Emission Sources - Maximum Allowable Emission Rates

Permit Number 19016

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)
Emission Limits (Non-MSS)				
LDFLARE (14)	LPE Process Flare ME-73007	VOC	794.51	108.84
		NO_x	75.92	18.77
		CO	386.87	97.52
		SO_2	1.00	0.57
LDFTO (14) (15)	Flameless Thermal Oxidizer	VOC	1.43	1.66
		NO_x	5.52	4.75
		CO	20.17	11.56
		SO_2	0.08	0.17
		PM_{10}	0.09	0.11
LDFLARE/LDFTOCAP (14)		VOC	794.51	108.84
		NO_x	75.92	18.77
		CO	386.87	97.52
		SO_2	1.00	0.57
LDFLARE (15)	LPE Process Flare ME-73007	VOC	794.51	43.53
		NO_x	75.92	7.53
		CO	386.87	97.52
		SO_2	1.00	0.57
L1TOA492	Reactor 1 Analyzer Thermal Oxidizer	VOC	0.01	0.01
L1TOA891	Reactor 2 Analyzer	VOC	0.01	0.01
L1T06A04	O_2 Analyzer Thermal	VOC	0.01	0.02
LDBLR1	Boiler No. 1 (46.3 MMBtu/hr)	VOC	1.62	7.10
		NO_x	2.78	12.17
		CO	3.80	16.63
		SO_2	0.65	2.84

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.35	1.52
LDBLR2	Boiler No. 2 (46.3 MMBtu/hr)	VOC	0.25	0.93
		NO_x	5.56	20.68
		CO	3.80	14.13
		SO_2	0.65	2.41
		PM_{10}	0.35	1.29
L1BF25033	E4 Anti-Oxidant (A/O) Melt Tank Filter	PM_{10}	0.01	0.01
Additive System	Additive Systems (6) VOC Cap	VOC	0.01	0.01
L1TK25054	E4 A/O Melt Tank	VOC	(6)	(6)
L1TK25055	E4 A/O Melt Day Tank	VOC	(6)	(6)
L1TK25053	E4 A/O Storage Tank	VOC	(6)	(6)
L1V33105V1	A/O Melt Tank	VOC	(6)	(6)
L1V33205V1	A/O Melt Tank	VOC	(6)	(6)
L1V33105V2	A/O Feed Tank	VOC	(6)	(6)
L1V33205V2	A/O Feed Tank	VOC	(6)	(6)
L1TK24137	E3 Bulk A/O Storage Tank	VOC	(6)	(6)
L1TK24138	E3 Bulk A/O Storage Tank	VOC	(6)	(6)
L1BFE2ADD1	E2 Common Additive Vent No. 1	VOC	(6)	(6)
		PM_{10}	0.02	0.01
Catalyst System	Catalyst System VOC Cap (7)	VOC	10.65	2.17
L1VV03002A	Dehydrator Operation	PM_{10}	0.01	0.01
L1VV03002B	Silica Dehydrator Operation	PM_{10}	0.01	0.01
L1VV03004	Base Blow Tank	PM_{10}	0.01	0.01
L1VV03243	TOB Blow Tank	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03301	Reduction Blow Tank	VOC	(7)	(7)
		PM_{10}	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

L1VV03302	Catalyst Storage Bin V-03302	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03303	Catalyst Storage Bin V-03303	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03304	Catalyst Storage Bin V-03304	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03305	Catalyst Storage Bin V-03305	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03306	Catalyst Storage Bin V-03306	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03307	Catalyst Storage Bin V-03307	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SFR1CAT1	Common Reactor 1 Catalyst Vent No. 1	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SFR2CAT1	Common Reactor 2 Catalyst Vent No. 1	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SF03252	Catalyst Loading Station No. 1	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SF03327	Catalyst Loading Station No. 2	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SF03352	Catalyst Loading Station No. 3	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1VV03290	Catalyst Weigh Pot (10)	HCl	0.36	0.08
L1SF04147	Catalyst Hold Tank Filter	VOC	(7)	(7)
		PM_{10}	0.01	0.01
L1SF04172	Catalyst Vent Filter	VOC	(7)	(7)
		PM_{10}	0.02	0.01
L1SF04148	Catalyst hold Tank Filter	VOC	(7)	(7)

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.01	0.01
Residual System	Residual VOC Cap (8)	VOC	52.92	67.74
L1ANCATE2	O_2 Analyzer in Catalyst Area	VOC	0.10	0.05
L1ANCATM1	O_2 Analyzer in Catalyst Area	VOC	0.35	0.35
L1SF06111	Catalyst Blow Tank Filter	VOC	1.50	0.20
		PM_{10}	0.01	0.01
L1SF06112	Loading Station Vent Filter	VOC	0.63	0.08
		PM_{10}	0.01	0.01
L1SF06113	Loading Station Vent Filter	VOC	0.63	0.08
		PM_{10}	0.01	0.01
L1SF06114	Blended Catalyst Loading Station Vent Filter	PM_{10}	0.01	0.01
L1SF06115	Waste Catalyst Vent Filter	PM_{10}	0.01	0.01
L1SF06116	PT Maintenance Station Vent Filter	PM_{10}	0.01	0.01
L1YF01310A	Extruder Feed Bin 1A	VOC	(8)	(8)
		PM_{10}	0.39	0.44
L1YF01310B	Extruder Feed Bin 1B	VOC	(8)	(8)
		PM_{10}	0.39	0.44
L1YF01310D	Extruder Feed Bin 1D	VOC	(8)	(8)
		PM_{10}	0.39	0.44
L1YF02310A	E2 O/S Pellet Bin Filter	VOC	(8)	(8)
		PM_{10}	0.39	0.42
L1YF02310D	E2 Granular Feed Bin Filter	VOC	(8)	(8)
		PM_{10}	0.43	1.88
L1BF25040	E4 Feed Bin Filter	VOC	(8)	(8)
		PM_{10}	0.43	1.65
L1BF24157	E3 Masterblend Resin Bin Filter	VOC	(8)	(8)
		PM_{10}	0.53	0.15

Emission Sources - Maximum Allowable Emission Rates

L1BF24001	E3 Feed Bin Filter	VOC	(8)	(8)
		PM_{10}	0.43	0.60
L1BF24002	E3 Feed Bin Filter	VOC	(8)	(8)
		PM_{10}	0.43	0.59
L1BF24003	E3 Feed Bin Filter	VOC	(8)	(8)
		PM_{10}	0.43	0.59
L1YF01328	E1 Feed Hopper Filter	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1BF23127	E2 Feed Hopper Filter	VOC	(8)	(8)
		PM_{10}	0.01	0.02
L1BF24010	E3 Feed Hopper Filter and M/B Conveyer Filter	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1BF25034	E4 Resin Screw Conveyer and Feed Hopper Filter	VOC	(8)	(8)
		PM_{10}	0.01	0.03
L1BF05123	RF-05123 Vent Filter	VOC	(8)	(8)
		PM_{10}	0.05	0.21
L1BF05223	RF-05223 Vent Filter	VOC	(8)	(8)
		PM_{10}	0.05	0.21
L1BF30108	Granular Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.08
L1BF30109	Granular Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.08
L1BF30110	Granular Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.08
L1VD01427	E1 Pellet Pickup Hopper Vent	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1VD02427	E2 O/S Pellet Pickup Hopper Vent	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1BN24018	E3 Pellet Pickup Hopper Vent	VOC	(8)	(8)

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.01	0.02
L1BF30208	Pellet Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.27	0.03
L1BF30209	Pellet Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.27	0.03
L1BF30210	Pellet Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.27	0.03
L1BF30211	Pellet Weigh Bin Filter	VOC	(8)	(8)
		PM_{10}	0.27	0.03
L1BF30123	Granule Blender Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.27
L1BF30124	Granule Blender Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.27
L1BF30125	Granule Blender Filter	VOC	(8)	(8)
		PM_{10}	0.55	0.27
Additive	Pellet Blender PM_{10} Cap (9)	PM_{10}	2.48	4.55
L1BF30126	O/S Pellet Blender Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1BF30223	Pellet Blender Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1BF30224	Pellet Blender Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1BF30225	Pellet Blender Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1BF30226	Pellet Blender Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF01416A	Pellet Blender 1A Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF01416B	Pellet Blender 1B Filter	VOC	(8)	(8)

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	(9)	(9)
L1YF01416C	Pellet Blender 1C Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF02416A	Pellet Blender 2A Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF02416B	Pellet Blender 2B Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF03416A	Pellet Blender 3A Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YF03416B	Pellet Blender 3B Filter	VOC	(8)	(8)
		PM_{10}	(9)	(9)
L1YD01310	E1 Pellet Dryer Vent	VOC	(8)	(8)
		PM_{10}	0.17	0.75
L1DR23117	E21 Pellet Dryer Vent	VOC	(8)	(8)
		PM_{10}	0.51	2.25
L1DR24012	E3 Pellet Dryer Vent	VOC	(8)	(8)
		PM_{10}	0.42	1.82
L1DR25010	E4 Pellet Dryer Vent	VOC	(8)	(8)
		PM_{10}	0.42	1.82
L1BF33201	Pellet Receiver Filter (Tr2)	VOC	(8)	(8)
		PM_{10}	0.20	0.87
L1BF33503	Scalperator Vent Filter (Tr2)	VOC	(8)	(8)
		PM_{10}	0.37	1.61
L1CYV580J	Elutriator Cyclone Vent (Tr3)	VOC	(8)	(8)
		PM_{10}	0.03	0.12
L1CL281JV1	Scalperator Cyclone Vent (Tr3)	VOC	(8)	(8)
		PM_{10}	0.37	1.28
L1CL281JV2	Scalperator Cyclone Vent (Tr3)	VOC	(8)	(8)
		PM_{10}	0.37	1.28

Emission Sources - Maximum Allowable Emission Rates

L1BF30127	Granule Filter Receiver	VOC	(8)	(8)
		PM_{10}	0.34	0.45
L1BF30138	Common Filter Receiver (Tr1/Tr2)	VOC	(8)	(8)
		PM_{10}	0.34	0.76
L1BF30227	Pellet Receiver Filter (Tr2)	VOC	(8)	(8)
		PM_{10}	0.34	1.50
L1BF33101	Granule Receiver Filter (Tr1)	VOC	(8)	(8)
		PM_{10}	0.40	0.53
L1BF37107	Pellet Receiver Filter (Tr2)	VOC	(8)	(8)
		PM_{10}	0.15	0.66
L1ME33263	O/S Loading Cyclone (Tr1)	VOC	(8)	(8)
		PM_{10}	0.05	0.03
L1BD15004	Pellet Pullback Receiver (Tr1)	VOC	(8)	(8)
		PM_{10}	0.05	0.01
L1ANALYZER	LPE Analyzer Vents	VOC	0.52	2.29
LDCOOLTWR	Cooling Tower (11)	VOC	0.37	1.63
L1FINBLDG1	E1/E2 Finishing Building fugitives (5)	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1FINBLDG3	E3 Finishing Building fugitives (5)	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1FINBLDG4	E4 Finishing Building fugitives (5)	VOC	(8)	(8)
		PM_{10}	0.01	0.01
L1TKAST1A	Gasoline Storage Tank	VOC	65.21	0.61
L1TKAST1B	Diesel Storage Tank	VOC	0.26	0.01
LOAD8LDTOL	Toluene Loading	VOC	0.21	0.01
L1SF03539	Catalyst Loading Station Filter	VOC	1.65	0.30
		PM_{10}	0.01	0.01
L1SF03540	Catalyst Loading Station Filter	VOC	1.65	0.30
		PM_{10}	0.01	0.01
L1SF03541	Catalyst Loading Station Filter	VOC	1.65	0.30

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.01	0.01
L1SF03542	Catalyst Loading Station Filter	VOC	1.65	0.30
		PM_{10}	0.01	0.01
L1SF03543	Catalyst Loading Station Filter	VOC	1.65	0.30
		PM_{10}	0.01	0.01
HDBF4406	Additive Feed Drum Bag Filter	PM_{10}	0.01	0.01
HDBF4407	Additive Bag Dumping Bag Filter	PM_{10}	0.16	0.01
HDBF4434	Extruder Building Bag Filter	PM_{10}	0.02	0.01
HDBF4463	Repellet Hopper Bag Filter	PM_{10}	0.02	0.01
HDBF4801	Hopper Car Loading Bag Filter	PM_{10}	0.43	0.96
		VOC	0.10	0.25
HDBF4802	Hopper Car Unloading Bag Filter	PM_{10}	0.06	0.01
HDBLR3	Boiler No. 3	PM_{10}	0.35	1.51
		VOC	0.25	1.10
		NO_x	5.57	24.39
		SO_2	0.65	2.85
		CO	9.28	40.66
HDCATOX	Catalytic Oxidizer	PM_{10}	0.02	0.06
		VOC	2.22	6.43
		NO_x	0.43	1.23
		SO_2	0.04	0.10
		CO	0.06	0.17
HDCYS4402	Pellet Dryer Cyclone Vent	PM_{10}	0.16	0.56
		VOC	1.95	3.94
HDFINBLDG	Finishing Building	PM_{10}	0.01	0.01
		VOC	(12)	(12)
HDFLARE	HDPE Flare	VOC	14.11	44.98

Emission Sources - Maximum Allowable Emission Rates

		NO_x	3.37	7.62
		SO_2	0.22	0.03
		CO	17.18	38.81
HDOILWATER	Oil Water Separator	VOC	0.51	2.19
HDPROCSEW	Process Sewer	VOC	0.14	0.59
HDSAMSLRY	Slurry Sampling	VOC	0.21	0.24
HDTK4702	Tank 4702	VOC	0.52	1.50
HDTK4703	Tank 4703	VOC	0.32	0.74
HDVVANALY	Analyzer Vents	VOC	0.01	0.01
HDVVDM4401	Liquid Additive Melt Drum	VOC	0.01	0.01
HDVVDM4402	Liquid Additive Hold Drum	VOC	0.01	0.01
HDTKV83011	Oily Water tank	VOC	9.89	0.12
HDTK95050	Amine Storage Tank	VOC	0.03	0.01
HDTK6510	Amine Storage Tank	VOC	0.03	0.01
MBPPFUGEM	Plantwide Process Fugitives (5)	VOC	7.74	34.07
L1YF01313	E1 Talc Storage Bin Filter	PM_{10}	0.16	0.01
L1BF13101	E1/E2 Scrap Recovery Vacuum Filter Receiver	PM_{10}	0.01	0.01
L1BF13155	E1 Neutralizer Day Tank Filter	PM_{10}	0.01	0.01
L1BF15102	Bulk Anti-Block Storage Bin Filter	PM_{10}	0.11	0.01
L1BF23130	E2 Neutralizer Vacuum Filter Receiver	PM_{10}	0.02	0.01
L1BF23182	E2 Talc Storage Bin Filter	PM_{10}	0.23	0.08
L1BF24159	E3 Anti-Block Storage Bin Filter	PM_{10}	0.23	0.01
L1BF25029	E3 Neutralizer Blender Filter	PM_{10}	0.01	0.01
L1BF25031	E4 Additive Dump Tank Filter	PM_{10}	0.19	0.01

Emission Sources - Maximum Allowable Emission Rates

L1BF25032	E4 Anti-Block Storage Bin Filter	PM_{10}	0.29	0.01
L1BF25090	E4 Supersack vacuum Receiver Filter	PM_{10}	0.02	0.01
L1BF25091	E4 Additive Blender Filter	PM_{10}	0.40	0.01
L1BF25102	E4 Neutralizer Day Tank Filter	PM_{10}	0.02	0.01
L1BFE1ADD1	E1 Common Additive Vent No.1	PM_{10}	0.01	0.01
L1BFE2ADD2	E2 Common Additive Vent No.2	PM_{10}	0.02	0.01
L1BFE2ADD3	E2 Common Additive Vent No.3	PM_{10}	0.03	0.15
L1BFE4ADD1	E4 Common Additive Vent No.1	PM_{10}	0.03	0.01
L1BFE4ADD2	E4 Common Additive Vent No.2	PM_{10}	0.02	0.01
L1BN24155	E3MBAdditive Vacuum Filter	PM_{10}	0.01	0.01
L1ME23104F	E2 Additive Dump Station Filter	PM_{10}	0.02	0.01
L1ME24167	E3 Master Blend Dump Station	PM_{10}	0.19	0.04
L1ME33155	A/O Dump Hopper	PM_{10}	0.01	0.01
HDTO4781	O2 Analyzer Thermal Oxidizer	VOC	0.01	0.01
L1ANA936	RX1 Recovery O2	VOC	0.01	0.01
L1TOA242	Butene Drier Outlet O_2	VOC	0.01	0.03
L1TOA161	Ethylene Drier Outlet O_2	VOC	0.01	0.01
01A341	Butene Bullet O_2 Analyzer	VOC	0.01	0.03
01A342	iC5 Bullet O_2 Analyzer	VOC	0.01	0.01
01A343	Hexene Bullet O_2 Analyzer	VOC	0.01	0.01
05A938	RX2 Recovery Gas O_2 Analyzer	VOC	0.01	0.03

Emission Sources - Maximum Allowable Emission Rates

04A916	RX1 Convey Gas O_2 Analyzer	VOC	0.01	0.01
04A917	RX2 Convey Gas O_2 Analyzer	VOC	0.01	0.01
Intermittent Short Term Flare Allowables [Product Transitions (Type I) and Reaction Terminations (Type Ii)]				
HDFLARE and LDFLARE	HDPE Flare and LPE Process Flare	NO_x	90.82	
		VOC	1369.94	
		CO	653.97	
		SO_2	3.84	
		PM_{10}	0.02	
Planned MSS				
MAIN	See Attachment C	VOC (13)	68.53	6.51
		NO_x (13)	3.88	0.13
		CO (13)	0.77	0.08
		PM_{10} (13)	0.71	0.09
		H_2SO_4 (13)	0.71	0.06
Permit by Rule (PBR) sources incorporated by reference. Sources remain authorized by the PBR(s) as listed below:				
53389				
L1VV06143	Catalyst Weigh Pot	HCl	0.03	0.13
L1SF60110	Catalyst Weigh Pot	HCl	0.03	0.13

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - particulate matter equal to or less than 10 microns in diameter
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
HCl - hydrogen chloride
H_2SO_4 - sulfuric acid
(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 conditions and permit application representations.

Emission Sources - Maximum Allowable Emission Rates

(6) The listed emission rates are the cap for VOC emissions from the group of emission points in the additive system. The sum of emissions from all of the emission points in this group shall not exceed the emission rate listed for the group.
(7) The listed emission rates are the cap for VOC emissions from the group of emission points in the catalyst system. The sum of emissions from all of the emission points in this group shall not exceed the emission rate listed for the group.
(8) The listed emission rates are the cap for residual VOC emissions from the group of emission points in the finishing and storage areas. The sum of emissions from all of the emission points in this group shall not exceed the emission rate listed for the group.
(9) The listed emission rates are the cap for PM_{10} emissions from the group of emission points in the pellet blender system. The sum of emissions from all of the emission points in this group shall not exceed the emission rate listed for the group.
(10) Emissions may include other halogen anhydrides.
(11) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(12) Residual VOC emissions from the finishing building are included in the emissions at EPNs HDBF4801 and HDCYS4402.
(13) Allowable emissions are the sum of the controlled and uncontrolled emissions associated with maintenance, startup, and shutdown activities shown on Attachments A, B, and C.
(14) EPN LDFLARE and EPN LDFTO is capped by EPN LDFlare/LDFTOCAP and limited to these emissions until the start of start of operation of the MPBPP Polyethylene Unit authorized under Permit No. 103048.
(15) EPN LDFLARE and EPN LDFTO will be limited to these emissions after the start of start of operation of the MPBPP Polyethylene Unit authorized under Permit No. 103048.

Date: September 2, 2016