

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 946A and PSDTX1025M1

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 (7)	
			lbs/hour	TPY (4)
1/2/3/4/5	Lines 92 and 93 Collectors and High-Energy Air Filtration (HEAF) - Stacks	PM	33.50	146.73
		Total VOC	21.61	94.64
		NO <sub>x</sub>	11.76	51.51
		SO <sub>2</sub>	6.53	28.65
		CO	57.46	251.67
		NH <sub>3</sub>	36.00	157.68
		Formaldehyde	8.50	37.23
		Phenol	4.12	18.05
		Methyl Alcohol	3.69	16.15
15A	Glass Furnaces (1901 and 1902) ESP - Stack	PM	7.46	32.65
		PM (6)	8.00	0.16
		PM <sub>10</sub>	7.46	32.65
		PM <sub>10</sub> (6)	8.00	0.16
		PM <sub>2.5</sub>	7.46	32.65
		PM <sub>2.5</sub> (6)	8.00	0.16
		VOC	0.12	0.53
		NO <sub>x</sub>	18.32	80.25
		SO <sub>2</sub>	4.20	18.36
		SO <sub>2</sub> (6)	8.40	0.17
		CO	0.55	2.40

## Emission Sources - Maximum Allowable Emission Rates

		HF	0.18	0.78
		Pb	0.00035	0.00153
FHFUG	1901 Forehearth (5)	PM	0.09	0.40
		PM <sub>10</sub>	0.09	0.40
		PM <sub>2.5</sub>	0.09	0.40
		VOC	0.05	0.24
		NO <sub>x</sub>	0.98	4.28
		SO <sub>2</sub>	0.01	0.03
		CO	0.82	3.59
		HF	0.05	0.21
FHFUG2	1902 Furnace Forehearth (5)	PM	0.25	1.10
		PM <sub>10</sub>	0.25	1.10
		VOC	0.04	0.18
		NO <sub>x</sub>	1.46	6.40
		SO <sub>2</sub>	<0.01	0.05
		CO	1.10	4.80
FMFUG	1901 Forming Area (5)	PM	1.67	7.30
		PM <sub>10</sub>	1.67	7.30
		VOC	0.75	3.29
		NH <sub>3</sub>	0.13	0.58
BFUG	1901 Batch Plant (5)	PM	<0.01	0.02
		PM <sub>10</sub>	<0.01	0.02
		PM <sub>2.5</sub>	<0.01	0.02
FUGRM	1901 Batch Drop Railcar Unloading (5)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01

## Emission Sources - Maximum Allowable Emission Rates

		PM <sub>2.5</sub>	<0.01	<0.01
MXBIN1	1901 E-Glass Mixing Bin (North) (5)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
		PM <sub>2.5</sub>	<0.01	<0.01
MXBIN2	1901 E-Glass Mixing Bin (South) (5)	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
		PM <sub>2.5</sub>	<0.01	<0.01
16	Line 91 Collection Wet Scrubber No. 1 - Stack	PM	4.50	19.08
		PM <sub>10</sub>	4.50	19.08
		Total VOC	3.84	12.38
		NO <sub>x</sub>	1.29	5.63
		SO <sub>2</sub>	0.01	0.04
		CO	9.15	40.17
		NH <sub>3</sub>	4.20	18.37
		Formaldehyde	0.68	2.97
		Phenol	0.75	3.29
17	Line 91 Collection Wet Scrubber No. 2 - Stack	PM	4.50	19.08
		PM <sub>10</sub>	4.50	19.08
		Total VOC	3.84	12.38
		NO <sub>x</sub>	1.29	5.63
		SO <sub>2</sub>	0.01	0.04
		CO	9.15	40.17
		NH <sub>3</sub>	4.20	18.37
		Formaldehyde	0.68	2.97
		Phenol	0.75	3.29

Emission Sources - Maximum Allowable Emission Rates

18	Line 91 Collection Wet Scrubber No. 3 - Stack	PM	4.50	19.08
		PM <sub>10</sub>	4.50	19.08
		Total VOC	3.84	12.38
		NO <sub>x</sub>	1.29	5.63
		SO <sub>2</sub>	0.01	0.04
		CO	9.15	40.17
		NH <sub>3</sub>	4.20	18.37
		Formaldehyde	0.68	2.97
		Phenol	0.75	3.29
19	Line 91 Collection Wet Scrubber No. 4 - Stack	PM	4.50	19.08
		PM <sub>10</sub>	4.50	19.08
		Total VOC	3.84	12.38
		NO <sub>x</sub>	1.29	5.63
		SO <sub>2</sub>	0.01	0.04
		CO	9.15	40.17
		NH <sub>3</sub>	4.20	18.37
		Formaldehyde	0.68	2.97
		Phenol	0.75	3.29
20	Line 91 Curing Oven Wet Scrubber (with Ring-Burner) - Stack	PM	4.51	18.96
		PM <sub>10</sub>	4.51	18.96
		Total VOC	7.82	34.24
		NO <sub>x</sub>	4.38	19.18
		SO <sub>2</sub>	0.01	0.04
		CO	22.28	97.58
		NH <sub>3</sub>	7.02	30.75

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		Formaldehyde	1.60	7.00
		Phenol	1.00	4.38
21	Line 91 Melters Baghouse No. 1 - Stack	PM	0.99	4.34
		PM <sub>10</sub>	0.99	4.34
		Total VOC	3.72	16.27
		NO <sub>x</sub>	0.11	0.50
		SO <sub>2</sub>	1.12	4.92
		CO	5.27	23.08
		Boron Oxide	0.40	1.75
		Pb	0.000166	0.000736
		As	0.000223	0.000977
		Cd	0.000088	0.000389
		Cr	0.00425	0.0186
22	Line 91 Cold End/Horizontal Band Saw Baghouse No. 2 - Stack	PM	0.06	0.26
		PM <sub>10</sub>	0.06	0.26
23	Line 91 Batch Loading Shed Baghouse No. 3 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
24	Line 91 Unload Shed Baghouse No. 4 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
25	Line 91 Melter Dust Refeed Baghouse No. 5 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
26	Line 91 Mixed Batch Day Bin Baghouse No. 6 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
27	Line 91 Mixed Batch Day Bin Baghouse No. 7 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13

## Emission Sources - Maximum Allowable Emission Rates

28	Line 91 Mixed Batch Day Bin Baghouse No. 8 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
29	Line 91 Mixed Batch Day Bin Baghouse No. 9 - Stack	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
35	South Trim Waste Re-Feed Baghouse	PM	0.03	0.12
		PM <sub>10</sub>	0.03	0.12
36	North Trim Waste Re-Feed Baghouse	PM	0.03	0.12
		PM <sub>10</sub>	0.03	0.12
37	Off-Line Trim Waste Re-Feed Baghouse	PM	0.08	0.36
		PM <sub>10</sub>	0.08	0.36
Tanks 34, 35, 36, 37, and 38	E-Glass Mixing Tanks	VOC	0.31	1.54
RA901	1901 E-Glass Reclaim Area	PM	0.62	2.72
		PM <sub>10</sub>	0.62	2.72
		VOC	0.45	1.97
		NO <sub>x</sub>	0.10	0.44
		SO <sub>2</sub>	<0.01	0.01
		CO	0.08	0.35
		NH <sub>3</sub>	0.10	0.44
DRYTUNFUG	Gypsum Drying Tunnel (5)	PM	0.02	0.088
		PM <sub>10</sub>	0.02	0.088
		PM <sub>2.5</sub>	0.02	0.088
		Total VOC	0.14	0.61
		NO <sub>x</sub>	0.15	0.66
		SO <sub>2</sub>	<0.01	<0.01
		CO	0.13	0.55

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		HF	0.01	0.04
OGMFUG	Off-Line Grooving Machine (5)	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
MSSFUG	MSS Fugitives (5)	PM	<0.40	<1.00
		PM <sub>10</sub>	<0.40	<1.00
		PM <sub>2.5</sub>	<0.40	<1.00
		VOC	<0.40	<1.00
		NO <sub>x</sub>	<0.40	<1.00
		SO <sub>2</sub>	<0.40	<1.00
		CO	<0.40	<1.00
		NH <sub>3</sub>	<0.40	<1.00
		Formaldehyde	<0.40	<1.00
		Phenol	<0.40	<1.00

- (1) Emission point identification - either specific equipment designation or emission point number from 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
- NO<sub>x</sub> - total oxides of nitrogen
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- CO - carbon monoxide
- NH<sub>3</sub> - ammonia
- HF - hydrogen fluoride
- Pb - lead
- As - arsenic
- Cd - cadmium
- Cr - chromium
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) Emission rates apply during inspection, cleaning, and maintenance of Glass Furnaces 1901 and 1902 dry scrubber.

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- (7) Planned startup and shutdown emissions are included. Maintenance activities, except as specified in Special Condition Nos. 20 through 24, are not authorized by this permit and will need separate authorization, unless the activity can meet the conditions of 30 TAC § 116.119.

Date: July 2, 2013