

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 734

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. 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 (4)	
			lbs/hour	TPY
Case 1: Firing natural gas for Boilers 1, 2, 6, and 7. Firing natural gas and supplemental hydrocarbon fuel for Boilers 4 and 5, (EPNs 1-C-1D and 1-C-1E only). 8,760 hours per year (hrs/yr):				
1-C-1A	Boiler 1 (96 MMBtu/hr)	NO <sub>x</sub>	8.75	38.30
		CO	7.35	32.17
		SO <sub>2</sub>	0.05	0.23
		PM <sub>10</sub>	0.67	2.91
		VOC	0.48	2.11
1-C-1B	Boiler 2 (96 MMBtu/hr)	NO <sub>x</sub>	8.75	38.30
		CO	7.35	32.17
		SO <sub>2</sub>	0.05	0.23
		PM <sub>10</sub>	0.67	2.91
		VOC	0.48	2.11
1-C-1D	Boiler 4 (96 MMBtu/hr)	NO <sub>x</sub>	9.72	42.59
		CO	6.85	29.99
		SO <sub>2</sub>	0.04	0.20
		PM <sub>10</sub>	0.79	3.47
		VOC	0.43	1.90
1-C-1E	Boiler 5 (114 MMBtu/hr)	NO <sub>x</sub>	25.80	113.00
		CO	7.42	32.50
		SO <sub>2</sub>	0.04	0.18
		PM <sub>10</sub>	1.17	5.11

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		VOC	0.45	1.95
1-C-1F	Boiler 6 (126 MMBtu/hr)	NO <sub>x</sub>	32.20	141.04
		CO	9.66	42.31
		SO <sub>2</sub>	0.07	0.30
		PM <sub>10</sub>	0.87	3.83
		VOC	0.63	2.77
1-C-1G	Boiler 7** (120 MMBtu/hr) (Supplemental Boiler)	NO <sub>x</sub>	4.20	5.26
		CO	10.10	18.40
		SO <sub>2</sub>	0.07	0.088
		PM <sub>10</sub>	0.88	1.10
		VOC	0.64	0.80
** Boiler No. 7 is only authorized to burn natural gas. Annual emission rates are based on best available control technology as noted in Special Condition No. 7.				
Case 2: Waste liquid fuel firing 168 hrs/yr:				
1-C-1A	Boiler 1 (96 MMBtu/hr)	NO <sub>x</sub>	99.84	8.39
		CO	4.16	0.35
		PM <sub>10</sub>	1.66	0.14
		VOC	0.17	0.01
1-C-1B	Boiler 2 (96 MMBtu/hr)	NO <sub>x</sub>	99.84	8.39
		CO	4.16	0.35
		PM <sub>10</sub>	1.66	0.14
		VOC	0.17	0.01
1-C-1D	Boiler 4 (96 MMBtu/hr)	NO <sub>x</sub>	77.92	6.55
		CO	4.16	0.35
		PM <sub>10</sub>	1.66	0.14
		VOC	0.17	0.01

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1-C-1E	Boiler 5 (114 MMBtu/hr)	NO <sub>x</sub>	95.58	8.03
		CO	4.90	0.41
		PM <sub>10</sub>	1.96	0.16
		VOC	0.20	1.02
1-C-1F	Boiler 6 (126 MMBtu/hr)	NO <sub>x</sub>	131.33	11.03
		CO	5.47	0.46
		PM <sub>10</sub>	2.19	0.18
		VOC	0.22	0.02
Case 3: No. 4 fuel oil firing 336 hrs/yr:				
1-C-1A	Boiler 1 (96 MMBtu/hr)	NO <sub>x</sub>	16.64	2.80
		CO	4.16	0.70
		PM <sub>10</sub>	5.82	0.98
		VOC	0.17	0.03
		SO <sub>2</sub>	35.44	5.95
		SO <sub>3</sub>	0.50	0.08
1-C-1B	Boiler 2 (96 MMBtu/hr)	NO <sub>x</sub>	16.64	2.80
		CO	4.16	0.70
		PM <sub>10</sub>	5.82	0.98
		VOC	0.17	0.03
		SO <sub>2</sub>	35.44	5.95
		SO <sub>3</sub>	0.50	0.08
1-C-1D	Boiler 4 (96 MMBtu/hr)	NO <sub>x</sub>	16.64	2.80
		CO	4.16	0.70
		PM <sub>10</sub>	4.73	0.79
		VOC	0.17	0.03

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		SO <sub>2</sub>	26.11	4.39
		SO <sub>3</sub>	0.50	0.08
1-C-1E	Boiler 5 (114 MMBtu/hr)	NO <sub>x</sub>	19.58	3.29
		CO	4.90	0.82
		PM <sub>10</sub>	5.76	0.97
		VOC	0.20	0.03
		SO <sub>2</sub>	32.38	5.44
		SO <sub>3</sub>	0.46	0.08
1-C-1F	Boiler 6 (126 MMBtu/hr)	NO <sub>x</sub>	21.89	3.68
		CO	5.47	0.92
		SO <sub>2</sub>	46.62	7.83
		SO <sub>3</sub>	0.66	0.11
		PM <sub>10</sub>	7.66	1.29
		VOC	0.22	0.04
Case 4: Natural gas (Firing a combination of natural gas and supplemental hydrocarbon fuel [EPNs 1-C-1D and 1-C-1E only]) 8,256 hrs/yr, waste liquid fuel 168 hrs/yr, and No. 4 fuel oil 336 hrs/yr:				
1-C-1A	Boiler 1 (96 MMBtu/hr)	NO <sub>x</sub>	99.84	47.28
		CO	7.35	31.37
		SO <sub>2</sub>	35.44	6.17
		SO <sub>3</sub>	0.50	0.08
		PM <sub>10</sub>	5.82	3.87
		VOC	0.48	2.03
1-C-1B	Boiler 2 (96 MMBtu/hr)	NO <sub>x</sub>	99.84	47.28
		CO	7.35	31.37
		SO <sub>2</sub>	35.44	6.17
		SO <sub>3</sub>	0.50	0.08

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		PM <sub>10</sub>	5.82	3.87
		VOC	0.48	2.03
1-C-1D	Boiler 4 (96 MMBtu/hr)	NO <sub>x</sub>	77.92	48.64
		CO	6.85	29.31
		SO <sub>2</sub>	26.11	3.85
		SO <sub>3</sub>	0.37	0.05
		PM <sub>10</sub>	4.73	4.12
		VOC	0.43	1.82
1-C-1e	Boiler 5 (114 MMBtu/hr)	NO <sub>x</sub>	95.58	116.97
		CO	7.42	31.86
		SO <sub>2</sub>	32.38	4.89
		SO <sub>3</sub>	0.46	0.07
		PM <sub>10</sub>	5.76	5.86
		VOC	0.45	1.89
1-C-1F	Boiler 6 (126 MMBtu/hr)	NO <sub>x</sub>	131.33	147.63
		CO	9.66	41.26
		SO <sub>2</sub>	46.62	8.12
		SO <sub>3</sub>	0.66	0.11
		PM <sub>10</sub>	7.66	5.08
		VOC	0.63	2.67
Dowtherm Furnaces				
A-C-1	F-4502 Furnace	NO <sub>x</sub>	10.31	45.15
		CO	0.33	1.43
		SO <sub>2</sub>	0.07	0.30
		PM <sub>10</sub>	0.86	3.75

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A-C-2	F-4504 Furnace	VOC	0.62	2.72
		NO <sub>x</sub>	1.09	4.77
		CO	2.37	10.40
		SO <sub>2</sub>	0.04	0.18
		PM <sub>10</sub>	0.52	2.28
		VOC	0.38	1.65

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name.
- (3) SO<sub>3</sub> - sulfur trioxide  
PM<sub>10</sub> - 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.  
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  
CO - carbon monoxide
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

Date: February 12, 2014