

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 4943B

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)
DPV-002	T6254 Sump	EDC	0.01	0.01
		VOC	0.01	0.01
DPV-003	F6201 Furnace	NO <sub>x</sub>	2.31	(6)
		CO	5.87	(6)
		SO <sub>2</sub>	0.04	(6)
		PM <sub>2.5</sub>	0.52	(6)
		VOC	0.37	(6)
DPV-004	F6202 Furnace	NO <sub>x</sub>	2.52	(6)
		CO	5.87	(6)
		SO <sub>2</sub>	0.04	(6)
		PM <sub>2.5</sub>	0.52	(6)
		VOC	0.37	(6)
DPV-005	F6203 Furnace	NO <sub>x</sub>	2.45	(6)
		CO	3.01	(6)
		SO <sub>2</sub>	0.04	(6)
		PM	0.52	(6)
		PM <sub>10</sub>	0.52	(6)
		PM <sub>2.5</sub>	0.52	(6)
		VOC	0.37	(6)

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DPV-017	F6204 Furnace	NO <sub>x</sub>	5.18	(6)
		CO	5.86	(6)
		SO <sub>2</sub>	0.04	(6)
		PM <sub>2.5</sub>	0.52	(6)
		VOC	0.37	(6)
Total annual allowables for all four cracking furnaces		NO <sub>x</sub>	---	52.39
		CO	---	86.64
		SO <sub>2</sub>	---	0.68
		PM <sub>2.5</sub>	---	8.68
		VOC	---	6.28
DPV-006	Decoke Vessel V6212	CO	43.64	(7)
		VOC	2.17	(7)
		PM	1.11	(7)
		HCl	0.80	(7)
DPV-007	Decoke Vessel V6214	CO	43.64	(7)
		VOC	2.17	(7)
		PM	1.11	(7)
		HCl	0.80	(7)
Total annual allowables for the decoking emissions		CO	---	12.56
		VOC	---	0.62
		PM	---	0.32
		HCl	---	0.24
DPV-010	T6151 Tank	VOC	0.01	0.01
DPV-011	T6259 Tank	VOC	0.01	0.01
DPV-013	C1704 Scrubber	HCl	0.01	0.05

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DPV-014	T1790 Tank and Scrubber	HCl	0.01	0.01
DPV-015	A1750 Incinerator	NO <sub>x</sub>	1.40	6.13
		CO	5.42	4.35
		CO (8)	50.00	(8)
		VOC	0.85	0.25
		PM <sub>10</sub> (9)	1.58	6.92
		Cl <sub>2</sub> /HCl	5.44	23.83
		SO <sub>2</sub>	0.01	0.01
DPV-016	A1770 Incinerator	NO <sub>x</sub>	1.40	6.13
		CO	5.42	4.35
		CO (8)	50.00	(8)
		VOC	0.85	0.25
		PM <sub>10</sub> (9)	1.58	6.92
		Cl <sub>2</sub> /HCl	5.44	23.83
		SO <sub>2</sub>	0.01	0.01
DPV-019	T6255 Tank	NaOH	0.01	0.01
F-DPV-01	VCM Plant Fugitives (5)	EDC	2.73	11.95
		VCM	0.34	1.49
		VOC	1.49	6.49
		HCl	0.08	0.34
		Cl <sub>2</sub>	0.02	0.09
F-DPV-02	Incinerator Fugitives (5)	EDC	0.04	0.17
		VOC	0.12	0.53
F-DPV-03	VCM Storage Fugitives (5)	VCM	0.91	3.99
DPV-025	Cooling Tower	VOC	20.02	3.68

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DPV-028	Lube Oil Tank	VOC	0.01	0.01
F-DPV-MSS	Maintenance, Start up and Shutdown on VCM process spheres	VCM	81.93	0.33

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- (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
EDC	- ethylene dichloride
NO <sub>x</sub>	- total oxides of nitrogen
PM	- particulate matter, suspended in the atmosphere, including PM <sub>10</sub>
PM <sub>2.5</sub>	- particulate matter equal to or less than 2.5 microns in diameter
PM <sub>10</sub>	- particulate matter equal to or less than 10 microns in diameter
CO	- carbon monoxide
HCl	- hydrogen chloride
Cl <sub>2</sub>	- chlorine
VCM	- vinyl chloride monomer
SO <sub>2</sub>	- sulfur dioxide
NaOH	- sodium hydroxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.
- (6) Total annual emissions for all four cracking furnaces are limited to the combined allowables listed under "Total annual allowables for all four cracking furnaces."
- (7) Total annual emissions for the decoking vessels are limited to the combined allowables listed under "Total annual allowables for the decoking emissions."
- (8) Stack concentrations of CO may exceed 100 ppmv corrected to 7 percent oxygen during start-up, shutdown, and transition events.
- (9) The total long-term PM<sub>10</sub> allowable for both incinerators is 13.84 tpy. In order to allow increased operational flexibility, either incinerator may emit more than 6.92 tpy as long as both incinerators together emit no more than 13.84 tpy.

\* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

\_\_\_\_\_ Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year or 8,760 Hrs/year

Date: May 1, 2013