

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 |
| 709 | Catalyst Transfer Tank Vent Filter | PM | 0.01 | 0.01 |
| 710 | G-3 Reactor Sed Bed Vent | Polyethylene Dust | 8.13 | 0.20 |
| 712 | Catalyst Vent Filter | PM | 0.04 | 0.01 |
| 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 |
| 717FF | P3 Pelleter Antiox Receiver | Additive Dust | 0.13 | 0.08 |

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|---------------------------|--|-----------------------------|-------------------------|-------|
| | | | lb/hr | TPY** |
| 718 | Trim Receiver Vent Filter | PM | 0.03 | 0.03 |
| 720 | Pelleting System Dust Collector | PM | 0.01 | 0.01 |
| 721 | Pelletier 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 | |
| | | VOC | 48.78 | |
| 246 | Large Flare Start-Up, Shutdown, and Maintenance | CO | 280.63 | 1.68 |
| | | NO _x | 55.07 | 0.33 |
| | | VOC | 610.00 | |
| 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 |

Ethylene Propylene Rubber Facility:

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| | | | lb/hr | TPY** |
| 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 |
| 1105 | Guard Filter | PM | 0.07 | 0.27 |

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| | | | lb/hr | TPY** |
| 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 | |
| 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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|---------------------------|--------------------|-----------------------------|------------------|-------|
| | | | lb/hr | TPY** |

Olefins II Facility

| | | | | |
|------|----------------------------------|-----|------|-------|
| SD89 | Fugitives - Product Ethylene (4) | VOC | 5.81 | 25.31 |
|------|----------------------------------|-----|------|-------|

- (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) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) These hourly flare emissions represent worst-case scenarios from normal expected operations.
- (6) Flare emissions from natural gas consumption during process start ups and while the unit is shutdown.
- (7) These emission rates are Interim emission rates and will expire two years after the date of the 2004 amendment approval.
- (8) The 0.1 tpy fo VOC are authorized through Permit by Rule (PBR) Registration Number 45492. This PBR has not been voided.

* 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_____