

## Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 9403B and PSDTX627M2

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)
WG-CAP	Waste Gas Combustion Annual Emissions Cap	PM		202.9
		NO <sub>x</sub>		628.3
		SO <sub>2</sub>		5821.2
		CO		1307.5
		VOC (5)		50.7
		H <sub>2</sub> S		52.6
		COS		13.9
		CS <sub>2</sub>		20.7
		HCN		9.63
		BZ		0.51
1 INC	VOC Incinerator	PM	29.3	(6)
		NO <sub>x</sub>	95.2	(6)
		SO <sub>2</sub>	968.8	(6)
		CO	204.0	(6)
		VOC (5)	8.3	(6)
		H <sub>2</sub> S	8.8	(6)
		COS	2.3	(6)
		CS <sub>2</sub>	3.5	(6)
		HCN	1.5	(6)
		BZ	<0.1	(6)

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1A	Waste Heat Boiler	PM	29.3	(6)
		NO <sub>x</sub>	95.2	(6)
		SO <sub>2</sub>	968.8	(6)
		CO	204.0	(6)
		VOC (5)	8.3	(6)
		H <sub>2</sub> S	8.8	(6)
		COS	2.3	(6)
		CS <sub>2</sub>	3.5	(6)
		HCN	1.5	(6)
		BZ	<0.1	(6)
2	Dryer Filter No. 1	PM	1.0	(6)
		NO <sub>x</sub>	1.2	(6)
		SO <sub>2</sub>	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)
		H <sub>2</sub> S	0.1	(6)
		COS	<0.1	(6)
		CS <sub>2</sub>	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
2a	Dryer Filter No. 2	PM	1.0	(6)
		NO <sub>x</sub>	1.2	(6)
		SO <sub>2</sub>	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)

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		H <sub>2</sub> S	0.1	(6)
		COS	<0.1	(6)
		CS <sub>2</sub>	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
3	Dryer Filter No. 3	PM	1.0	(6)
		NO <sub>x</sub>	1.2	(6)
		SO <sub>2</sub>	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)
		H <sub>2</sub> S	0.1	(6)
		COS	<0.1	(6)
		CS <sub>2</sub>	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
4	Dryer Filter No. 4	PM	1.0	(6)
		NO <sub>x</sub>	67.5	(6)
		SO <sub>2</sub>	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)
		H <sub>2</sub> S	0.1	(6)
		COS	<0.1	(6)
		CS <sub>2</sub>	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)

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9	Process Steam Boiler Stack	PM	3.0	(6)
		NO <sub>x</sub>	12.1	(6)
		SO <sub>2</sub>	123.3	(6)
		CO	26.0	(6)
		VOC (5)	1.1	(6)
		H <sub>2</sub> S	1.1	(6)
		COS	0.3	(6)
		CS <sub>2</sub>	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
20	Carbon Black Dryer No. 1 Stack	PM	3.0	(6)
		NO <sub>x</sub>	12.1	(6)
		SO <sub>2</sub>	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H <sub>2</sub> S	1.0	(6)
		COS	0.3	(6)
		CS <sub>2</sub>	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
21	Carbon Black Dryer No. 2 Stack	PM	3.0	(6)
		NO <sub>x</sub>	12.1	(6)
		SO <sub>2</sub>	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)

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		H <sub>2</sub> S	1.0	(6)
		COS	0.3	(6)
		CS <sub>2</sub>	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
22	Carbon Black Dryer No. 3 Stack	PM	3.0	(6)
		NO <sub>x</sub>	12.1	(6)
		SO <sub>2</sub>	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H <sub>2</sub> S	1.0	(6)
		COS	0.3	(6)
		CS <sub>2</sub>	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
23	Carbon Black Dryer No. 4 Stack	PM	3.0	(6)
		NO <sub>x</sub>	12.1	(6)
		SO <sub>2</sub>	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H <sub>2</sub> S	1.0	(6)
		COS	0.3	(6)
		CS <sub>2</sub>	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)

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7	Rerun Line 2	PM	0.09	0.36
8	Rerun Line 1	PM	0.04	0.15
19	Packaging and Shipping	PM	0.56	2.34
24	Rerun Line 3	PM	0.04	0.15
25	Rerun Line 3	PM	0.04	0.15
26	Packaging and Shipping	PM	0.04	0.15
27	Rerun West System	PM	0.04	0.15
28	Sealed Bin Transloading	PM	0.09	0.40
16	Fugitives	PM	2.13	8.93
11	CBO Tank 1	VOC	1.79	0.20
12	CBO Tank 2	VOC	1.79	0.20
13	CBO Tank 3	VOC	1.29	0.30
WG-FUG	Waste Gas System Fugitive	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	0.03
		CO	0.41	1.72
		VOC (5)	0.02	0.10
		H <sub>2</sub> S	<0.01	0.02
		COS	<0.01	0.01
		CS <sub>2</sub>	<0.01	0.02
BLR-VENT	Cogen Boiler Planned Startup, Tailgas Vent to Atmosphere - MSS (7)	PM	0.22	<0.01
		NO <sub>x</sub>	0.16	<0.01
		SO <sub>2</sub>	1.41	0.02
		CO	123.43	1.85
		VOC (5)	4.99	0.04
		H <sub>2</sub> S	1.12	0.02

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		COS	0.68	0.01
		CS <sub>2</sub>	0.86	0.01
		HCN	0.58	0.01
		BZ	0.03	<0.01
RX1-VENT, RX2-VENT, RX4-VENT, RX5-VENT, and RX6/7-VENT	Reactor Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (8)	PM	0.27	0.10
		NO <sub>x</sub>	3.60	1.30
		SO <sub>2</sub>	0.02	0.01
		CO	3.02	1.09
		VOC	0.20	0.07
L1-VENT, L2-VENT, and L3-VENT	Unit Bagfilter Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (8)	PM	0.27	0.10
		NO <sub>x</sub>	3.60	1.30
		SO <sub>2</sub>	0.02	0.01
		CO	3.02	1.09
		VOC	0.20	0.07
BAGFILTFUG	Bagfilter Changeout Fugitives - MSS (9)	PM	0.57	0.01
BRICKFUG	Re-bricking Fugitives - MSS (10)	PM	2.10	0.05

- (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
- H<sub>2</sub>S - hydrogen sulfide
- COS - carbonyl sulfide
- CS<sub>2</sub> - carbon disulfide
- HCN - hydrogen cyanide

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- BZ - benzene
- MSS - planned maintenance, startup, and shutdown
- EPN - emission point number

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period and a maximum operating schedule of 8400 hours per year.
- (5) VOC includes (but is not limited to) acetylene, COS, CS<sub>2</sub>, HCN, and BZ.
- (6) Annual emissions are regulated under the waste gas combustion annual emissions cap, WG-CAP
- (7) MSS emissions from Cogen Boiler startup do not occur simultaneously with production emissions from the boiler and are captured by EPN 1A.
- (8) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for EPNs 1 INC and WG-CAP.
- (9) PM emissions from bagfilter changeouts do not occur simultaneously with production emissions from the corresponding unit and are captured by EPNs 1 INC and WG-CAP.
- (10) PM emissions from re-bricking are captured by EPNs 1 INC and WG-CAP. Production rates will be reduced to stay within the PM emission limits.

Date: \_\_\_\_\_