

EMISSION SOURCES - EMISSION CAPS AND RATES

Flexible 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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			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	4.07	17.66

Flare System **

216	Flare	CO		
308	Flare	CO		
408	Flare	CO		
	Emission Cap	CO	192.80	394.23

Flare System - Startup, Shutdown, and Maintenance:

216	Flare	CO		
308	Flare	CO		
408	Flare	CO		
	Emission Cap	CO	114.95	7.76

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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>

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	NO _x		
1000	Activator No. 1 Main Burner	NO _x		
Emission Cap		NO_x	3.12	13.45

Flare System

216	Flare	NO _x		
308	Flare	NO _x		
408	Flare	NO _x		
Emission Cap		NO_x	24.08	45.98

Flare System - Startup, Shutdown, and Maintenance:

216	Flare	NO _x		
308	Flare	NO _x		
408	Flare	NO _x		
Emission Cap		NO_x	13.41	0.91

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

PM₁₀ Sources:

Polyethylene Catalyst Activation Facilities:

83	Activator No. 2 Main Burner	PM ₁₀
86	Activator No. 3 Main Burner	PM ₁₀
146	Activator No. 4 Main Burner	PM ₁₀
170	Activator No. 5 Main Burner	PM ₁₀
1000	Activator No. 1 Main Burner	PM ₁₀
1004	Quench Station Vent (5)	PM ₁₀
1005	Raw Catalyst Charging Building	PM ₁₀
1006	Drum Unloading Enclosure	PM ₁₀
1007	Catalyst Fugitives (4)	PM ₁₀

Polyethylene Plants:

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 A, B	PE6 Extruder Feed/Blender	PM ₁₀
218	PE6 Fluff Loadout	PM ₁₀
219	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 A, B	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

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
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
716	Train 1 Pure Additive Hopper	PM ₁₀
736	Trains 3, 4 Pure Additive Hopper	PM ₁₀
748	Train 4 Extruder Feed Chute	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
817A	Pellet Silo A Filter	PM ₁₀
817B	Pellet Silo B Filter	PM ₁₀
817C	Pellet Silo C Filter	PM ₁₀
819A	Blender Silo A	PM ₁₀
819B	Blender Silo B	PM ₁₀
821 A, B	Pellet Feed Hopper	PM ₁₀
822	Pellet Feed Hopper Filter	PM ₁₀
827	Railcar Unloading Filter Receiver	PM ₁₀

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Emission	Source	Air Contaminant	<u>Emission Rates *</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
Emission Cap		PM ₁₀	2.50	6.49
February 2002 Amendment Submittal Emission Cap				
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		
812 A, B	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		PM ₁₀	0.67	1.23
Non Polymer Sources				
10	Sandblasting Fugitives	PM ₁₀		
902	Rail Repair Sandblasting Fugitives	PM ₁₀		
Emission Cap		PM ₁₀	2.10	1.26
<u>SO₂ Sources:</u>				
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		SO ₂	0.02	0.08

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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>

VOC Sources:

Polyethylene Catalyst Activation Facilities:

83	Activator No. 2 Main Burner	VOC
86	Activator No. 3 Main Burner	VOC
146	Activator No. 4 Main Burner	VOC
170	Activator No. 5 Main Burner	VOC
1000	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 A, B	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	VOC
261 A, B	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	VOC

EMISSION SOURCES - EMISSION CAPS AND RATES

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>
313	PE7 Extruder Feed/Blender	VOC		
350	PE7 Flash Tank	VOC		
353	PE7 Pellet Dryer	VOC		
354	PE7 Pellet Blend Tanks	VOC		
355	PE7 Extruder Feed/Blender	VOC		
400	PE8 Flash Tank	VOC		
403	PE8 Pellet Dryer	VOC		
404	PE8 Pellet Blending and Storage	VOC		
405	PE8 Pellet Loadout	VOC		
406	PE8 Piping Fugitives (4)	VOC		
407	PE8 Cooling Tower	VOC		
413	PE8 Extruder Feed/Blender	VOC		
450	PE8 Flash Tank	VOC		
453	PE8 Pellet Dryer	VOC		
454	PE8 Pellet Blend Tanks	VOC		
455	PE8 Extruder Feed/Blender	VOC		

HAC Polypropylene Plant:

132	Cooling Tower	VOC		
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GPH Polypropylene Plant:

803	Cooling Tower	VOC		
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Emission Cap	VOC	106.95	444.13
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June 2005 Amendment Submittal Emissions Cap (Subcap)

HAC Polypropylene Plant:

39A	Tank Farm	VOC		
39B	Pellet Loading Spot 13	VOC		
39C	Pellet Loading Spot 14	VOC		
56	Piping Fugitives (4)	VOC		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
729	Train 2 Pellet Dryer	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		
816	Pellet Dryer Vent	VOC		
817A	Pellet Silo A Filter	VOC		
817B	Pellet Silo B Filter	VOC		
817C	Pellet Silo C Filter	VOC		
819A	Blender Silo A	VOC		
819B	Blender Silo B	VOC		
821 A, B	Pellet Feed Hopper	VOC		
822	Pellet Feed Hopper	VOC		
824	GPH Aeration Hopper	VOC		
	Transportation Blower			
825	GPH Powder Silo Transportation	VOC		
	Blower Vent			
Emission Cap		VOC	31.88	98.38

February 2002 Amendment Submittal Emission Cap

256	PE6 Analyzer Vents	VOC		
356	PE7 Analyzer Vents	VOC		
456	PE8 Analyzer Vents	VOC		
752	Analyzer Vents	VOC		
754	Hot Oil Systems	VOC		
Emission Cap		VOC	0.19	0.82

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

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		
901	Storage Fugitives (4)	VOC		
903	Painting Fugitives	VOC		
	Emission Cap	VOC	28.07	23.19

Wastewater Ponds

123	Wastewater Pond No. 1	VOC		
124	Wastewater Pond No. 2	VOC		
125	Wastewater Pond No. 3	VOC		
126	Wastewater Pond No. 4	VOC		
	Emission Cap	VOC	0.86	2.21

Flare System:

216	Flare	VOC		
308	Flare	VOC		
408	Flare	VOC		
	Emission Cap	VOC	157.39	200.47

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AIR CONTAMINANTS DATA

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

Flare System - Startup, Shutdown and Maintenance:

216	Flare	VOC		
308	Flare	VOC		
408	Flare	VOC		
	Emission Cap	VOC	147.86	11.83

Hexene Sources:

Flare System:

216	Flare	Hexene
308	Flare	Hexene
408	Flare	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	21.85	81.18

N014M1 Emission Cap

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
216, 308, 408	PE/PP Off-Gases	VOC***	71.59	113.62
20	Emergency Generator (100 hours per calendar year)	CO	2.61	0.13
		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 (405 hours per calendar year)	CO	29.04	1.04
		NO _x	17.25	0.62
		PM ₁₀	0.07	0.01
		SO ₂	7.34	0.26
		VOC	0.23	0.01
39Df	Hopper Car Loading Spot	PM ₁₀	0.01	0.01
		VOC	0.03	0.04
65	Underground Gasoline Tank	VOC	8.33	0.04
65.2	Diesel Tank	VOC	0.26	0.01
721	Train 2 Weigh Tank	PM ₁₀	0.01	0.01
		VOC	0.01	0.01
722	Train 2 Finishing Vent	PM ₁₀	0.03	0.12
		VOC	0.13	0.15
728	Train 2 Farrel Continuous Mixer Vent	VOC	0.30	0.34
732	Train 3 Finishing Vent	PM ₁₀	0.03	0.12
		VOC	0.85	1.11
741	Train 4 Weigh Tank	PM ₁₀	0.01	0.02
		VOC	0.03	0.04
761	HAC Train 4 Peroxide Hopper	PM ₁₀	0.01	0.02

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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>
823	GPH Dense Phase Conveyor System 0.01		PM ₁₀	0.01
900	Piping Fugitives (4) (6)	VOC	0.25	1.12
1001	Activator No. 1 HEPA Filter Vent	AA	0.55	1.71
1002	Activator No. 2-4 HEPA Filter Vent	AA	0.55	1.71
1003	Activator No. 5 HEPA Filter Vent	AA	0.55	1.71

- (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 PM greater than 10 microns is emitted.
SO₂ - sulfur dioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
AA - acetic acid
- (4) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (5) Emergency use only.
- (6) Isobutane, hexene, and n-hexane emissions only. Emissions of other materials at 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.
- *** These are the N014M1 emissions only. The PE/PP off-gases are used as fuel gas in flares identified by EPN above. Other emissions associated with these flares are included in the emission caps found in the maximum allowable emission caps or rates table of this permit.

Dated January 5, 2006