EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 914

DRAFT

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**
PK-1	Cracking Heater BA-100	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-2	Cracking Heater BA-101	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-3	Cracking Heater BA-102	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-4	Cracking Heater BA-103	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-5	Cracking Heater BA-104	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-6	Cracking Heater BA-105	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-8	Superheater BA-111	VOC	0.32	1.42
		CO	0.06	0.26
		NO_x	4.26	18.66
		SO_2	0.04	0.15
		PM	0.45	1.96
PK-9	Cracking Heater BA-106	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-10	Cracking Heater BA-107	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-11	Cracking Heater BA-108	VOC	1.17	4.58
		CO	13.00	47.82
		NO_x	17.20	63.78
		SO_2	0.13	0.50
		PM	1.10	4.29
PK-14	Cracking Heater BA-99	VOC	1.23	4.81
		CO	13.7	50.22
		NO_x	23.38	60.35
		SO_2	0.13	0.52
		PM	3.13	12.07
PK-16	Flare CB-801	VOC	1124	19.53
		CO	628	18.34
		NO_x	157	27.21
		SO_2	0.01	0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA Emission Rates * lb/hr	TPY**
PK-16M	Flare CB-801 SSM	VOC	1773	11.95
		CO	1794	11.51
		NO_x	345	2.37
		SO_2	47.59	0.12
PK-19	Regeneration Heater BA-201	VOC	0.03	0.07
		CO	0.39	1.14
		NO_x	0.47	1.36
		SO_2	0.01	0.01
		PM	0.01	0.03
PK-23	Methanol Tank	VOC	2.24	0.06
PK-24	Analyzers	VOC	0.50	2.19
PK-30	Steam Stripper Carbon Beds	VOC	0.14	0.05
PK-33	Biocide Tank	VOC	0.26	0.01
PK-34	Dispersant Tank	VOC	0.23	0.01
PK-35	Inhibitor Tank	VOC	0.23	0.01
PK-36	Coke Separator Stack	PM	0.55	0.66
PK-37	Coagulant Tank	VOC	0.23	0.01
PK-38	Cooling Tower	VOC	3.44	15.09
		PM	0.54	2.37
PK-39	Seal Tank	VOC	0.03	0.01
PK-41	Lube Oil Tank	VOC	0.01	0.01
PK-45	Anti-foulant Tank	VOC	0.02	0.01
PK-49	Red Oil Inhibitor Tank	VOC	1.57	0.01
PK-51	Anti-foulant Tank	VOC	2.26	0.02

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**
PK-53	Dispersant Tank	VOC	0.01	0.01
PK-54	Dispersant Tank	VOC	0.12	0.01
PK-61	Storm Water Carbon Canister	VOC	0.15	0.23

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PK-62	Tar Removal System	VOC	0.39		0.28
PK-63	DEHA Tank	VOC	0.03		0.01
PK-64	MOPA	VOC	0.09		0.01
PK-65	Brine Tank	VOC	0.01		0.01
PK-66	Bio-surfactant Tank	VOC	1.63		0.01
PKA-8A	LAD Tank	VOC	0.80		1.27
PKA-8B	HAD Tank	VOC	0.60		0.49
PKA-12	Railcar Loading/Unloading	VOC	0.23		1.00
PKF-F13	Fugitives (4)	VOC	25.66		112.70
PKF-F33	Fugitives (4)	VOC	0.37		1.64
NEW MSS Emissions					
VAC-LOAD (6)	Tank Vacuum Loading	VOC	2.12		0.01
TANK-DEGAS (6)	Tank/Vessel Degassing	VOC	28.79		0.02
LOVOC-DEGAS (6)	Quench Tower, Settler, Caustic Units	VOC (HAP)	0.51		<0.01
LINE-DEGAS (6)	Railcar Unload Lines	VOC	<0.01		<0.01
VESSEL-DEGAS (6)	Vessels, Towers, Reactors, Heat Exchangers, Process Lines	VOC	5.14		0.05

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CARB-LOAD (6)	Carbon Beds Changeouts	VOC	7.11	0.01
		PM	0.24	<0.01
		PM_{10}	0.15	<0.01
		$PM_{2.5}$	0.15	<0.01
CAT-LOAD (6)	Catalyst & Mole Sieves Changeouts	PM	1.99	0.09
		PM_{10}	0.86	0.05
		$PM_{2.5}$	0.86	0.05
SLUDGE-LOSS (6)	Tanks, Vessels, Heal Sludge, Standing and Purge Losses	VOC	2.32	0.01
SLUDGE-LOAD (6)	Sludge Vacuum Loading, Washwater	VOC	0.07	<0.01
DRUM-LOAD (6)	Tar Box Sludge Solids to Drums	VOC	4.91	0.04
FUG-OELS (6)	Fugitive Maintenance with Open-Ended Lines	VOC	3.04	0.03
PKA-8AM (6)	LAD Tank Roof Landing	VOC	0.75	0.02
PKA-8BM (6)	HAD Tank Roof Landing	VOC	0.31	0.01
PK-16M (6)	Flare CB-801 MSS	VOC	1172.94	94.64
		CO	1794.16	93.74
		NOx	383.56	19.94
		SO2	451.39	19.28

(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 an area name or fugitive source name.

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(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 - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$..
CO - carbon monoxide
SO_2 - sulfur dioxide

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

(5) Hourly rates for the two modes of flares operation are not additive. Annual allowable emission rates are additive.

(6) Planned MSS emissions (04/10)

* 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 or 8,760 Hrs/year

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

Table 1a Dated: 2/18/2010