EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 3179

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)	Emission Rates * lb/hr	TPY**
A1333/A1301	HIPA/A & S Flare (Routine Emissions)	Acetone	0.72	2.00
		CO	104.29	128.37
		NO_x	24.93	45.49
		VOC	202.53	118.68
		SO_2	3.43	14.99
A1333/A1301	HIPA/A & S Flare (MSS Operations)	CO	139.69	1.63
		NO_X	27.12	0.32
		VOC	365.60	4.82
A1333/A1301	HIPA/A & S Flare (7) (Combined Routine Emissions and MSS Operations)	Acetone	0.72	2.00
		CO	243.98	130.00
		NO_X	52.05	45.81
		VOC	568.13	123.50
		SO_2	3.43	14.99
ANALYZER	Process Analyzers	VOC	0.10	0.22
CPI	CPI Separator	VOC	4.0	3.0
CWT13	Cooling Water Tower	VOC	2.1	9.2
CWT18	Cooling Water Tower	VOC	2.1	9.2
D (306/307/308)	Phenol Tanks	VOC	49.60	8.80
D313	Toluene Tank	VOC	7.9	0.7
D342	Cumene Tank (5)	VOC	18.1	2.4
D342	Cumene Tank (6)	VOC	40.8	

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
D345	Acetone Tank	Acetone	0.7	1.1
D390	Acetone Tank	Acetone	1.7	2.0
D391	Acetone Tank	Acetone	1.7	2.0
D392	Acetone Tank	Acetone	1.7	2.0
D393	Benzene Tank	VOC	0.49	1.2
D394	Cumene Tank	VOC		1.5
D395	Cumene Tank	VOC		0.5
D394/D395	Cumene Tanks	VOC	35.3	
D400	Cumene Tank	VOC	4.2	0.5
D402/D403	Phenol Tanks	VOC	6.2	5.1
D8100	Storage Tank	Benzene	0.34	0.42
		VOC	0.38	0.90
E8256	Cleavage Reactor Vent	Acetone	1.3	5.7
E8309	Acetone Finishing Column	Acetone	1.0	4.4
EPFLARE	East Property Flare	CO	8.2	4.8
		NO_x	1.6	1.0
		VOC	27.0	15.8
EX67	Caustic Tank	Caustic	0.5	0.1
EX80	Wastewater Tank	Acetone	0.1	0.2
		VOC	0.4	0.4
F335	Acetone Tank	Acetone	0.8	0.9
F354	Acetone Tank	Acetone	2.1	4.0

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
F8300	Heavy Ends Furnace	CO	0.96	4.54
		NO_x	1.63	7.72
		PM_{10}	0.09	0.41
		SO_2	0.37	0.01
		VOC	0.06	0.30
F8301	Regen. Furnace	CO	0.18	0.15
		NO_x	0.50	0.44
		PM_{10}	0.07	0.06
		SO_2	0.16	0.14
		VOC	0.01	0.01
G330	Cumene Tank	VOC		15.2
G331	Cumene Tank	VOC		15.2
G330/G331	Cumene Tanks	VOC	40.8	
H9200	Incinerator	Acetone	9.00	8.24
		CO	0.91	1.30
		NO_x	6.92	8.84
		PM_{10}	0.40	0.52
		SO_2	0.10	0.10
		VOC	24.11	10.04
H87002	Thermal Oxidizer	Acetone	1.50	3.40
		CO	1.75	2.46
		NO_x	3.15	4.37
		PM_{10}	0.15	0.11
		VOC	6.78	26.72
LDLSDMK	Acetone Loading Losses	Acetone	3.34	2.71

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
P87107	Diesel Engine (Fire Water Pump)	CO	1.60	0.01
		NO_x	7.4	0.4
		PM_{10}	0.5	0.1
		SO_2	0.5	0.1
		VOC	0.6	0.1
P87921	Diesel Engine (Demin. Water Pump)	CO	0.4	0.1
		NO_x	1.9	0.1
		PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.1
S303A	Sulfuric Acid Tank	H_2SO_4	0.1	0.1
SCRWRTC/	Acetone Land Loading	Acetone	1.2	1.0
SCRWRTT	Acetone Land Loading	Acetone	1.2	1.0
T182	Acetone Tank	Acetone	1.14	1.76
T665	Acetone Tank	Acetone	0.4	1.0
T770	Water Tank	VOC	0.1	0.1
T87301	Acetone Tank	Acetone	0.6	
T87302	Acetone Tank	Acetone	0.6	
T87301/T87302	Acetone Tanks	Acetone		3.8
T87920	Water Tank	VOC	0.1	0.1
V8217	V-8217 Relief Drum	VOC	0.1	0.4
V8342	Vent Stream Collection Vessel	VOC	0.1	0.2
V9300	Phenol Land Loading	VOC	0.26	0.06
FUGPAU3	Phenol 3 Process Fugitives (4)	Acetone	1.46	6.39
		VOC	5.98	26.17

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
PAUFE	Phenol 2 Process Fugitives (4)	Acetone	2.23	9.78
		VOC	7.99	34.98
WRACKFE	Acetone Land Loading Process Fugitives (4)	Acetone	6.7	5.4
PLANNED MAINTENANCE STARTUP AND SHUTDOWN (MSS)				
CUMSD	Cumene Unit Shutdown/Decontamination	VOC	0.33	0.02
		Benzene	0.02	.01
EP Flare	Cumene Unit Shutdown/Decontamination	VOC	8.98	0.43
		Benzene	1.60	0.08
		NO_x	1.08	0.05
		CO	5.56	0.27
V87003	Thermal Oxidizer MSS	VOC	0.08	0.03
		Acetone	0.01	0.01
PAU2SD	Phenol-2 Unit Shutdown/Decontamination	VOC	3.85	0.18
		Acetone	0.74	0.04
H9200	Phenol-2 Unit SD/Decontamination	VOC	0.42	0.02
		Acetone	2.49	0.12
		NO_x	0.49	0.02
		CO	0.03	0.01
PAU3SD	Phenol-3 Unit Shutdown/Decontamination	VOC	3.04	0.15
		Acetone	0.47	0.02
H87002	Phenol-3 Unit SD/Decontamination	VOC	0.36	0.02
		Acetone	1.49	0.08
		NO_x	0.17	0.01
		CO	0.12	0.01
PAUMSSFUG	PAU MSS Stream Fugitive	VOC	2.59	0.31

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
	Emissions	Benzene	0.52	0.06
		Acetone	1.55	0.19
PAUPMPDCN	PAU Pump Decontamination	VOC	15.39	0.06
	Emissions	Benzene	3.08	0.01
		Acetone	9.23	0.04
PAUSAMPL	PAU Emissions from Loading	VOC	0.11	0.02
	Sample	Benzene	0.02	0.01
		Acetone	0.07	0.01
DSTMSSFUG	Distribution MSS Stream Fugitive	VOC	3.18	0.38
DSTPMPDCN	Distribution MSS	VOC	15.75	0.05
DSTSAMPL	Distribution Sample Emissions	VOC	0.12	0.01
DSTDCN	Vessel Shutdown and Degassing	VOC	1.54	0.04

(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 area name or fugitive source name.
(3) CO - carbon monoxide
NO_x - total oxides of nitrogen
PM_{10} - particulate matter (PM) equal to or 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_2 - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code ' 101.1

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) Emission limits during normal operations.
(6) Emission limits in the event that it becomes necessary to off-load a cumene barge into Tank D342.
(7) Emissions from routine operations and MSS related operations can occur simultaneously from EPN A1333/A1301.

* 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

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

Dated July 21, 2011