Emission Sources - Maximum Allowable Emission Rates

Permit Number 49823

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, 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 (1)	Source Name (2)	Air Contaminant (3)	Emission Rates	
			lbs/hour	TPY (4)
FLRFINCAP	VOC Cap for Flare and Finishing (6) (12)	VOC		105.75
		Ethylene		64.48
PE-CT1	Cooling Tower CT1	VOC	1.26	5.52
		Ethylene	1.26	0.88
		PM	0.37	1.16
		PM_{10}	0.06	0.18
		$PM_{2.5}$	0.01	0.01
PE-CT2A	Cooling Tower CT2A	VOC	0.63	2.76
		Ethylene	0.63	0.44
		PM	0.37	1.16
		PM_{10}	0.06	0.18
		$PM_{2.5}$	0.01	0.01
PE-CT2B	Cooling Tower CT2B	VOC	0.67	2.94
		Ethylene	0.67	0.47
		PM	0.37	1.16
		PM_{10}	0.06	0.18
		$PM_{2.5}$	0.01	0.01
PE-CT3	Cooling Tower CT3	VOC	1.16	5.06

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		Ethylene	1.16	0.81
		PM	0.37	1.16
		PM_{10}	0.06	0.18
		$PM_{2.5}$	0.01	0.01
PE-FLARE	Polyethylene Flare (6)	NO_x	73.64	22.61
		CO	379.39	116.47
		VOC	351.26	105.75
		Ethylene	351.25	64.48
		Propylene	173.98	1.25
		SO_2	1.96	0.48
PE-A50	Area 50 Fugitives (5)	VOC	21.82	95.56
		Ethylene	7.55	33.08
PE-AR702	Area R702 Fugitives (5)	VOC	11.60	50.79
		Ethylene	3.82	16.72
PE-A130A	Area 130A Fugitives (5)	VOC	9.80	42.94
		Ethylene	3.61	15.82
PE-A130B	Area 130B Fugitives (5)	VOC	17.53	76.74
		Ethylene	5.76	25.21
PE-A130C	Area 130C Fugitives (5)	VOC	10.49	45.94
		Ethylene	3.49	15.30
PE-A150	Area 150 Fugitives (5)	VOC	11.98	52.47
		Ethylene	4.00	17.52
PE-A160	Area 160 Fugitives (5)	VOC	2.79	12.20
		Ethylene	0.97	4.24

Emission Sources - Maximum Allowable Emission Rates

PE-AMTRYD	Metering Yard Components Fugitives (5)	VOC	2.10	9.17
		Ethylene	0.85	3.71
PE-ERU	Ethylene Recovery Unit Fugitives (5)	VOC	17.78	77.87
		Ethylene	6.22	27.23
PE-A410	PP Tank Farm Fugitives (5)	VOC	2.10	9.19
		Ethylene	0.73	3.21
FINLOADCAP	Particulate Cap for Finishing and Loading (11) (12)	PM		1.88
PE-CM7DRY, PE-CM7STG	CM7 Dryer Vent and Storage Vent (6) (7)	VOC	4.17	6.94
PE-CM7STG	CM7 Storage Vent (11)	PM	0.02	0.07
PE-CM7EV	Additive Feed Vent	VOC	0.02	0.09
		Ethylene	<0.01	<0.01
		Propylene	<0.01	<0.01
PE-CM8DRY, PE-CM8STG, PE-CM8VNT	CM8 Dryer Vent, Storage Vent, and Extruder Premixer Vent (6) (7)	VOC	4.21	7.01
PE-CM8STG	CM8 Storage Vent (11)	PM	0.01	0.01
PE-CM8VNT	CM8 Extruder Premix Vent (11)	PM	0.01	0.01
PE-CM10DRY, PE-CM10STG, PE-CM10FV	CM10 Dryer Vent, Storage Vent, and Extruder Feed Vent (6) (7)	VOC	5.61	10.76
PE-CM10STG	CM10 Storage Vent (11)	PM	0.01	0.01
PE-CM10FV	CM10 Extruder Feed Vent (11)	PM	0.01	0.01
PE-CM10EV	Additive Feed Vent	VOC	0.01	0.02
		Ethylene	<0.01	<0.01
		Propylene	<0.01	<0.01
PE-FCM2DRY, PE-FCM2STG	FCM2 Dryer Vent and Storage Vent (6) (7)	VOC	4.61	8.80

Emission Sources - Maximum Allowable Emission Rates

PE-FCM2STG	FCM2 Storage Vent (11)	PM	0.11	0.24
PE-FCM3DRY, PE-FCM3STG	FCM3 Dryer Vent and Storage Vent (6) (7)	VOC	4.61	8.80
PE-FCM3STG	FCM3 Storage Vent (11)	PM	0.11	0.24
PE-FCM23EV	Additive Feed Vent	VOC	0.60	2.65
		Ethylene	<0.01	<0.01
		Propylene	<0.01	<0.01
PE-FCM6DRY, PE-FCM6STG, PE-FCM6FV	FCM6 Dryer Vent, Storage Vent, and Extruder Feed Vent (6) (7)	VOC	5.73	9.79
PE-FCM6STG	FCM6 Storage Vent (11)	PM	0.20	0.45
PE-LOAD	Loading (6) (11)	VOC	6.98	4.85
		Ethylene	0.20	0.03
		PM	0.60	0.83
COGACTCAP	Combustion Cap for Cogens and Catalyst Activator Heaters (8) (12)	NO_x	48.22	99.05
		CO	64.88	155.11
		SO_2		4.66
PE-HRSG21	Cogen Unit 1 (8)	NO_x	14.73	25.03
		CO	15.76	40.73
		PM	1.59	3.37
		PM_{10}	1.59	3.37
		$PM_{2.5}$	1.59	3.37
		VOC	3.53	5.58
		Ethylene	0.01	0.06
		SO_2	0.50	1.16
PE-HRSG22	Cogen Unit 2 (8)	NO_x	14.73	25.03

Emission Sources - Maximum Allowable Emission Rates

		CO	15.76	40.73
		PM	1.59	3.37
		PM_{10}	1.59	3.37
		$PM_{2.5}$	1.59	3.37
		VOC	3.53	5.58
		Ethylene	0.01	0.06
		SO_2	0.50	1.16
PE-HRSG23	Cogen Unit 3 (8)	NO_x	14.73	25.03
		CO	15.76	40.73
		PM	1.59	3.37
		PM_{10}	1.59	3.37
		$PM_{2.5}$	1.59	3.37
		VOC	3.53	5.58
		Ethylene	0.01	0.06
		SO_2	0.50	1.16

Emission Sources - Maximum Allowable Emission Rates

PE-HRSG24	Cogen Unit 4 (8)	NO_x	14.73	25.03
		CO	15.76	40.73
		PM	1.59	3.37
		PM_{10}	1.59	3.37
		$PM_{2.5}$	1.59	3.37
		VOC	3.53	5.58
		Ethylene	0.01	0.06
		SO_2	0.50	1.16
PE-H11	Catalyst Activator Heater H11(8)	NO_x	0.54	2.38
		CO	0.46	2.00
		PM	0.05	0.23
		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.05	0.23
		VOC	0.03	0.13
		SO_2	0.02	0.07
PE-H16	Catalyst Activator Heater H16 (8)	NO_x	0.54	2.38
		CO	0.46	2.00
		PM	0.05	0.23
		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.05	0.23
		VOC	0.03	0.13
		SO_2	0.02	0.07
PE-H19	Catalyst Activator Heater H19 (8)	NO_x	0.54	2.38
		CO	0.46	2.00

Emission Sources - Maximum Allowable Emission Rates

		PM	0.05	0.23
		PM_{10}	0.05	0.23
		$PM_{2.5}$	0.05	0.23
		VOC	0.03	0.13
		SO_2	0.02	0.07
PE-RTO	Thermal Oxidizer	NO_x	0.70	3.07
		CO	0.52	2.27
		PM	0.09	0.41
		PM_{10}	0.09	0.41
		$PM_{2.5}$	0.09	0.41
		VOC	0.54	2.34
		SO_2	0.09	0.08
PE-TLOAD	Transloading Operations (11)	PM	0.40	1.75
VCONT	Temporary Flares and Vapor Combustors (9)	NO_x	1.61	0.06
		CO	8.27	0.33
		SO_2	0.03	0.01
MSSCAP2	Sitewide MSS Activities (9)	VOC	56.01	1.30
PE-FLAREMSS	Flare MSS Emissions (10)	NO_x	29.17	0.32
		CO	150.25	0.65
		VOC	498.80	15.99
		SO_2	7.13	0.08
PE-BLAST	Dry Abrasive Blasting	PM	1.48	0.89
		PM_{10}	0.35	0.21
		$PM_{2.5}$	0.35	0.21

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 Title 30 Texas Administrative Code § 101.1
HRVOC - highly reactive volatile organic compounds as defined in 30 TAC § 115.10
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) The individual emission limitations for these EPNs during normal operations are independently enforceable from the annual emissions limitations in FLRFINCAP. The annual emissions limitations in FLRFINCAP make federally enforceable certain reductions in VOC and ethylene emissions achieved by INEOS to fulfil the requirements of 30 TAC 101.394(a)(3)(D).
(7) VOC emissions occur at multiple EPNs including *-DRY, *-STG, *-VNT, *-FV.
(8) The individual emission limitations for these EPNs are independently enforceable from the hourly and annual emissions limitations in COGCATCAP. The basis for the limits is the permit renewal issued June 30, 2008. The Catalyst Activator Heaters (EPNs PE-H11, PE-H16, and PE-H19), previously authorized via Permit by Rule, were included in the cap at the time of the renewal with no increase in the cap.
(9) MSSCAP2 represents the VOC emissions from miscellaneous process equipment and includes VOC emissions for uncontrolled venting of residual VOC and for VOC after controls, as applicable. Therefore, the MSS VOC emissions from temporary flares and vapor combustors are included in EPN MSSCAP2. MSS NO_x, CO, and SO_2 emissions from temporary flares and vapor combustors are represented in EPN VCONT and are not included in EPN MSSCAP2. Emissions from EPNs MSSCAP2 and VCONT are intended for miscellaneous MSS activities that may occur during normal operation or during shutdowns.
(10) Emissions rates for PE-FLAREMSS represent emissions from planned MSS activities that are routed to the plant flare (EPN PE-FLARE). The hourly emissions limits apply instead of the hourly emissions limits listed for normal operation for EPN PE-FLARE; they do not apply in addition to the limits for normal operation. The annual emissions listed for PE-FLAREMSS are the maximum allowable from planned MSS activities; however, the total annual emissions from the flare (from both normal operation and planned MSS activities) must meet the limits listed for EPN PE-FLARE and the FLRFINCAP.
(11) The individual emission limitations for these EPNs during normal operations are independently enforceable from the annual emissions limitations in FINLOADCAP. The basis for the limits is the permit amendment/renewal issued June 30, 2008. During this amendment/renewal, EPN PE-TLOAD was added to the particulate matter cap without increasing the emissions cap limit.
(12) Emissions caps do not remove the obligation to assess federal permitting applicability per the major modification definition in 30 TAC 116.12.

Date: April 30, 2019