

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 18773 and PSD-TX-118M4

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>	
			<u>lb/hr</u>	<u>TPY**</u>
<u>Polyethylene Facility:</u>				
700	Rxn and Ethylene Purification Fugitives (4) (8)	VOC	6.04	25.56
704	Analyzer Vent	VOC	0.22	0.96
705	Small Flare	CO	52.86	70.31
		NO _x	17.08	
		VOC	48.34	
707	Cycle Gas Compressor Seal/Lube Oil Vent	VOC	0.11	0.48
708	Catalyst Transfer Tank Vent Filter	PM	0.01	0.01
		VOC	0.17	
709	Catalyst Transfer Tank Vent Filter	PM	0.01	0.01
		VOC	0.17	
710	G-3 Reactor Sed Bed Vent	Polyethylene Dust	8.13	0.20
712	Catalyst Vent Filter	PM	0.04	0.01
		VOC	0.006	
715	Pneumatic Conveyor Vent Filter	PM	0.01	0.01
716-717	Additive Bin Vent Filters	PM	0.02	0.01
716FF	P3 Pelleter Preblender Receiver	Additive Dust	0.13	0.08

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			lb/hr	TPY**
717FF	P3 Pelleter Antiox Receiver	Additive Dust	0.13	0.08
718	Trim Receiver Vent Filter	PM	0.03	0.03
720	Pelleting System Dust Collector	PM	0.01	0.01
721	Pelleter Dryer Exhaust	PM	0.95	3.11
720, 722-724	Storage/Blend Bin Vent Filters and Pelleting System Dust Collector	PM	0.10	0.31
		VOC	6.44	18.53
725	Pellet Loading Vent Filter	PM	0.10	0.31
246	Large Flare	CO	22.69	2.10
		NO _x	4.45	0.41
		VOC	48.78	5.22
246	Large Flare Start-Up, Shutdown, and Maintenance	CO	280.63	3.65
		NO _x	55.07	0.72
		VOC	610.00	7.93
1239	Additive Hopper	PM ₁₀	0.04	0.05
1240	Additive Hopper	PM ₁₀	0.04	0.05
1241	Additive Hopper	PM ₁₀	0.04	0.05
1242	Additive Hopper	PM ₁₀	0.04	0.05

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<u>Ethylene Propylene Rubber Facility:</u>				
1100	Flare before the Recycle Compressor Projects is Complete (7)	CO	100.77	141.23
		H ₂ S	0.01	0.01
		NO _x	12.07	16.48
		SO ₂	1.38	0.13
		VOC	105.61	137.73
	Flare after the Recycle Compressor Project is Complete	CO	92.98	90.96
		H ₂ S	0.01	0.01
		NO _x	11.16	10.61
		SO ₂	1.38	0.13
		VOC	98.66	92.81
	Flare Natural Gas Combustion (6)	CO	86.18	74.69
		NO _x	10.05	8.71
		SO ₂	0.50	0.43
		VOC	3.00	2.60
	Start-Up, Shutdown, Maintenance before the Recycle Compressor Project is Complete (5) (7)	CO	380.81	6.85
		H ₂ S	0.01	0.01
		NO _x	44.50	0.80
		SO ₂	1.38	0.02
		VOC	319.90	5.76
	Start-Up, Shutdown, Maintenance after the Recycle Compressor Project is Complete (5)	CO	386.79	10.21
		H ₂ S	0.01	0.01
		NO _x	45.20	1.19
		SO ₂	1.38	0.02
		VOC	325.25	8.76
1102	Dust Collection Exhaust	PM	0.39	0.56

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			lb/hr	TPY**
1105	Guard Filter	PM	0.07	0.27
1107	Filter Exhaust	PM	0.01	0.01
1108	Catalytic Oxidizer Vent	CO	1.65	7.22
		NO _x	4.23	16.61
		PM	0.03	0.11
		SO ₂	0.09	0.32
		VOC	7.98	25.89
1109/1110	Product Blending Dust Collectors	PM	0.76	3.35
		VOC	0.01	0.01
1111	Hopper Car Unloading Guard Filter	PM	0.10	0.02
1112	Hopper Car Loading Filter	PM	0.29	1.26
1113	Catalyst Surge Tank Filter	PM	0.01	0.01
1115	Analyzer Vents	VOC	0.04	0.17
1116	Sample Vents	VOC	0.01	0.01
1120	Catalyst Deactivator Storage Tank	VOC	0.01	0.01
1122	Bagging Bldg. Bag Filter	PM	0.17	0.04
		VOC	0.01	0.01
1123	Purged Product Container 1	PM	0.01	0.01
1124	Purged Product Container 2	PM	0.01	0.01
FUGS	Area Fugitives (4)	VOC	4.99	21.84

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Olefins II Facility

SD89	Fugitives - Product Ethylene (4)	VOC	5.81	25.31
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- (1) Emission point identification - either specific equipment designation or emission point number from a 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
 - CO - carbon monoxide
 - NO_x - total oxides of nitrogen
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
 - H₂S - hydrogen sulfide
 - SO₂ - sulfur dioxide
 - HCl - hydrogen chloride
- (4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable Special Conditions and permit application representations.
- (5) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (6) These hourly flare emissions represent worst-case scenarios from normal expected operations.
- (7) Flare emissions from natural gas consumption during process start ups and while the unit is shutdown.
- (8) These emission rates are Interim emission rates and will expire two years after the date of the 2004 amendment approval.

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

Hrs/day 24 Days/week 7 Weeks/year 52

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

Dated November 23, 2005