

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 20162

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

<u>Emission Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
Point No. (1)	Name (2)		Name	
(3)	lb/hr	TPY		
E-AN-A1,2	Building A (wet scrubbers)	Acids	2.75	11.43
E-AS-A1,2		Halocarbons	1.29	5.42
E-AS-E1		Hydrides	0.08	0.34
E-BR-1		Inorganics	5.23	21.95
		VOC	0.38	1.60
E-AS-AMM	Ammonia Scrubber	Hydrides	7.51	31.54
E-AS-S1	Rotor Concentrator/ Thermal Oxidizer Stack	VOC	9.01	37.53
		CO	4.50	19.71
		NO _x	0.60	2.63
		SO ₂	<0.01	
		0.01		
	0.42	PM	0.10	
E-BR-2,	Solvent Exhaust	VOC	0.08	0.34
E-BR-3	DI Lab	Acids	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	<0.01	0.01
E-BR-4	DI Lab	Acids	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	<0.01	<0.01

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(3)	lb/hr	TPY		
E-BR-5	Silane Cabinet Exhaust	Hydrides	<0.01	<0.01
E-BR-6	Pipe Clean Shop	Acids	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	<0.01	0.03
E-BR-7	Silane Purge Vent	PM	<0.01	<0.01
E-CR-1,2,3	Boilers (4)	PM	0.31	1.38
	(Natural Gas-Fired)	SO ₂	0.04	0.17
		CO	2.20	9.63
		NO _x	8.79	38.51
		VOC	0.18	0.77
	Boilers (4)	PM	0.90	0.07
	(Fuel Oil-Fired)	SO ₂	6.45	0.51
		CO	2.24	0.18
		NO _x	8.96	0.70
		VOC	0.09	<0.01
E-CR-4	A-Building Generator	PM	0.90	0.09
		SO ₂	4.07	0.41
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-CR-5	A-Building Generator	PM	0.90	0.09
		SO ₂	4.07	0.41
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12

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<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
<u>(3)</u>	<u>lb/hr</u>	<u>TPY</u>		
E-CR-6	DI Treatment	Acids	<0.01	<0.01
		Inorganics	0.02	0.08
		VOC	<0.01	<0.01
E-CR-7	HCl/NaOH Scrubber	HCl	4.73	0.08
		NaOH	<0.01	<0.01
E-CR-8	Natural Gas Compressor	SO ₂	<0.01	0.02
		CO	2.73	11.95
		NO _x	1.97	8.63
		VOC	0.61	2.66
E-CR-9	A-Building Generator	PM	5.91	0.59
		SO ₂	5.51	0.55
		CO	12.89	1.29
		NO _x	58.07	5.81
		VOC	0.30	0.03
E-DR-1	Lab Exhaust	Acid	0.14	0.60
		Halocarbons	0.01	0.05
		Hydrides	<0.01	<0.01
		Inorganics/Bases	0.05	0.24
E-DR-2	Lab Exhaust	VOC	0.07	0.32
E-ER-1	Test Floor/ Lab Exhaust	Acids	0.01	0.05
		Halocarbons	0.01	0.05
		Inorganics	<0.01	0.01
		VOC	0.04	0.16

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<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
<u>(3)</u>	<u>lb/hr</u>	<u>TPY</u>		
E-ER-2	Test Floor/ Labs Exhaust	Acids	<0.01	0.01
		Halocarbons	<0.01	0.01
		Inorganics	<0.01	<0.01
		VOC	0.01	0.03
E-ER-3	Test Floor/ Lab Exhaust	Acids	<0.01	0.01
		Halocarbons	<0.01	0.02
		Hydrides	<0.01	0.01
		Inorganics	<0.01	0.01
		VOC	0.01	0.05
E-ER-4	Test Floor/ Lab Exhaust	Acids	<0.01	<0.01
		Halocarbons	<0.01	0.01
		Hydrides	<0.01	<0.01
		Inorganics	<0.01	0.01
		VOC	0.01	0.03
E-ER-5	Boiler Stack (5) (Natural Gas-Fired)	PM	0.06	0.28
		SO ₂	0.01	0.03
		CO	0.44	1.93
		NO _x	1.76	7.70
		VOC	0.07	0.29
	(Fuel Oil-Fired)	PM	0.18	0.01
		SO ₂	1.30	0.10
		CO	0.45	0.04
		NO _x	1.80	0.14
		VOC	0.03	<0.01
E-FR-1	Test Floor/	Acids	0.01	0.02

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<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
(3)	lb/hr	TPY		
	Lab Exhaust	Halocarbons	0.01	0.02
		Inorganics	<0.01	<0.01
		VOC	0.02	0.07
E-FR-2	Test Floor/ Lab Exhaust	Acids	<0.01	<0.01
		Halocarbons	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	<0.01	0.01
E-HR-1	General Exhaust	Acids	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	0.02	0.10
E-HR-2	Paint Booth Exhaust	VOC	4.26	0.90
		PM	<0.01	<0.01
E-HR-3	Welding/Machine	Acids	<0.01	<0.01
		Inorganics	<0.01	<0.01
		VOC	0.02	0.09
E-HR-4	Carpentry Filter Box Exhaust	PM	<0.01	<0.01
E-JR-1, E-JR-2	Boiler Stacks (5) (Natural Gas-Fired)	PM	0.06	0.28
		SO ₂	0.01	0.03
		CO	0.44	1.93
		NO _x	1.76	7.71
		VOC	0.07	0.31
	(Fuel Oil-Fired)	PM	0.18	0.01
		SO ₂	1.30	0.10
		CO	0.45	0.04

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<u>Emission Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
(3)	lb/hr	TPY		
		NO _x	1.80	0.14
		VOC	0.03	<0.01
E-JR-3	General Exhaust Stack	Acids	0.01	0.03
		Halocarbons	0.02	0.09
		VOC	0.09	0.36
E-JR-4	General Exhaust	Acids	0.01	0.06
		Halocarbons	0.05	0.20
		VOC	0.01	0.03
E-SR-1	Acid Scrubber	Acids	<0.01	<0.01
		Halocarbons	<0.01	<0.01
		Hydrides	<0.01	<0.01
		Inorganics	<0.01	<0.01
E-SR-2	Silane Cabinet Exhaust	Hydrides	<0.01	<0.01
E-SR-3	Silane Purge Vent	PM	<0.01	<0.01
E-ST-1	C-Building Diesel Tank	VOC	0.11	<0.01
E-ST-2	Fire Pump (Emergency Use)	PM	0.46	0.05
		SO ₂	0.43	0.04
		CO	1.39	0.14
		NO _x	6.42	0.64
		VOC	0.62	0.06
E-ST-3	E-Building Diesel Tank	VOC	0.11	<0.01
E-ST-4	E-Building Emergency Generator	PM	0.64	0.06
		SO ₂	0.60	0.06

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<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
<u>(3)</u>	<u>lb/hr</u>	<u>TPY</u>		
		CO	1.94	0.19
		NO _x	8.98	0.90
		VOC	0.87	0.09
E-ST-5	C-Building	Inorganics	0.10	<0.01
	Cooling Tower Corrosion	VOC		0.06
	<0.01			
	Inhibitor Tank			
E-ST-10	C-Cooling Tower	Acids	0.27	0.01
		Inorganics	0.23	0.02
		VOC	0.13	<0.01
E-ST-11	H-Building	PM	0.59	0.06
	Emergency Generator	SO ₂	0.55	0.06
		CO	1.79	0.18
		NO _x	8.28	0.83
		VOC	0.80	0.08
E-ST-12	E-Building	Acids	<0.01	<0.01
	Cooling Towers	Inorganics	<0.01	0.01
		VOC	<0.01	<0.01
E-ST-13	Emergency Generator	PM	0.90	0.09
	(North of B-Building)	SO ₂	4.07	0.41
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-ST-14	Emergency Generator	PM	0.90	0.09
	(North of B-Building)	SO ₂	4.07	0.41

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<u>Emission Rates*</u>	Source	Air Contaminant	<u>Emission</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>	
<u>(3)</u>	<u>lb/hr</u>	<u>TPY</u>		
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-ST-15	J-Building	PM	0.74	0.07
	Emergency Generator	SO ₂	0.69	0.07
		CO	2.24	0.22
		NO _x	10.35	1.03
		VOC	1.00	0.10
E-ST-16	C-Building Cooling	Inorganics	0.05	<0.01
	Tower Biocide Tank	VOC	0.05	<0.01
E-ST-17	D-Building	PM	0.29	0.03
	Emergency Generator	SO ₂	0.62	0.06
		CO	1.55	0.16
		NO _x	5.81	0.58
		VOC	0.32	0.03
E-ST-18	J-Building	Acids	0.15	<0.01
	Cooling Tower	Inorganics	0.13	0.01
		VOC	0.07	<0.01
E-WR-1	Packaging Foam	Polymethylene	<0.01	<0.01
		Polyphenyliso-cyanate		
		Polyurethane resin	<0.01	<0.01

(1) Emission point identification - either specific equipment

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<u>Point No. (1)</u>	<u>Name (2)</u>		<u>Name</u>
<u>(3)</u>	<u>lb/hr</u>	<u>TPY</u>	

designation or emission point number from plotplan.

(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

NO_x - total oxides of nitrogen

CO - carbon monoxide

PM - particulate matter

SO₂ - sulfur dioxide

Halocarbons - halogenated chlorofluorocarbons

(4) Emission rates are summed for 2 operational boilers; 1 extra boiler is for backup only.

(5) Emission rates are summed for 2 boilers.

* These allowable emission rates do not represent the potential increases allowed under Special Condition No. 4.

Dated_____