0.31	1.3

FU-210	Fugitives (4)	VOC	1.1	4.9
ST-210	Tank F-116	VOC	0.1	0.4

Paraxylene Unit 3

ST-2118	Tank F-2118	VOC	0.4	0.6
ST-2113	Tank F-2113	VOC	0.2	0.5
FU-551	Fugitives (4)	VOC	3.1	13.5
FL-351	Flare M-117 (5)	VOC	0.3	1.1
		NOx	0.04	0.2
		CO	0.2	0.9
CT-351	Cooling Tower (4)	VOC	0.3	1.3

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (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 General Rule 101.1  
NOx - total oxides of nitrogen  
SO2 - sulfur dioxide  
PM - particulate matter  
CO - carbon monoxide
  - (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
  - (5) Emissions for anticipated routine abatement. Does not include upset conditions.
  - (6) Tanks F-1111 and F-1112 are not filled simultaneously. Tanks F-111 and F-112 are not filled simultaneously.
- \* Emission rates are based on and the facilities are limited by the following maximum operating schedule: Hrs/year 8,760
- \*\* A common stack is used.

Dated\_\_\_\_\_