

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 16786

The total emissions of air contaminants from any of the sources listed on this table shall not exceed the stated values. 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 sources. The annual emission rates are based on a rolling 12-month period.

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
1	South (South Building VOCs)	VOC	15.80	35.12
		Non-VOC	5.50	12.22
		Acid/Base	0.29	0.71
		Reactant Gas	0.06	0.13
		PM 0.32	0.80	
		IOFC	<0.01	0.02
		Other IOFC	0.02	0.06
		SO _x <0.01	<0.01	
2	S28AB (South Building Scrubbers)	VOC	0.89	3.54
		Non-VOC	0.14	0.57
		Acid/Base	0.57	1.51
		Reactant Gas	0.47	1.03
		PM	0.80	3.15
		SO _x <0.01	0.02	
		IOFC	0.07	0.27
		Other IOFC	0.14	0.54
3	S28C (South Building)	VOC	6.00	13.32
		Non-VOC	4.89	10.85
		Acid/Base	0.24	0.52
		Reactant Gas	<0.01	0.02
		PM	0.55	1.20
		POC 0.25	1.08	
		IOFC	0.04	0.02
		Other IOFC	<0.01	<0.01
4	S204207 (South Building Scrubber)	Non-VOC	0.02	0.08
		Reactant Gas	<0.01	<0.01
		PM 1.15	4.00	
		IOFC <0.01	<0.01	

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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>

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
5	S109110 (South Building Boilers)	Non-VOC	0.09	0.20
		PM	0.05	0.11
		POC	2.34	10.23
6	S217 (South Building Scrubbers)	VOC	2.64	9.11
		Non-VOC	0.95	2.30
		Acid/Base	1.35	3.91
		Reactant Gas	0.20	0.44
		PM	1.45	3.89
		POC	0.30	0.54
		IOFC	0.71	0.71
7	S55 (South Building General Exhaust)	Other IOFC	0.22	0.88
8	SEPI (South Building EPI Reactors and Scrubbers)	VOC	3.96	8.80
		Non-VOC	3.45	7.65
9	Floyd (Floyd Building VOCs and Acids)	Acid/Base	0.03	0.12
10	QTZ (Quartz Shop)	VOC	0.61	1.57
		Non-VOC	3.36	7.46
		Acid/Base	<0.01	0.02
		Reactant Gas	<0.01	0.02
		PM	0.01	0.03
		POC	<0.01	<0.01
11	Security (Security Building VOCs and Acids)	IOFC	0.14	0.54
12	Time (Cooling Water Chiller)	VOC	0.93	2.06
		Non-VOC	1.07	2.38
		Acid/Base	0.14	0.31
		IOFC	0.02	0.05
12	Time (Cooling Water Chiller)	VOC	1.00	2.21
		Non-VOC	9.01	20.01

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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>
		Acid/Base	0.15	0.54
		POC	0.31	0.69
		PM	<0.01	
13	Reswest (Research West Building VOCs and Acids)	VOC	5.90	11.18
		Non-VOC	5.20	12.26
		Acid/Base	1.08	2.41
		Reactant Gas	0.04	0.08
		PM	0.23	0.51
		POC	<0.01	<0.01
		IOFC	0.09	0.36
14	Chem (Chemical Building Acids and Bases)	VOC	0.10	0.22
		Non-VOC	<0.01	<0.01
		Acid/Base	1.71	3.90
		PM	<0.01	0.02
		POC	<0.01	<0.01
		IOFC	0.10	0.11
15	North (North Building Acids and Bases)	VOC	0.35	0.72
		Non-VOC	0.25	0.54
		Acid/Base	0.22	0.49
		Reactant Gas	<0.01	<0.01
		PM	0.02	0.03
		POC	0.08	0.16
		IOFC	0.02	0.03
16	NorthFug (North Building VOCs)	VOC	3.39	3.00
		Non-VOC	2.52	5.60
		Acid/Base	0.05	0.10
		IOFC	<0.01	<0.01
17	N215216 (North Building VOCs)	VOC	8.78	33.01
		Non-VOC	4.87	10.83
		Acid/Base	0.05	0.10

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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>
		IOFC	<0.01	<0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
18	D4AC (DMOS-IV Acids)	VOC	1.47	5.88
		Acid/Base	0.96	2.56
		Reactant Gas	0.24	0.52
		PM	0.43	0.96
		POC	<0.01	<0.01
		IOFC	0.76	2.83
		Other IOFC	0.40	1.59
19	D4AM (DMOS-IV Bases)	Acid/Base	0.23	0.51
20	East51E (DMOS-IV Chemical Dock)	emergency release only		
21	S/C (Semiconductor Building VOCs and Acids)	VOC	8.49	15.08
		Non-VOC	6.80	15.10
		Acid/Base	1.69	3.75
		Reactant Gas	0.05	0.12
		PM	1.00	2.22
		POC	0.02	0.04
		IOFC	0.06	0.14
		Other IOFC	<0.01	<0.01
22	Reseast (Research East Building VOCs and Acids)	VOC	1.53	3.47
		Non-VOC	0.76	1.72
		Acid/Base	0.38	0.85
		Reactant Gas	0.52	1.16
		PM	0.02	0.03
		POC	0.21	0.46
		IOFC	0.03	0.08
		Other IOFC	0.05	0.10

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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>
23	Cup (Central Utility Plant Exhaust and Chillers)	VOC	4.84	9.14
		Non-VOC	22.72	48.05
		Acid/Base	<0.01	0.02
		PM	0.69	1.50
		IOFC	<0.01	<0.01
23	Cup (Central Utility Plant Boilers)	VOC	12.50	54.75
		NO _x	79.20	168.10
		SO _x	6.85	14.50
		PM	13.65	28.59
		CO	19.85	88.10
24	Cup 40E (Central Utility Plant Emergency Exhaust)	emergency release only		
25	Solvent (Solvent Building VOCs)	VOC	5.12	8.72
		Non-VOC	4.17	9.25
		Acid/Base	<0.01	0.02
		PM	0.02	0.03
		POC	<0.01	<0.01
26	D5COR (DMOS-V Acid and Base Scrubbers)	VOC	0.09	0.28
		Non-VOC	0.04	0.11
		Acid/Base	0.84	2.77
		Reactant Gas	<0.01	0.03
		NO _x	<0.01	<0.01
		IOFC	0.31	1.22
		Other IOFC	0.28	0.03

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
27	D5VOC (DMOS-V VOCs and Oxidizer)	VOC	7.36	21.53
		Non-VOC	1.15	4.22
		Acid/Base	0.23	0.57
		Reactant Gas	>0.01	0.02
		PM	0.12	0.24
		POC 0.43	1.85	
		IOFC	0.08	0.24
		Other IOFC	<0.01	<0.01
28	D6COR (DMOS-VI Acid and Base Scrubbers)	VOC	0.39	0.49
		NO _x 1.20	5.26	
		Acid/Base	2.32	5.08
		IOFC 0.52	2.26	
		Other IOFC	2.40	10.52
29	D6VOC (DMOS-VI VOCs and Oxidizer)	VOC	2.03	4.40
		Non-VOC	0.11	0.46
		POC	0.25	1.08
30	RDICOR (R&D-I Acid and Base Scrubbers)	VOC	1.71	3.74
		NO _x 0.70	3.05	
		Acid/Base	1.28	2.77
		IOFC 0.02	0.07	
31	RDIVOC (R&D-I VOCs and Oxidizer)	VOC	0.28	0.71
		Non-VOC	0.11	0.46
		POC 0.18	0.78	

(1) These are groupings of similar stacks as listed in the source grouping parameter table listed in Attachment 1. The emissions are the sum of the stacks in each source grouping.

(2) Specific point source name. For fugitive sources use area name or fugitive source name.

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(3) VOC -volatile organic compounds as defined
in General Rule 101.1
Non-VOC - compounds specifically excluded from the definition of
volatile organic compounds as defined in
General Rule 101.1
PM - particulate matter
POC - products of combustion including NO_x, CO, SO_x, VOC, and PM
Reactant Gas -silicon and hydride dopants and
molecules of compounds of gases Groups IIIb, IVb, and
VB elements
SO_x - sulfur dioxide
NO_x - nitrogen oxides
CO - carbon monoxide
Acid/Base - organic or inorganic polar acids or bases
IOFC - inorganic fluoride compounds except NF₃ and SF₆
other IOFC - NF₃ and SF₆

* Emission rates are based on and the facilities are limited by the
following maximum operating schedule:

Hrs/day 24 Days/week 7 Weeks/year 52
or Hrs/year 8,760

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Dated _____