

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> Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission</u>	
			lb/hr	TPY
E-AN-A1, 2	Building A (Wet Scrubbers)	Inorganics	9.14	34.70
E-AS-A1, 2		VOC	2.13	9.31
E-BR-1		Excluded VOC	4.10	17.95
E-AS-E1	Fab EPI (Wet Scrubber)	Inorganics	<0.01	<0.01
E-AS-AMM	Ammonia Scrubber	Hydrides	9.76	4.07
E-AS-S1	Rotor Concentrator/ Thermal Oxidizer Stack	VOC	44.97	36.76
		SO ₂	<0.01	0.03
		PM	0.12	0.52
		NO _x	1.00	4.38
		CO	0.21	0.92
		Excluded VOC	0.62	0.41
E-BR-2	Solvent Exhaust	VOC	0.02	0.10
E-BR-3	DI Lab	Inorganics	<0.01	<0.01
		VOC	<0.01	0.01
E-BR-4	DI Lab	Inorganics	<0.01	<0.01
		VOC	<0.01	<0.01
E-BR-5	Silane Cabinet Exhaust	Inorganics	<0.01	<0.01
E-BR-6	Pipe Clean Shop	Inorganics	<0.01	<0.01
		VOC	<0.01	0.03

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Emission Rates Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA Emission	
			lb/hr	TPY
E-BR-7	Silane Purge Vent	Inorganics	<0.01	<0.01
E-CR-1,2,3	2 Boilers (Natural Gas-Fired) and 1 Boiler (Stand-By, Fuel Oil-Fired)	PM	1.33	3.95
		SO ₂	8.10	1.93
		CO	3.32	9.87
		NO _x	13.27	39.49
		VOC	0.22	0.77
	2 Boilers (Fuel Oil-Fired)	PM	0.90	0.20
		SO ₂	16.13	3.53
		CO	2.24	0.49
		NO _x	8.96	1.96
		VOC	0.09	0.02
E-CR-4	A-Building Generator No. 2 0.09	PM	0.90	0.90
		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 No. 1 0.09	PM	0.90	0.90
		SO ₂	4.07	0.41
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-CR-6	DI Treatment	Inorganics	0.03	0.11
		VOC	0.01	0.04
E-CR-7	HCl/NaOH Scrubber	Inorganics	0.22	<0.01
E-CR-9	A-Building Generator No. 5	PM	5.91	5.91

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Emission Rates <u>Point No. (1)</u>	Source <u>Name (2)</u>	AIR CONTAMINANTS DATA		
		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			<u>lb/hr</u>	<u>TPY</u>
	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-CR-10	Generator 1	VOC	0.01	<0.01
	Diesel Day Tank			
E-CR-11	Generator 2	VOC	0.01	<0.01
	Diesel Day Tank			
E-CR-12	Generator 5	VOC	0.01	<0.01
	Diesel Day Tank			
E-DR-1	Lab Exhaust	Inorganics	0.01	0.04
		Excluded VOC	<0.01	<0.01
E-DR-2	Lab Exhaust	VOC	0.06	0.25
E-ER-1	Test Floor/ Lab Exhaust	Inorganics	0.01	0.05
		VOC	0.03	0.12
		Excluded VOC	<0.01	0.02
E-ER-2	Test Floor/ Lab Exhaust	Inorganics	0.01	0.04
		VOC	0.03	0.10
		Excluded VOC	<0.01	0.01
E-ER-3	Test Floor/ Lab Exhaust	Inorganics	<0.01	0.01
		VOC	<0.01	0.01
		Excluded VOC	<0.01	<0.01
E-ER-4	Test Floor/ Lab Exhaust	Inorganics	0.06	0.24
		VOC	0.07	0.30
		Excluded VOC	0.01	0.04
E-ER-5	2 Boilers	PM	0.24	0.67

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Emission Rates Point No. (1)	Source Name (2)	AIR CONTAMINANTS DATA		
		Air Contaminant Name (3)	Emission	
			lb/hr	TPY
	(Natural Gas-Fired) and 1 Boiler (Stand-By, Fuel Oil-Fired) 5.70	SO ₂ CO NO _x	1.63 0.49 2.16	0.39 1.20 2.16
		VOC	0.09	0.32
	2 Boilers (Fuel Oil-Fired)	PM SO ₂ CO NO _x VOC	0.18 3.24 0.45 1.80 0.03	0.04 0.71 0.10 0.39 0.01
E-FR-1	Test Floor/ Lab Exhaust	Inorganics VOC Excluded VOC	0.03 0.05 0.01	0.13 0.20 0.03
E-FR-2	Test Floor/ Lab Exhaust	Inorganics VOC Excluded VOC	0.04 0.06 0.01	0.21 0.32 0.05
E-HR-1	General Exhaust	Inorganics VOC	<0.01 0.02	<0.01 0.09
E-HR-2	Paint Booth Exhaust	VOC PM	0.03 <0.01	0.11 <0.01
E-HR-3	Welding/Machine	Inorganics VOC	<0.01 0.02	<0.01 0.08
E-HR-4	Carpentry Filter Box Exhaust	PM	<0.01	<0.01
E-JR-1, E-JR-2	1 Boiler (Natural Gas-Fired) and 1 Boiler (Stand-By, Fuel Oil-Fired) 2.95	PM SO ₂ CO NO _x VOC	0.16 1.62 0.36 1.53 0.05	0.35 0.37 0.63 1.53 0.16

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Emission Rates <u>Point No. (1)</u>	Source <u>Name (2)</u>	AIR CONTAMINANTS DATA		
		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			<u>lb/hr</u>	<u>TPY</u>
E-JR-3	General Exhaust Stack	VOC	<0.01	<0.01
E-JR-4	General Exhaust	VOC	<0.01	<0.01
E-SR-1	Acid Scrubber	Inorganics	<0.01	<0.01
		Excluded VOC	<0.01	<0.01
E-SR-2	Silane Cabinet Exhaust	Inorganics	<0.01	<0.01
E-SR-3	Silane Purge Vent	Inorganics	<0.01	<0.01
E-ST-1	CUB Diesel Tank	VOC	0.14	<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	ECP 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
		CO	1.94	0.19
		NO _x	8.98	0.90
		VOC	0.87	0.09
E-ST-5	C-Building Cooling Tower Corrosion Inhibitor Tank	Inorganics	0.17	<0.01
E-ST-10	C-Building Cooling Towers <0.01	Inorganics		<0.01
		VOC	<0.01	<0.01

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Emission Rates Point No. (1)	Source Name (2)	AIR CONTAMINANTS DATA		
		Air Contaminant Name (3)	<u>Emission</u> lb/hr	<u>TPY</u>
E-ST-11	H-Building Emergency Generator	PM	0.59	0.06
		SO ₂	0.60	0.06
		CO	1.79	0.18
		NO _x	8.28	0.83
		VOC	0.80	0.08
E-ST-12	E-Building 6 Cooling Towers	Inorganics	<0.01	<0.01
		VOC	<0.01	<0.01
E-ST-13	Emergency Generator No. 4 0.09 (North of B-Building) 0.41	PM		0.90
		SO ₂		4.07
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-ST-14	Emergency Generator No. 3 0.09 (North of B-Building) 0.41	PM		0.90
		SO ₂		4.07
		CO	8.87	0.89
		NO _x	40.66	4.07
		VOC	1.22	0.12
E-ST-15	J-Building Emergency Generator	PM	0.74	0.07
		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 Tower Biocide Tank	VOC	0.09	<0.01
E-ST-17	D-Building Emergency Generator	PM	0.29	0.03
		SO ₂	0.62	0.06
		CO	1.55	0.16

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<u>Emission Rates</u> Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA <u>Emission</u>	
			lb/hr	TPY
		NO _x	5.81	0.58
		VOC	0.32	0.03
E-ST-18	J-Building Cooling Tower	Inorganics	<0.01	<0.01
		VOC	<0.01	<0.01
E-ST-19	Generator 3, 4 Diesel Day Tank	VOC	0.01	<0.01
E-ST-20	D, E, and H Generator Diesel Day Tank	VOC	0.01	<0.01
E-ST-21	Fire Pump Diesel Day Tank	VOC	0.01	<0.01

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- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
 - (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
Excluded VOC - volatile organic compounds as defined in General Rule 101.1 specifically excluded from the definition of VOC in General Rule 101.1
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|-----------------|----------------------------|
| NO _x | - total oxides of nitrogen |
| CO | - carbon monoxide |
| PM | - particulate matter |
| SO ₂ | - sulfur dioxide |

Dated _____