

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 4757

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	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
P-3 Polyol Unit				
F2303PV	P3 Alcohol Tank	VOC	<0.01	<0.01
F2309PV	P3 DEOA Tank	VOC	<0.01	<0.01
P2102APVA	P3 Intermediate Tank	VOC	0.17	0.01
F2102APVB	P3 Intermediate Tank	VOC	0.17	0.01
F2102BPVA	P3 Intermediate Tank	VOC	0.17	0.01
F2102BPVB	P3 Intermediate Tank	VOC	0.17	0.01
D2201MV	P3 Neutralizer	VOC	0.53	0.25
F2209MV	P3 Slurry Tank	VOC	0.01	<0.01
F2206PV	P3 Filter Feed Tank	VOC	0.29	0.14
F2203PV	P3 Impurity Absorber Tank	VOC	0.02	0.01
F2204APV	P3 Flash Drum Feed Tank	VOC	0.46	0.11
F2204BPV	P3 Flash Drum Feed Tank	VOC	0.46	0.11
F2202V	P3 Off-Spec Product Storage Tank	VOC		<0.01
	<0.01			

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
F2205PV	P3 Stabilizer Tank	VOC	<0.01	<0.01
F2305APV	P3 Rundown Tank	VOC	<0.01	<0.01
F2305BPV	P3 Rundown Tank	VOC	<0.01	<0.01
F2306APV	P3 Product Tank	VOC	<0.01	<0.01
F2306BPV	P3 Product Tank	VOC	<0.01	<0.01
F2306CPV	P3 Product Tank	VOC	<0.01	<0.01
F2306DPV	P3 Product Tank	VOC	<0.01	<0.01
F2306EPV	P3 Product Tank	VOC	<0.01	<0.01
F2306FPV	P3 Product Tank	VOC	<0.01	<0.01
F2306GPV	P3 Product Tank	VOC	<0.01	<0.01
F2306HPV	P3 Product Tank	VOC	<0.01	<0.01
P3LE	P3 Loading Emissions	VOC	<0.01	<0.01
P3PUFE	P3 Process Unit Fugitive Emissions (4) 0.26	VOC		0.04
P3OSFE	P3 Oxide System Fugitive Emissions (4) 0.49	VOC		0.13
F2207VSV	P3 Flash Drum Vacuum System	VOC	0.40**	1.07**
D2101VSV	P3 Reactor Vacuum System	VOC	43.00**	24.90**

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
D2101VSV	P3 Reactor Vacuum System (5)	VOC	<0.01***	
	<0.01***			
P3FL1	P3 Flare	VOC	0.87***	0.51***
		NO _x	0.15	0.13***
		CO	1.33***	1.11***

P4 Polyol Unit

F3303APV	P4 Alcohol Tank	VOC	<0.01	<0.01
F3303BPV	P4 Alcohol Tank	VOC	<0.01	<0.01
F3303CPV	P4 Alcohol Tank	VOC	<0.01	<0.01
P3102APV	P4 Intermediate Tank	VOC	0.34	0.02
F3102BPV	P4 Intermediate Tank	VOC	0.34	0.02
F3102CPV	P4 Intermediate Tank	VOC	0.34	0.02
D3201MV	P4 Neutralizer	VOC	0.48	0.27
F3209MV	P4 Slurry Tank	VOC	0.02	0.01
F3206PV	P4 Filter Feed Tank	VOC	0.43	0.24
F3203PV	P4 Impurity Absorber Tank	VOC	0.02	0.01
F3204APV	P4 Flash Drum Feed Tank	VOC	0.15	0.12
F3204BPV	P4 Flash Drum Feed Tank	VOC	0.15	0.12

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
F3205PV	P4 Stabilizer Tank	VOC	<0.01	<0.01
F3305APV	P4 Rundown Tank	VOC	<0.01	<0.01
F3305BPV	P4 Rundown Tank	VOC	<0.01	<0.01
F3305CPV	P4 Rundown Tank	VOC	<0.01	<0.01
F3306APV	P4 Product Tank	VOC	<0.01	<0.01
F3306BPV	P4 Product Tank	VOC	<0.01	<0.01
F3306CPV	P4 Product Tank	VOC	<0.01	<0.01
F3306DPV	P4 Product Tank	VOC	<0.01	<0.01
F3306EPV	P4 Product Tank	VOC	<0.01	<0.01
F3306FPV	P4 Product Tank	VOC	<0.01	<0.01
P4LE	P4 Loading Emissions	VOC	<0.01	<0.01
P4PUFE 0.27	P4 Process Unit Fugitive Emissions (4)	VOC		0.04
P4OSFE 0.49	P4 Oxide System Fugitive Emissions (4)	VOC		0.13
D3101VSV	P4 Reactor Vacuum System (5)	VOC	<0.01	<0.01
P4FL1	P4 Flare	VOC	0.87	0.58
		NO _x	0.15	0.15
		CO	1.33	1.28

P5 Polyol Unit

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
F4303APV	P5 Alcohol Tank	VOC	<0.01	<0.01
F4303BPV	P5 Alcohol Tank	VOC	<0.01	<0.01
F4303CPV	P5 Alcohol Tank	VOC	<0.01	<0.01
P4102APV	P5 Intermediate Tank	VOC	0.34	0.02
F4102BPV	P5 Intermediate Tank	VOC	0.34	0.02
F4102CPV	P5 Intermediate Tank	VOC	0.34	0.02
D4201MV	P5 Neutralizer	VOC	0.48	0.27
F4209MV	P5 Slurry Tank	VOC	0.02	0.01
F4206PV	P5 Filter Feed Tank	VOC	0.43	0.24
F4203PV	P5 Impurity Absorber Tank	VOC	0.02	0.01
F4204APV	P5 Flash Drum Feed Tank	VOC	0.15	0.12
F4204BPV	P5 Flash Drum Feed Tank	VOC	0.15	0.12
F4205PV	P5 Stabilizer Tank	VOC	<0.01	<0.01
F4305APV	P5 Rundown Tank	VOC	<0.01	<0.01
F4305BPV	P5 Rundown Tank	VOC	<0.01	<0.01
F4305CPV	P5 Rundown Tank	VOC	<0.01	<0.01
F4306APV	P5 Product Tank	VOC	<0.01	<0.01
F4306BPV	P5 Product Tank	VOC	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
F4306CPV	P5 Product Tank	VOC	<0.01	<0.01
F4306DPV	P5 Product Tank	VOC	<0.01	<0.01
F4306EPV	P5 Product Tank	VOC	<0.01	<0.01
F4306FPV	P5 Product Tank	VOC	<0.01	<0.01
P5LE	P5 Loading Emissions	VOC	<0.01	<0.01
P5PUFE	P5 Process Unit Fugitive Emissions (4) 0.27	VOC		0.04
P5OSFE	P5 Oxide System Fugitive Emissions (4) 0.49	VOC		0.13
D4101VSV	P5 Reactor Vacuum System (5)	VOC	<0.01	<0.01
P5FL1	P5 Flare	VOC	0.87	0.58
		NO _x	0.15	0.15
		CO	1.33	1.28

(1) Emission point identification - either specific equipment designation or emissions 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

NO_x - nitrogen oxide

CO - carbon monoxide

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

(5) Emissions from the P3 Reactor (after flare installation), P4

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

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

Reactor and P5 Reactor represent other vacuum steps that may not go to the flare.

- * 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

- ** Emissions from the P3 Reactor and flash drum vacuum systems prior to flare installation which must be completed no later than the start-up of P5 but no later than November 1, 1999. After flare installation Emission Point No. F2207VSV will no longer exist.

- *** Emissions from the P3 Reactor vacuum system and flare after flare installation which must be completed no later than the start-up of P5 but no later than November 1, 1999.

Dated _____