

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 16786

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

Source Rates *,**	Source	Air Contaminant		Emission
Grouping No. (1)	Name (2)	Name (3)		lbs/hr
TPY				
1	South (South Building VOC Stacks)	VOC	25.16	49.25
		Non-VOC	10.70	19.01
		Acid/Base	0.39	0.88
		Reactant Gas	0.08	0.16
		PM	0.40	1.00
		POC	<0.01	<0.01
		IOFC	0.03	0.03
		Other IOFC	0.02	0.06
2	S28AB (South Building Scrubbers)	VOC	1.11	3.89
		Non-VOC	0.16	0.53
		Acid/Base	0.71	1.89
		Reactant Gas	0.58	1.29
		PM	1.00	3.94
		POC	<0.01	0.01
		IOFC	0.31	0.26
		Other IOFC	0.14	0.53
3	S28C (South Building Oxidizer)	VOC	7.51	14.70
		Non-VOC	6.08	10.80
		Acid/Base	0.29	0.64
		Reactant Gas	0.01	0.01
		PM	0.73	1.60
		POC	11.98	52.73
		IOFC	0.01	0.01
		Other IOFC	<0.01	<0.01
4	S204207 (South Building Scrubber)	VOC	0.35	1.23
		Non-VOC	0.03	0.08
		Acid/Base	1.21	4.63
		Reactant Gas	0.08	0.16
		PM	1.44	5.00
		POC	0.31	0.54

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission Rates *,**	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lbs/hr	
<u>TPY</u>				
		IOFC	0.33	0.28
		Other IOFC	0.21	0.84
5	S109110 (South Building Boilers)	Non-VOC	1.11	0.18
		PM	0.06	0.14
		POC	2.84	4.10
6	S217 (South Building Scrubbers)	VOC	2.99	6.41
		Non-VOC	1.14	2.20
		Acid/Base	0.83	2.00
		Reactant Gas	0.18	0.40
		PM	1.81	4.85
		POC	<0.01	<0.01
		IOFC	0.06	0.05
		Other IOFC	<0.01	0.04
7	Floyd (Floyd Building VOC and Acid Stacks)	VOC	1.33	2.61
		Non-VOC	4.19	7.45
		Acid/Base	<0.01	0.01
		Reactant Gas	0.01	0.01
		PM	0.01	0.03
		POC	<0.01	<0.01
8	Security (Security Building VOC and Acid Stacks)	VOC	1.19	2.33
		Non-VOC	1.30	2.31
		Acid/Base	0.18	0.39
		IOFC	0.03	0.03
9	Time (Cooling Water Chiller)	VOC	1.24	2.43
		Non-VOC	11.25	20.00
		Acid/Base	0.30	0.68
		PM	<0.01	<0.01
		POC	0.31	0.68
10	Reswest (Research West Building VOC and Acid Stacks)	VOC	7.88	15.41
		Non-VOC	5.60	9.95
		Acid/Base	1.34	2.98
		Reactant Gas	0.04	0.09
		PM	0.28	0.60

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission Rates *,** Point No. (1) TPY	Source Name (2)	Air Contaminant Name (3)	Emission lbs/hr	
		POC	<0.01	<0.01
		IOFC	0.11	0.11
12	Chem (Chemical Building Acid and Base Stacks)	VOC	0.13	0.24
		Non-VOC	<0.01	0.01
		Acid/Base	2.14	4.76
		PM	0.01	0.03
		POC	<0.01	<0.01
		IOFC	0.15	0.13
13	North (North Building Acid and Base Stacks)	VOC	0.50	0.98
		Non-VOC	0.24	0.42
		Acid/Base	0.26	0.58
		Reactant Gas	<0.01	0.01
		PM	0.01	0.04
		POC	0.07	0.16
		IOFC	0.01	0.01
14	NorthFug (North Building VOC Stacks)	VOC	4.78	9.35
		Non-VOC	2.71	4.82
		Acid/Base	0.05	0.11
		IOFC	<0.01	<0.01
15	N215216 (North Building VOC Stacks)	VOC	7.45	14.80
		Non-VOC	5.46	9.72
		Acid/Base	0.05	0.11
		IOFC	<0.01	<0.01
16	East (DMOS IV Acid Stacks)	Acid/Base	1.19	2.64
		Reactant Gas	0.29	0.65
		PM	0.54	1.19
		POC	<0.01	<0.01
		IOFC	0.75	0.63
		Other IOFC	0.40	1.58

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission Rates *,**	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)	Name (3)	lbs/hr	
TPY				
17	East 51E (DMOS IV Chemical Dock)	emergency release only		
18	S/C (Semiconductor Building VOC and Acid Stacks)	VOC	11.30	21.88
		Non-VOC	8.16	14.52
		Acid/Base	2.13	4.73
		Reactant Gas	0.06	0.14
		PM	1.25	2.76
		POC	0.02	0.03
		IOFC	0.08	0.05
		Other IOFC	<0.01	<0.01
19	Reseast (Research East Building VOC and Acid Stacks)	VOC	2.35	4.60
		Non-VOC	0.56	1.00
		Acid/Base	0.46	1.04
		Reactant Gas	0.65	1.44
		PM	0.01	0.03
		POC	0.20	0.45
		IOFC	0.10	0.09
		Other IOFC	0.05	0.10
20	Cup (Central Utility Boiler Building boilers and Chillers)	VOC	8.84	17.27
		Non-VOC	33.14	59.91
		Acid/Base	0.01	0.01
		PM	0.84	1.86
		POC	130.58	348.40
21	Cup 40E (Central Utility Boiler Building Oxidizer for DMOS IV)	emergency release only		
22	Solvent (Solvent Building VOC)	VOC	11.51	22.51
		Non-VOC	4.36	7.76

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission Rates *,** Point No. (1) TPY	Source Name (2)	Air Contaminant Name (3)	Emission lbs/hr	
	Stacks)	Acid/Base	0.01	0.01
		PM	0.01	0.04
		POC	<0.01	<0.01
23	2E208209 (DP1 Building Acid and Base Scrubbers)	VOC	0.06	0.14
		Non-VOC	0.04	0.09
		Acid/Base	0.49	1.20
		Reactant Gas	0.01	0.03
		POC	<0.01	0.01
		IOFC	0.38	0.30
		Other IOFC	0.27	0.03
24	SE210 (DP1 Building Oxidizer)	VOC	4.91	12.11
		Non-VOC	0.25	0.44
		Acid/Base	0.40	0.89
		Reactant Gas	0.01	0.01
		PM	0.14	0.31
		POC	12.95	54.56
		IOFC	0.18	0.18
		Other IOFC	<0.01	<0.01
25	SL200 (Floyd Road North Building Oxidizer)	VOC	0.21	0.81
		Acid/Base	0.01	0.05
		POC	2.89	12.63
26	SL201202 (Floyd Road North Building Acid and PM)	VOC	0.01	0.01
		Acid/Base	1.06	4.59
		Reactant Gas	0.03	0.03
		PM	0.51	2.23
		POC	3.08	6.00
		IOFC	0.33	0.33
27	2D218 (DMOS V Building Oxidizer)	VOC	2.24	8.65
		Acid/Base	0.03	0.09
		POC	7.36	32.25

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

## AIR CONTAMINANTS DATA

Emission Rates *, **	Source	Air Contaminant	Emission	
Point No. (1)	Name (2)	Name (3)	lbs/hr	
TPY				
28	2D219220 (DMOS V Building Scrubbers)	VOC	0.04	0.17
		Non-VOC	<0.01	0.01
		Acid/Base	0.08	0.35
		IOFC	0.01	0.01

(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.

(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<sub>x</sub>, CO, SO<sub>2</sub> and PM

Reactant - silicon and hydride dopants, and molecules of compounds of Gases group IIIb, IVB, and VB elements

Acid/Base - organic or inorganic polar acids or bases

IOFC - inorganic fluoride compounds except NF<sub>3</sub> and SF<sub>6</sub>  
other IOFC - NF<sub>3</sub> and SF<sub>6</sub>

\* 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

\*\* These allowable emission rates represent the potential increases allowed under Special Condition No. 4. If Special Condition No. 4 is not used, then the allowable emission rates are those listed in the revised permit application dated September 20, 1994.

Dated \_\_\_\_\_