

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 1820

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 *	Source	Air Contaminant	<u>Emission Rates</u>	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
<u>Case 1: Firing natural gas and supplemental hydrocarbon fuel</u> <u>(EPNs B-C-9A, B-C-9B, A-C-0A/OB/OC only) 8,760 hrs/yr:</u>				
B-C-8A	42 MMBtu/hr Process Heater	NO <sub>x</sub>	5.15	22.57
		CO	1.29	5.64
		SO <sub>2</sub>	0.02	0.10
		PM <sub>10</sub>	0.18	0.81
		VOC	0.10	0.45
B-C-8B	42 MMBtu/hr Process Heater	NO <sub>x</sub>	5.15	22.57
		CO	1.29	5.64
		SO <sub>2</sub>	0.02	0.10
		PM <sub>10</sub>	0.18	0.81
		VOC	0.10	0.45
B-C-8C	31 MMBtu/hr Process	NO <sub>x</sub>	3.74	16.39
		CO	0.94	4.10
		SO <sub>2</sub>	0.02	0.07
		PM <sub>10</sub>	0.13	0.59
		VOC	0.07	0.33
B-C-8D	31 MMBtu/hr Process	NO <sub>x</sub>	3.74	16.39
		CO	0.94	4.10
		SO <sub>2</sub>	0.02	0.07
		PM <sub>10</sub>	0.13	0.59
		VOC	0.07	0.33

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Emission *	Source	Air Contaminant	Emission	Rates
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
B-C-8E	34 MMBtu/hr Process	NO <sub>x</sub>	4.17	18.25
		CO	1.04	4.56
		SO <sub>2</sub>	0.02	0.08
		PM <sub>10</sub>	0.15	0.65
		VOC	0.08	0.37
B-C-9A	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	8.89	38.95
		CO	2.22	9.74
		SO <sub>2</sub>	0.04	0.16
		PM <sub>10</sub>	0.32	1.39
		VOC	0.18	0.78
B-C-9B	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	8.89	38.95
		CO	2.22	9.74
		SO <sub>2</sub>	0.04	0.16
		PM <sub>10</sub>	0.32	1.39
		VOC	0.18	0.78
<u>Case 2: Waste liquid fuel firing 168 hours per year:</u>				
B-C-8A	42 MMBtu/hr Process Heater	NO <sub>x</sub>	44.16	3.71
		CO	1.84	0.15
		PM <sub>10</sub>	0.74	0.06
		VOC	0.07	0.01
B-C-8B	42 MMBtu/hr Process Heater	NO <sub>x</sub>	44.16	3.71
		CO	1.84	0.15
		PM <sub>10</sub>	0.74	0.06
		VOC	0.07	0.01
B-C-8C	31 MMBtu/hr Process	NO <sub>x</sub>	32.06	2.69
		CO	1.34	0.11
		PM <sub>10</sub>	0.53	0.04
		VOC	0.05	0.01

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Emission *	Source	Air Contaminant	Emission	Rates
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
B-C-8D	31 MMBtu/hr Process	NO <sub>x</sub>	32.06	2.69
		CO	1.34	0.11
		PM <sub>10</sub>	0.53	0.04
		VOC	0.05	0.01
B-C-8E	34 MMBtu/hr Process	NO <sub>x</sub>	35.71	3.00
		CO	1.49	0.13
		PM <sub>10</sub>	0.60	0.05
		VOC	0.06	0.01
B-C-9A	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	72.22	6.07
		CO	3.17	0.27
		PM <sub>10</sub>	1.27	0.11
		VOC	0.13	0.01
B-C-9B	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	72.22	6.07
		CO	3.17	0.27
		PM <sub>10</sub>	1.27	0.11
		VOC	0.13	0.01

Case 3: No. 4 fuel oil firing 336 hours per year:

B-C-8A	42 MMBtu/hr Process Heater	NO <sub>x</sub>	7.36	1.24
		CO	1.84	0.31
		PM <sub>10</sub>	2.58	0.43
		VOC	0.07	0.01
		SO <sub>2</sub>	15.68	2.63
		SO <sub>3</sub>	0.22	0.04
B-C-8B	42 MMBtu/hr Process Heater	NO <sub>x</sub>	7.36	1.24
		CO	1.84	0.31
		PM <sub>10</sub>	2.58	0.43
		VOC	0.07	0.01
		SO <sub>2</sub>	15.68	2.63

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Emission *	Source	Air Contaminant	Emission	Rates
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
		SO <sub>3</sub>	0.22	0.04
B-C-8C	31 MMBtu/hr Process Heater	NO <sub>x</sub>	5.34	0.90
		CO	1.34	0.23
		PM <sub>10</sub>	1.87	0.31
		VOC	0.05	0.01
		SO <sub>2</sub>	11.38	1.91
		SO <sub>3</sub>	0.16	0.03
B-C-8D	31 MMBtu/hr Process Heater	NO <sub>x</sub>	5.34	0.90
		CO	1.34	0.23
		PM <sub>10</sub>	1.87	0.31
		VOC	0.05	0.01
		SO <sub>2</sub>	11.38	1.91
		SO <sub>3</sub>	0.16	0.03
B-C-8E	34 MMBtu/hr Process Heater	NO <sub>x</sub>	5.95	1.00
		CO	1.49	0.25
		PM <sub>10</sub>	2.08	0.35
		VOC	0.06	0.01
		SO <sub>2</sub>	12.68	2.13
		SO <sub>3</sub>	0.18	0.03
B-C-9A	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	12.70	2.13
		CO	3.18	0.53
		PM <sub>10</sub>	4.60	0.77
		VOC	0.13	0.02
		SO <sub>2</sub>	25.36	4.26
		SO <sub>3</sub>	0.36	0.06
B-C-9B	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	12.70	2.13
		CO	3.18	0.53
		PM <sub>10</sub>	4.60	0.77
		VOC	0.13	0.02

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		SO <sub>2</sub>	25.36	4.26
		SO <sub>3</sub>	0.36	0.06

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## AIR CONTAMINANTS DATA

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

Case 4: Firing a combination of natural gas and supplemental hydrocarbon fuel (EPNs B-C-9A, B-C-9B, A-C-0A/0B/0C only) 8,256 hrs/yr, waste liquid fuel 168 hrs/yr, and No. 4 fuel oil 336 hrs/yr:

B-C-8A	42 MMBtu/hr Process Heater	NO <sub>x</sub>	44.16	26.21
		CO	1.84	5.78
		SO <sub>2</sub>	15.68	2.72
		SO <sub>3</sub>	0.22	0.04
		PM <sub>10</sub>	2.58	1.25
		VOC	0.10	0.44
B-C-8B	42 MMBtu/hr Process Heater	NO <sub>x</sub>	44.16	26.12
		CO	1.84	5.78
		SO <sub>2</sub>	15.68	2.72
		SO <sub>3</sub>	0.22	0.04
		PM <sub>10</sub>	2.58	1.25
		VOC	0.10	0.44
B-C-8C	31 MMBtu/hr Process	NO <sub>x</sub>	32.06	19.03
		CO	1.34	4.20
		SO <sub>2</sub>	11.38	1.98
		SO <sub>3</sub>	0.16	0.03
		PM <sub>10</sub>	1.87	0.91
		VOC	0.07	0.32
B-C-8D	31 MMBtu/hr Process	NO <sub>x</sub>	32.06	19.03
		CO	1.34	4.20
		SO <sub>2</sub>	11.38	1.98
		SO <sub>3</sub>	0.16	0.03
		PM <sub>10</sub>	1.87	0.91
		VOC	0.07	0.32
B-C-8E	34 MMBtu/hr Process	NO <sub>x</sub>	35.71	21.20
		CO	1.49	4.67
		SO <sub>2</sub>	12.68	2.20

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Emission *	Source	Air Contaminant	Emission	Rates
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
B-C-9A	69 MMBtu/hr Dowtherm	SO <sub>3</sub>	0.18	0.03
		PM <sub>10</sub>	2.08	1.01
		VOC	0.08	0.36
		NO <sub>x</sub>	72.22	44.91
		CO	3.18	9.98
		SO <sub>2</sub>	25.36	4.41
		SO <sub>3</sub>	0.36	0.06
		PM <sub>10</sub>	4.60	2.19
		VOC	0.18	0.77
B-C-9B	69 MMBtu/hr Dowtherm	NO <sub>x</sub>	72.22	44.91
		CO	3.18	9.98
		SO <sub>2</sub>	25.36	4.41
		SO <sub>3</sub>	0.36	0.06
		PM <sub>10</sub>	4.60	2.19
		VOC	0.18	0.77

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name.

(3) PM<sub>10</sub> - particulate matter less than 10 microns

VOC - volatile organic compounds as defined in General Rule 101.1

NO<sub>x</sub> - total oxides of nitrogen

SO<sub>2</sub> - sulfur dioxide

SO<sub>3</sub> - sulfur trioxide

CO - carbon monoxide

\* The facilities are limited by the following maximum operating schedule:

Hrs/day \_\_\_\_\_ Days/week \_\_\_\_\_ Weeks/year \_\_\_\_\_ or Hrs/year 8,760

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AIR CONTAMINANTS DATA

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