

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

19708

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)	lb/hr	TPY	Emission Rates *
<u>BLDG. A PHASE 1</u>					
<u>FAB 1A</u>					
FS-34	FUME SCRUBBER	HCl	0.03	0.04	
FS-33	PHASE 1	HALOCARBONS	0.03	0.05	
FS-35 (4)		INORGANIC ACIDS	0.46	0.69	
		NOx	0.01	0.02	
		SOx	0.39	0.57	
		HF	0.10	0.15	
		OTHER INORGANICS	0.08	0.12	
FS-37	AMMONIA SCRUBBER PHASE 1	AMMONIA	0.13	0.19	
SE-31	SOLVENT EXHAUST	VOC	10.92	16.31	
SE-32	PHASE 1	HALOCARBON	0.001	0.002	
CD-1(5)	THERMAL OXIDIZER, ROUTED FROM FAB 1A PHASE 1	VOC	1.02	1.57	
		NOx	0.24	1.05	
		CO	0.05	0.21	
		SOx	0.001	0.01	
		PM	0.01	0.03	
FUG-1A	FUGITIVES FAB 1A PHASE 1	VOC	2.46	3.66	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
FAB 2A				
FS-1	FUME SCRUBBER PHASE 1	VOC	0.11	0.16
FS-2		HCl	0.02	0.03
FS-3 (4)		HALOCARBONS	0.10	0.14
		INORGANIC ACIDS	0.19	0.28
		AMMONIA	0.10	0.15
		NOx	0.17	0.25
		SOx	0.29	0.43
		HF	0.10	0.15
		OTHER INORGANICS	0.18	0.26
FS-14	EPI SCRUBBER PHASE 1	HCl	0.10	0.14
FS-15		OTHER INORGANICS	<.001	<.001
FS-16				
FS-17				
FS-18				
SE-12	SOLVENT EXHAUST PHASE 1	VOC	0.26	0.38
SE-4	SOLVENT EXHAUST PHASE 1	VOC	12.74	20.61
		AMMONIA	0.01	0.01
CD-1 (5)	THERMAL OXIDIZER, ROUTED FROM FAB 2A PHASE 1	VOC	1.20	1.89
		NOx	0.48	2.10
		CO	0.10	0.42
		SOx	0.03	0.13
		PM	0.12	0.53
FUG-2A	FUGITIVES FAB 2A PHASE 1	VOC	3.36	5.13

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
<u>BLDG C PHASE 1</u>				
<u>FAB 1A</u>				
SE-C	SOLVENT EXHAUST PHASE 1	VOC	3.44	5.11
FS-C	FUME SCRUBBER PHASE 1	HF	0.07	0.01
		INORGANIC ACIDS	0.01	0.01
		AMMONIA	0.003	0.01
		SOx	<0.001	<0.001
		OTHER INORGANICS	0.06	0.09
FUG-C	FUGITIVES BLDG. C	VOC	0.32	0.47
<u>BLDG A. PHASE 2</u>				
<u>FAB 1A</u>				
FS-34	FUME SCRUBBER PHASE 2	HCl	0.03	0.04
FS-33		HALOCARBONS	0.04	0.07
FS-35 (4)		INORGANIC ACIDS	0.56	0.83
		NOx	0.02	0.02
		SOx	0.40	0.60
		HF	0.11	0.16
		OTHER INORGANICS	0.16	0.24
FS-37	AMMONIA SCRUBBER PHASE 2	AMMONIA	0.20	0.29
R-1	ACID REPROCESSOR PHASE 2	H2SO4	.04	.05
SE-31	SOLVENT EXHAUST PHASE 2	VOC	5.86	8.88
SE-32		HALOCARBON	0.002	0.003

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
CD-1 (5)	THERMAL OXIDIZER, ROUTED FROM FAB 1A PHASE 2	VOC	3.65	5.60
		NOx	0.72	3.15
		CO	0.14	0.63
		SOx	0.04	0.19
		PM	0.02	0.08
FUG-1A	FUGITIVES FAB 1A PHASE 2	VOC	4.72	7.02
<u>FAB 2A</u>				
FS-1	FUME SCRUBBER PHASE 2	VOC	0.17	0.26
FS-2		HCl	0.02	0.03
FS-3 (4)		HALOCARBONS	0.17	0.25
		INORGANIC ACIDS	0.20	0.30
		AMMONIA	0.17	0.26
		NOx	0.26	0.39
		SOx	0.57	0.84
		HF	0.13	0.19
		OTHER INORGANICS	0.39	0.49
FS-14	EPI SCRUBBER PHASE 2	HCl	0.13	0.19
FS-15		OTHER INORGANICS	<.001	<.001
FS-16				
FS-17				
FS-18				
SE-12	SOLVENT EXHAUST PHASE 2	VOC	0.40	0.60
SE-4	SOLVENT EXHAUST PHASE 2	VOC	3.87	8.61
		AMMONIA	0.010	0.02
CD-1 (5)	THERMAL OXIDIZER FROM FAB 2A PHASE 2	VOC	3.685	5.80
		NOx	0.59	2.58
		CO	0.12	0.52

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY
		SOx	0.004	0.02
		PM	0.02	0.07

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
FUG-2A	FUGITIVES FAB 2A PHASE 2	VOC	5.37	8.00
<u>BLDG. C PHASE 2</u>				
<u>FAB 1A</u>				
SE-C	SOLVENT EXHAUST PHASE 2	VOC	5.47	8.14
FS-C	FUME SCRUBBER PHASE 2	HF	0.01	0.01
		INORGANIC ACIDS	0.01	0.02
		AMMONIA	0.01	0.01
		SOx	<0.001	<0.001
		OTHER INORGANICS	0.06	0.09
FUG-C	FUGITIVES BLDG. C	VOC	0.46	0.68
<u>BLDG A & C PHASE 3</u>				
<u>FAB 1A & 2A</u>				
CD-1	THERMAL OXIDIZER PHASE 3	VOC	12.40	18.94
		AMMONIA	0.01	0.01
		NOx	0.11	0.48
		CO	0.02	0.10
		SOx	0.001	0.003
		PM	0.003	0.012
		HALOCARBON	0.003	0.005

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
BLDG. A PHASE 3				
FAB 1A				
FS-33	FUME SCRUBBERS PHASE 3	HCl	0.04	0.07
FS-34		HALOCARBONS	0.09	0.13
FS-35 (4)		INORGANIC ACIDS	1.07	1.59
		NOx	0.03	0.04
		SOx	0.81	1.20
		HF	0.20	0.29
		OTHER INORGANICS	0.32	0.47
FS-37		AMMONIA SCRUBBER PHASE 3	AMMONIA	0.42
R-1	ACID REPROCESSOR	H2SO4	<0.001	<0.001
SE-33 (5)	BURN BOX EXHAUST, ALTERNATE FOR CD-1 PHASE 3	VOC	7.20	10.89
		NOx	0.720	3.15
		CO	0.14	0.63
		SOx	0.004	0.02
		PM	0.02	0.08
FUG-1A	FUGITIVES FAB 1A PHASE 3	VOC	9.22	13.72
FAB 2A				
FS-1	FUME SCRUBBERS PHASE 3	HCl	0.02	0.03
FS-2		HALOCARBONS	0.17	0.25
FS-3 (4)		INORGANIC ACIDS	0.20	0.30
		AMMONIA	0.17	0.26
		NOx	0.26	0.39
		SOx	0.57	0.84
		HF	0.13	0.19
		OTHER INORGANICS	0.39	0.49

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>			
			lb/hr	TPY		
		VOC			0.17	0.26

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
FS-14	EPI SCRUBBERS PHASE 3	HCl	0.13	0.19
FS-15		OTHER INORGANICS	<0.001	<0.001
FS-16				
FS-17				
FS-18				
SE-12	SOLVENT EXHAUST PHASE 3	VOC	0.40	0.60
SE-13 (5)	BURN BOX EXHAUST, ALTERNATE FOR CD-1 PHASE 3	VOC	1.67	2.60
		NOx	0.48	2.10
		CO	0.10	0.42
		SOx	0.003	0.01
		PM	0.01	0.05
FUG-2A	FUGITIVES FAB 2A PHASE 3	VOC	5.96	9.10
<u>BLDG C PHASE 3</u>				
FS-C	FUME SCRUBBER PHASE 3	HF	0.01	0.02
		INORGANIC ACIDS	0.02	0.03
		AMMONIA	0.02	0.03
		SOx	<0.001	0.001
		OTHER INORGANICS	0.06	0.09
		HALOCARBONS	0.003	0.01
FUG-C	FUGITIVES	VOC	0.82	1.22
<u>STORAGE TANKS, PHASE 1, 2 AND 3</u>				
T-1	DIESEL STORAGE	VOC	0.10	<0.001
T-2	NaOH STORAGE	NaOH	<0.001	<0.001

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
T-3	NaOH STORAGE	NaOH	<0.001	<0.001
T-4	H2SO4 STORAGE	H2SO4	0.0002	<0.0001
T-900 BWS	HCl STORAGE	HCl	0.10	0.002
	SOLVENT WASTE STORAGE	VOC	0.39	0.002
IWT-1	NEUTRALIZATION	H2SO4	<0.01	<0.01
IWT-2	NEUTRALIZATION	H2SO4	<0.01	<0.01
BCV	BOTTLE CHANGE CABINET	SILANE	0.001	<0.001

BOILERS, PHASE 1, 2 AND 3

BS-1	BOILER NO. 1 NATURAL GAS	VOC	0.06	0.24
		PM	0.05	0.23
		NOx	1.05	4.58
		CO	0.21	0.92
		SOx	0.007	0.03
BS-1	BOILER NO. 1 DIESEL	VOC	0.03	0.11
		PM	0.15	0.65
		NOx	1.49	6.54
		CO	0.37	1.64
		SOx	0.003	<0.001
BS-2	BOILER NO. 2 NATURAL GAS	VOC	0.06	0.24
		PM	0.05	0.23
		NOx	1.05	4.58
		CO	0.21	0.92
		SOx	0.007	0.03
BS-2	BOILER NO. 2 DIESEL	VOC	0.03	0.11
		PM	0.15	0.65

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
		NOx	1.49	6.54
		CO	0.37	1.64
		SOx	0.003	<0.001
BS-3	BOILER NO. 3	VOC	0.03	0.12
		PM	0.03	0.11
		NOx	0.52	2.29
		CO	0.1	0.46
		SOx	0.004	0.02
BS-4	BOILER NO. 4	VOC	0.03	0.12
		PM	0.03	0.11
		NOx	0.52	2.29
		CO	0.1	0.46
		SOx	0.004	0.02
G-1	BACK-UP GENERATOR 1 PHASES 1, 2 & 3	VOC	1.61	0.02
		PM	1.21	0.02
		NOx	16.98	0.21
		CO	3.67	0.04
		SOx	0.35	0.01
G-1	BACK-UP GENERATOR 2 PHASES 2 & 3	VOC	1.61	0.02
		PM	1.21	0.02
		NOx	16.98	0.21
		CO	3.67	0.04
		SOx	0.35	0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan. Unless otherwise noted, where more than one emission point is listed, the values shown are the maximum allowable combined stack emissions.
- (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
 NOx - total oxides of nitrogen
 SOx - sulfur oxides
 CO - carbon monoxide

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY
	HF	- hydrogen fluoride		
	HCl	- hydrogen chloride		
	PM	- particulate matter		
	H2SO4	- hydrogen sulfate		
	NaOH	- sodium hydroxide		
(4)	Two of the three scrubbers are operating in parallel. One serves as a backup for maintenance or unscheduled outages.			
(5)	This is the regenerative thermal oxidizer stack. Contributions from each building are listed separately. The maximum allowable for this stack is the combination of the allowables from each building.			

* 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

Revised July 2, 1993