Emission Sources - Maximum Allowable Emission Rates

Permit Number 41451

This table lists the maximum allowable emission rates and all sources of air contaminants 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, sources, and related activities. 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 (FIN)	Air Contaminant Name (2)	Emission Rates (4)	
			lbs/hour	TPY (3)
93	Etching/surface preparation - Methanol Phase II emissions** (controlled)	VOC	0.45	0.21
		Methanol (5)	0.45	0.21
90	LPE Reactors, surface preparation and leveling, Phase II emissions** (uncontrolled).	Methanol (uncontrolled)	2.53	1.17
5	Plating, Surface preparation, welding, photoresist, Phase II emissions** (uncontrolled)	Methanol (uncontrolled)	0.84	3.69
93	RTO Bypass (authorized for 120 hours per year during RTO maintenance)	VOC	3.42	0.21
		Methanol (5)	3.42	0.21
93	Regenerative Thermal Oxidizer (RTO) – Products of Combustion	VOC	0.02	0.07
		PM	0.02	0.09
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.09
		NOx	0.24	1.05
		CO	3.27	14.32
		SO_2	<0.01	0.01
89, 90, 92, 92B, 93	Capped Emissions for Research West Building Operations (RW_CAP) (6)	VOC (5)	8.72	12.39
		Exempt Solvent	5.20	7.07
		PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
		Inorganic Compounds	0.56	1.29
5, 5B, 12A, 12B, and 233A	Capped Emissions for Semiconductor Building Operations (SC_CAP)	VOC (5)	19.89	11.97
		Exempt Solvent	1.39	2.17

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		PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
		Inorganic Compounds	3.45	4.27
SCST	Waste Solvent Tank (SCST)	VOC	0.03	0.11
		Exempt Solvent	<0.01	0.03
RWGEN	Emergency Generator (RWGEN)	VOC	<0.01	<0.01
		PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
		NO_x	<0.01	<0.01
		CO	<0.01	<0.01
		SO_2	<0.01	<0.01
All Emission Points at the Site	All Sources at the Site	Individual HAP	---	<10.00
		Total HAPs	---	<25.00

Phase II - Methanol emissions from FPAD Solvent Areas 1, 2 and 3, and the DPT process area shall be controlled by an RTO (EPN 93) during Phase II operations. (Phase II complete on permit issuance dated **11/18/22)

(1) Emission point identification - either a single emission point or a grouping of emission points (FIN) - Facility Identification Number
(2) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
Inorganic Compounds - acids and bases
NO_x - total oxides of nitrogen
CO - carbon monoxide
SO_2 - sulfur dioxide
HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
(3) Compliance with annual emission limits (tpy) is based on a consecutive 12 month rolling period.
(4) Allowable emissions for all sources include emissions from planned maintenance, startup and shutdown activities.
(5) Methanol emissions are included in VOC.
(6) Capped emissions for Research West Building Operations exclude products of combustion from the Regenerative Thermal Oxidizer.

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Date: December 18, 2023