

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission Rates*	Source	Air Contaminant	Emission	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

EMISSION SOURCES - EMISSION CAPS AND RATES

Permit Numbers 4437A, PSD-TX-808, and N014M1

This table lists the maximum allowable emission caps or 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 Rates *	Source	Air Contaminant	Emission	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

CO Sources

Polyethylene Catalyst Activation Facilities:

83	Activator No. 2 Main Burner	CO		
86	Activator No. 3 Main Burner	CO		
146	Activator No. 4 Main Burner	CO		
170	Activator No. 5 Main Burner	CO		
1000	Activator No. 1 Main Burner	CO		
1001	Activator No. 1 HEPA Filter	CO		
1003	Activator No. 5 HEPA Filter	CO		
Emission Cap		CO	4.11	17.66

Flare System **

216	Flare	CO
308	Flare	CO

EMISSION SOURCES - EMISSION CAPS AND RATES

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Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
408	Flare	CO		
	Emission Cap	CO	194.32	456.71
Flare System - Start up, Shutdown and Maintenance:				
216	Flare	CO		
308	Flare	CO		
408	Flare	CO		
	Emission Cap	CO	107.87	5.71

NO_x Sources:

Polyethylene Catalyst Activation Facilities:

83	Activator No. 2 Main Burner	NO _x
86	Activator No. 3 Main Burner	NO _x
146	Activator No. 4 Main Burner	NO _x
170	Activator No. 5 Main Burner	

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Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

NO_x
1000

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Emission Rates*	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

Activator No. 1 Main Burner

NO_x

Emission Cap

NO_x

3.09

13.46

Flare System

216

Flare

NO_x

308

Flare

NO_x

408

Flare

NO_x

Emission Cap

NO_x

24.25

53.27

Flare System - Start up, Shutdown and Maintenance:

216

Flare

NO_x

308

Flare

NO_x

408

Flare

NO_x

Emission Cap

NO_x

12.58

0.67

PM₁₀ Sources:

Polyethylene Catalyst Activation Facilities:

83

Activator No. 2 Main Burner

PM₁₀

86

Activator No. 3 Main Burner

PM₁₀

146

Activator No. 4 Main Burner

PM₁₀

170

Activator No. 5 Main Burner

PM₁₀

1000

Activator No. 1 Main Burner

PM₁₀

1004

Quench Station Vent (5)

PM₁₀

1005

Raw Catalyst Charging Building

PM₁₀

1006

Drum Unloading Enclosure

PM₁₀

1007

Catalyst Fugitives (4)

PM₁₀

Polyethylene Plants:

EMISSION SOURCES - EMISSION CAPS AND RATES

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Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
208	PE6 Pellet Blend Tanks	PM ₁₀		
209	PE6 Off-Spec Tank	PM ₁₀		
210	PE6 Pellet Silos	PM ₁₀		
212	PE6 Pellet Blender	PM ₁₀		
217	PE6 Extruder Feed/Blender	PM ₁₀		
218	PE6 Fluff Loadout			

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

PM₁₀
219

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
	PE6 Pellet Loadout	PM ₁₀		
254	PE6 Pellet Blend Tanks	PM ₁₀		
255	PE6 Off-Spec Tank	PM ₁₀		
257	PE6 Pellet Silos	PM ₁₀		
258	PE6 Pellet Blender	PM ₁₀		
261	PE6 Extruder Feed/Blender	PM ₁₀		
302	PE7 Powder Additive Tank	PM ₁₀		
304	PE7 Pellet Blend Tanks	PM ₁₀		
305	PE7 Pellet Loadout	PM ₁₀		
311	PE7 Fluff Loadout	PM ₁₀		
313	PE7 Extruder Feed/Blender	PM ₁₀		
352	PE7 Powder Additive Tank	PM ₁₀		
354	PE7 Pellet Blend Tanks	PM ₁₀		
355	PE7 Extruder Feed/Blender	PM ₁₀		
402	PE8 Powder Additive Tank	PM ₁₀		
405	PE8 Pellet Loadout	PM ₁₀		
411	PE8 Fluff Loadout	PM ₁₀		
412	PE8 Pellet Loading	PM ₁₀		
413	PE8 Extruder Feed/Blender	PM ₁₀		
452	PE8 Powder Additive Tank	PM ₁₀		
455	PE8 Extruder Feed/Blender	PM ₁₀		

HAC Polypropylene Plant:

39C	Pellet Loading Spot 14	PM ₁₀
39D	Hopper Car Loading	PM ₁₀
716	Train 1 Pure Additive Hopper	PM ₁₀
719	Train 1 Pellet Dryer	PM ₁₀
729	Train 2 Pellet Dryer	PM ₁₀
736	Trains 3,4 Pure Additive Hopper	PM ₁₀
739	Train 3 Pellet Dryer	PM ₁₀

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
750	Train 4 Pellet Dryer	PM ₁₀		
751	Baghouse	PM ₁₀		

GPH Polypropylene Plant:

39D	S-E PP Hopper Car Loading	PM ₁₀		
810A	Additive Vent Filter A	PM ₁₀		
810B	Additive Vent Filter B	PM ₁₀		
810C	Additive Vent Filter C	PM ₁₀		
810D	Additive Vent Filter D	PM ₁₀		
811	Additive Pressure ELBF	PM ₁₀		
813	Powder Feed Weigher Vent Filter	PM ₁₀		
816	Pellet Dryer Vent	PM ₁₀		
817A	Pellet Silo A Filter	P		

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

M₁₀
817B

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
817C	Pellet Silo B Filter	PM ₁₀		
819A	Pellet Silo C Filter	PM ₁₀		
819B	Blender Silo A	PM ₁₀		
820	Blender Silo B	PM ₁₀		
821A	Off Pellet Hopper	PM ₁₀		
821B	A-Pellet Feed Hopper	PM ₁₀		
822	B-Pellet Feed Hopper	PM ₁₀		
	Pellet Feed Hopper Filter	PM ₁₀		
	Emission Cap	PM₁₀	2.24	6.95

February 2002 Amendment Subcap

39A	Tank Farm	PM ₁₀		
39B	Pellet Loading Spot 13	PM ₁₀		
206	PE6 Powder Additive Tank	PM ₁₀		
252	PE6 Powder Additive Tank	PM ₁₀		
312	PE7 Pellet Loading	PM ₁₀		
404	PE8 Pellet Blend Tanks	PM ₁₀		
454	PE8 Pellet Blend Tanks	PM ₁₀		
812A	Grizzley Vent Filter	PM ₁₀		
812B	Grizzley Vent Filter	PM ₁₀		
823	GPH Dense Phase Conveyor System		PM ₁₀	
1001	Activator No. 1 HEPA Filter	PM ₁₀		
1002	Activator Nos. 2, 3 and 4 HEPA Filter		PM ₁₀	
1003	Activator No. 5 HEPA Filter	PM ₁₀		
	Emission Cap	PM₁₀	0.67	1.23

Non Polymer Sources

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission Rates*	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

902	Rail Repair Sandblasting Fugitives	Sandblasting Fugitives PM ₁₀	PM ₁₀	
	Emission Cap	PM ₁₀	1.88	1.13

SO₂ Sources:

Polyethylene Catalyst Activation Facilities

83	Activator No. 2 Main Burner	SO ₂		
86	Activator No. 3 Main Burner	SO ₂		
146	Activator No. 4 Main Burner	SO ₂		
170	Activator No. 5 Main Burner	SO ₂		
1000	Activator No. 1 Main Burner	SO ₂		
	Emission Cap	SO₂	0.02	0.08

VOC Sources:

Flare System:

216	Flare	VOC		
308	Flare	VOC		
408	Flare	VOC		
	Emission Cap	VOC	167.59	267.82

Flare System - Start up, Shutdown and Maintenance:

216	Flare	VOC		
308	Flare	VOC		
408	Flare	VOC		
	Emission Cap	VOC	141.06	9.59

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

Hydrocarbon Loading/Unloading Facility:

900	Piping Fugitives (4) (6)
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EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

VOC

Polyethylene
Catalyst
Activation
Facilities:

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
86	Activator No. 2 Main Burner	VOC		
146	Activator No. 3 Main Burner	VOC		
170	Activator No. 4 Main Burner	VOC		
1000	Activator No. 5 Main Burner	VOC		
	Activator No. 1 Main Burner	VOC		

Polyethylene Plants:

201	PE6 Flash Tank	VOC
207	PE6 Pellet Dryer	VOC
208	PE6 Pellet Blend Tanks	VOC
209	PE6 Off-Spec Tank	VOC
210	PE6 Pellet Silos	VOC
212	PE6 Pellet Blender	VOC
217	PE6 Extruder Feed/Blender	VOC
219	PE6 Pellet Loadout	VOC
250	PE6 Flash Tank	VOC
253	PE6 Pellet Dryer	VOC
254	PE6 Pellet Blend Tanks	VOC
255	PE6 Off-Spec Tank	VOC
257	PE6 Pellet Silos	VOC
258	PE6 Pellet Blender	VOC
259	PE6 Piping Fugitives (4)	VOC
260	PE6 Cooling Tower (4)	VOC
261	PE6 Extruder Feed/Blender	VOC
300	PE7 Flash Tank	VOC
303	PE7 Pellet Dryer	VOC
304	PE7 Pellet Blend Tanks	VOC
305	PE7 Pellet Loadout	VOC
306	PE7 Piping Fugitives (4)	VOC
307	PE7 Cooling Tower (4)	VOC
313	PE7 Extruder Feed/Blender	VOC
350	PE7 Flash Tank	VOC
353	PE7 Pellet Dryer	VOC
354	PE7 Pellet Blend Tanks	VOC

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

355

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

VOC				
400	PE8 Flash Tank	VOC		
403	PE8 Pellet Dryer	VOC		
405	PE8 Pellet Loadout	VOC		
406	PE8 Piping Fugitives (4)	VOC		
407	PE8 Cooling Tower (4)	VOC		
413	PE8 Extruder Feed/Blender	VOC		
450	PE8 Flash Tank	VOC		
453	PE8 Pellet Dryer	VOC		
455	PE8 Extruder Feed/Blender	VOC		

HAC Polypropylene Plant:

39C	Pellet Loading Spot 14	VOC		
56	Piping Fugitives (4)	VOC		
132	Cooling Tower (4)	VOC		
718	Train 1 Farrel Continuous Mixer Vent	VOC		
719	Train 1 Pellet Dryer	VOC		
728	Train 2 Farrel Continuous Mixer Vent	VOC		
729	Train 2 Pellet Dryer	VOC		
738	Train 3 and 4 Farrel Continuous Mixer Vent	VOC		
748	Train 4 Extruder Chute	VOC		
749	Train 4 Extruder Vent	VOC		
750	Train 4 Pellet Dryer	VOC		
751	Baghouse	VOC		

GPH Polypropylene Plant:

39D	S-E PP Hopper Car Loading	VOC		
801	Piping Fugitives (4)	VOC		
803	Cooling Tower (4)	VOC		
815	Extruder Vent	VOC		
816	Pellet Dryer Vent	VOC		
817A	Pellet Silo A Filter	VOC		

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
817B	Pellet			
	Silo B Filter			
	VOC			
817C	Pellet			
	Silo C Filter			
	VOC			
819A				

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
VOC				
819B	Blender Silo B	VOC		
820	Off Pellet Hopper	VOC		
821	B-Pellet Feed Hopper	VOC		
822	Pellet Feed Hopper	VOC		
Emission Cap		VOC	137.64	527.72

February 2002 Amendment Subcap

39A	Tank Farm	VOC		
39B	Pellet Loading Spot 13	VOC		
206	PE6 Powder Additive Tank	VOC		
252	PE6 Powder Additive Tank	VOC		
312	PE7 Pellet Loading	VOC		
404	PE8 Pellet Blend Tanks	VOC		
454	PE8 Pellet Blend Tanks	VOC		
812A	Grizzley Vent Filter	VOC		
812B	Grizzley Vent Filter	VOC		
823	GPH Dense Phase Conveyor System	VOC		
1001	Activator No. 1 HEPA Filter	VOC		
1002	Activator Nos. 2, 3 and 4 HEPA Filter	VOC		
1003	Activator No. 5 HEPA Filter	VOC		
Emission Cap		VOC	0.67	1.23

Non Polymer Sources

DEG-1	Maintenance Shop Degreaser No. 1	VOC		
DEG-2	Maintenance Shop Degreaser No. 2	VOC		
DEG-3	Catalyst Activator Degreaser	VOC		
DEG-4	PE Maintenance Shop Degreaser	VOC		
DEG-6	Hoist and Crane Shop Degreaser	VOC		
8	Painting Fugitives	VOC		

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission Rates*		Source	Air Contaminant		<u>Emission</u>	
Point No. (1)		Name (2)		Name (3)	lb/hr	TPY
901	Storage Fugitives (4)		VOC			
903	Painting Fugitives		VOC			
Emission Cap		VOC	28.15	27.02		

Wastewater Ponds

123	Wastewater Pond No. 1	VOC
124	Wastewater Pond No. 2	

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

VOC
125

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission Rates*	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

Wastewater Pond No. 3 VOC

126 Wastewater Pond No. 4 VOC

Emission Cap VOC 0.87 2.21

Hexene Sources:

Flare System:

216 Flare Hexene

308 Flare Hexene

408 Flare Hexene

Hydrocarbon Loading/Unloading Facility:

900 Piping Fugitives (4) (6) Hexene

Polyethylene Plants:

201 PE6 Flash Tank Hexene

217 PE6 Extruder Feed/Blender Hexene

250 PE6 Flash Tank Hexene

259 PE6 Piping Fugitives (4) Hexene

261 PE6 Extruder Feed/Blender Hexene

300 PE7 Flash Tank Hexene

306 PE7 Piping Fugitives (4) Hexene

313 PE7 Extruder Feed/Blender Hexene

350 PE7 Flash Tank Hexene

355 PE7 Extruder Feed/Blender Hexene

400 PE8 Flash Tank Hexene

406 PE8 Piping Fugitives (4) Hexene

413 PE8 Extruder Feed/Blender Hexene

450 PE8 Flash Tank Hexene

455 PE8 Extruder Feed/Blender Hexene

Emission Cap Hexene 22.1 82.3

EMISSION SOURCES - EMISSION CAPS AND RATES

AIR CONTAMINANTS DATA

Emission <u>Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY

216, 308,
408

EMISSION SOURCES - EMISSION CAPS AND RATES

VOC***	38.73	117.56							
20	Emergency Generator	CO	2.61	0.13					
	(100 hours per calendar year)	NO _x	12.09	0.60					
		PM ₁₀	0.78	0.04					
		SO ₂	0.80	0.04					
		VOC	0.96	0.05					
27	Water Well Number Five Turbine	CO	83.89	16.78					
	(400 hours per calendar year)	NO _x	39.61	7.92					
		PM ₁₀	0.02	0.01					
		SO ₂	7.34	0.26					
		VOC	20.98	4.20					
65	Underground Gasoline Tank	VOC	8.33	0.04					
65.2	Diesel Tank	VOC	0.26	0.01					
826	GPH Vacudense Transportation Air	CO	0.40	0.32					
	Compressor	NO _x	5.26	4.26					
	(1,619 hours per calendar year)	PM ₁₀	0.10	0.08					
		SO ₂	1.43	1.16					
		VOC	0.29	0.24					

- (1) Emission point identification - either specific equipment designation or emission point number (EPN) from plot plan.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide
 NO_x - total oxides of nitrogen
 PM₁₀ - particulate matter (PM) 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.
 SO₂ - 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) Emergency use only.
- (6) Isobutane, hexene, and n-hexane emissions only. Emissions of other materials at Emission Point No. (EPN) 900 are covered in Permit Number 5662A.

* 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

EMISSION SOURCES - EMISSION CAPS AND RATES

** The PSD-TX-808 emissions are those CO flare emissions attributable to Polyethylene VI, VII, and VIII.

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*** These are the N014M1 emissions only. The PE/PP off-gases are used as fuel gas in flares identified by EPN above. Other emissions

EMISSION SOURCES - EMISSION CAPS AND RATES

associated with these flares are included in the emission caps found in the maximum allowable emission caps or rates table of this permit.