

## 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
			<0.01	<0.01
E-AS-AMM	Ammonia Scrubber	Hydrides	9.76	4.07
E-AS-S1	Rotor Concentrator/ Thermal Oxidizer Stack	VOC	44.99	36.51
		SO <sub>2</sub>	<0.01	0.03
		PM	0.12	0.52
		NO <sub>x</sub>	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	<0.01

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		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			<u>lb/hr</u>	<u>TPY</u>
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 <sub>2</sub>	8.10	1.93
		CO	3.32	9.87
		NO <sub>x</sub>	13.27	
	39.49			
		VOC	0.22	0.77
	2 Boilers (Fuel Oil-Fired)	PM	0.90	0.20
		SO <sub>2</sub>	16.13	3.53
		CO	2.24	0.49
		NO <sub>x</sub>	8.96	1.96
		VOC	0.09	0.02
E-CR-4	A-Building Generator No. 2 0.09		PM	0.90
		SO <sub>2</sub>	4.07	0.41
		CO	8.87	0.89
		NO <sub>x</sub>	40.66	4.07
		VOC	1.22	0.12
E-CR-5	A-Building Generator No. 1 0.09		PM	0.90
		SO <sub>2</sub>	4.07	0.41
		CO	8.87	0.89
		NO <sub>x</sub>	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

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		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			<u>lb/hr</u>	<u>TPY</u>
	0.59			
		SO <sub>2</sub>	5.51	0.55
		CO	12.89	1.29
		NO <sub>x</sub>	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	0.02
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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		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			lb/hr	TPY
	(Natural Gas-Fired) and 1 Boiler (Stand-By, Fuel Oil-Fired) 5.70	SO <sub>2</sub> CO NO <sub>x</sub>	1.63 0.49 2.16	0.39 1.20 2.16
		VOC	0.09	0.32
	2 Boilers (Fuel Oil-Fired)	PM SO <sub>2</sub> CO NO <sub>x</sub> 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	0.20 0.32 0.05
E-HR-1	General Exhaust Lab Exhaust	Inorganics VOC	<0.01 0.02	<0.01 0.09
E-HR-2	Paint Booth Exhaust	VOC PM	0.03 <0.01	0.10 <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 <sub>2</sub> CO NO <sub>x</sub> 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> lb/hr	<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 <sub>2</sub>	0.43	0.04
		CO	1.39	0.14
		NO <sub>x</sub>	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 <sub>2</sub>	0.60	0.06
		CO	1.94	0.19
		NO <sub>x</sub>	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-7 Cooling Towers	Inorganics	<0.01	<0.01
		VOC	<0.01	<0.01
E-ST-11	H-Building	PM	0.59	0.06

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		Air Contaminant <u>Name (3)</u>	<u>Emission</u>	
			<u>lb/hr</u>	<u>TPY</u>
	Emergency Generator	SO <sub>2</sub>	0.55	0.06
		CO	1.79	0.18
		NO <sub>x</sub>	8.28	0.83
		VOC	0.80	0.08
E-ST-12	E-Building	Inorganics	<0.01	<0.01
	6 Cooling Towers	VOC	<0.01	<0.01
E-ST-13	Emergency Generator No. 4		PM	0.90
	0.09			
	(North of B-Building)		SO <sub>2</sub>	4.07
	0.41			
		CO	8.87	0.89
		NO <sub>x</sub>	40.66	4.07
		VOC	1.22	0.12
E-ST-14	Emergency Generator No. 3		PM	0.90
	0.09			
	(North of B-Building)		SO <sub>2</sub>	4.07
	0.41			
		CO	8.87	0.89
		NO <sub>x</sub>	40.66	4.07
		VOC	1.22	0.12
E-ST-15	J-Building	PM	0.74	0.07
	Emergency Generator	SO <sub>2</sub>	0.69	0.07
		CO	2.24	0.22
		NO <sub>x</sub>	10.35	1.03
		VOC	1.00	0.10
E-ST-16	C-Building Cooling	VOC	0.09	<0.01
	Tower Biocide Tank			
E-ST-17	D-Building	PM	0.29	0.03
	Emergency Generator	SO <sub>2</sub>	0.62	0.06
		CO	1.55	0.16
		NO <sub>x</sub>	5.81	0.58

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		Air Contaminant Name (3)	<u>Emission</u> lb/hr	<u>TPY</u>
		VOC	0.32	0.03
E-ST-18	J-Building Cooling Tower	Inorganics VOC	<0.01 <0.01	<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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

- (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  
Exclude VOC - volatile organic compounds as defined in General Rule 101.1 specifically excluded from the definition of VOC in General Rule 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - CO - carbon monoxide
  - PM - particulate matter
  - SO<sub>2</sub> - sulfur dioxide

Dated \_\_\_\_\_