

Emission Sources - Maximum Allowable Emission Rates

Permit Number 1302 and PSDTX1085

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 No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
PH2	Start-Up Flare	VOC	165.17	6.20
		CO	258.22	18.62
		NO _x	65.84	5.40
		NH ₃	80.34	4.88
		SO ₂	0.23	0.02
PH3	ADN Operating Flare Routine Operations	VOC	191.54	92.55
		CO	521.74	307.75
		NO _x	139.52	24.57
		SO ₂	1.23	2.91
		HCl	0.07	0.19
		NH ₃	0.05	0.24
		PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
	ADN Operating Flare Maintenance Startup and Shutdown (MSS) Operations (6)	VOC	565.80	---
		NO _x	139.52	---
		SO ₂	1.23	---
PH70	Ammonia Flare Routine/MSS Operations (7)	VOC	4.68	0.34
		CO	64.88	4.24
		NO _x	64.41	3.91
		NH ₃	112.67	6.76
		SO ₂	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

PH63	HCN Loading Flare	VOC	0.83	2.45
		CO	4.61	13.66
		NO _x	0.54	1.60
		NH ₃	<0.01	<0.01
		SO ₂	0.01	0.02
		HCN	0.03	0.04
PA403	Building 3056 Fugitive (5)	VOC	0.35	1.54
PA404	Building 3040 Fugitive (5)	VOC	4.74	20.33
PA405	Building 3050 Fugitive (5)	VOC	1.86	8.09
PA406	Building 3092 Fugitive (5)	VOC	0.12	0.54
PA407	Building 3045/3055 Fugitive (5)	VOC	1.56	4.94
		HCl	0.01	0.01
PC408	Building 3065/3099 Fugitive (5)	VOC	2.74	11.97
		HCl	0.03	0.13
PC409	Building 3068 Fugitive (5)	VOC	1.23	5.39
		HCl	0.01	0.01
B3080	Building 3080 Fugitives (5)	VOC	0.70	3.04
PF410	311 Tank Farm Fugitive (5)	VOC	0.14	0.59
PF414	3047 Rail Rack Fugitive (5)	VOC	0.19	0.84
PH401	Building 3030/3032 Fugitive (5)	VOC	3.17	13.88
		NH ₃	3.60	15.76
PH402	Building 3090 Fugitive (5)	VOC	0.02	0.10
PH601	E HCN OD Stack	VOC	0.01	0.01
		NH ₃	0.01	0.01

PH602	W HCN OD Stack	VOC	0.01	0.01
		NH ₃	0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

PC82	Dust Collector	PM	0.03	0.01
PT301	Tank	Inorganic	0.01	0.01
PT302	Tank	Inorganic	0.01	0.01
PT303	Tank	Inorganic	0.01	0.01
PT304	Tank	VOC	0.01	0.01
PT305	Decanter	VOC	0.01	0.01
PT308	Catalyst Storage Tank #3 (effective June 2014)	VOC	0.75	0.12
PT329	Catalyst Storage Tanks #1 and #2 (effective June 2014)	VOC	4.87	0.53
PT60	Absorber	VOC	3.21	3.07
	Absorber Emissions During Maintenance (8)	VOC	---	0.05
PA39	Fume Abator (Incinerator)	VOC	0.48	1.05
		CO	0.01	0.01
		NO _x	2.00	5.12
		SO ₂	0.01	0.01
		NH ₃	0.01	0.01
	Fume Abator (Incinerator) MSS Activities (8)	VOC	---	0.10
		CO	---	0.01
		NO _x	---	0.01
PT326	Tank	VOC	0.01	0.01
PT335	Tank	VOC	0.05	0.01
PT10	HCl Scrubber/Tank (8)	HCl	0.17	0.03
PT341	Tank	VOC	---	0.37
PT342	Tank	VOC	0.37	0.38
PT343	Tank	VOC	0.37	
PT344	Tank	VOC	---	0.04

Emission Sources - Maximum Allowable Emission Rates

		HCN	---	0.03
PT345	Tank	VOC	0.01	0.01
PT347	Tank	VOC	---	0.37
PT341, PT347	Tank	VOC	0.77	---
PT349	Tank	VOC	---	0.04
		HCN	---	0.02
PT344, PT349	Tank	VOC	0.28	---
		HCN	0.16	---
PT369	Tank	VOC	0.01	0.01
PT370	Tank	VOC	0.01	0.01
PT371	Tank	VOC	0.01	0.01
PT379	Tank	VOC	0.01	0.01
PT380	Tank	VOC	0.01	0.01
PT383	Tank	VOC	13.72	0.75
PT384	Tank	VOC	13.72	
PT387	Tank	VOC	0.01	0.01
PT388	Tank	VOC	0.01	0.01
PC83	Building Vent	PM	6.00	0.75
		PM ₁₀	6.00	0.75
		PM _{2.5}	6.00	0.75
PN628	ADN Analyzer Vent	VOC	0.01	0.01
PN601	NG Plant KO Pot	VOC	2.20	4.10
PH627	HCN Analyzer Vent	VOC	0.01	0.01
PN301	Tank	VOC	0.01	0.01
PN302	Tank	VOC	0.01	0.01
PT353	Tank	VOC	0.01	0.06
PT354	Tank	VOC	0.01	

Emission Sources - Maximum Allowable Emission Rates

PT355	Tank	VOC	0.01	
PT381	Tank	VOC	20.04	2.08
PT382	Tank	VOC	19.99	
PN447	Gas Plant Fugitive (5)	VOC	0.60	2.61
PF412	513 Tank Farm Fugitive (5)	VOC	0.01	0.02
PF413A	Cooling Tower Fugitive (5)	Inorganic	0.08	0.32
PF413	ADN Cooling Tower	VOC	3.00	13.15
		PM	0.56	2.46
		PM ₁₀	0.41	1.79
		PM _{2.5}	<0.01	<0.01
PF415	3058 Tank Farm Fugitive (5)	VOC	0.25	1.11
PF900	Parts Degreaser	VOC	0.12	0.53
PF901	Dust Collector	PM	0.55	0.10
		PM ₁₀	0.55	0.10
		PM _{2.5}	0.55	0.10
DUSTCOLL	Catalyst Prep Dust Collector	PM	0.43	1.88
		PM ₁₀	0.43	1.88
		PM _{2.5}	0.43	1.88
LDFUG - Tank FT317	Recycle Ligand Tank Loading Fugitives	VOC	0.10	0.01
PF40	South ADN Boiler	VOC	1.79**	---
		CO	56.68**	---
		NO _x	490.00**	---

Emission Sources - Maximum Allowable Emission Rates

		PM	13.69**	---
		PM ₁₀	13.69**	---
		PM _{2.5}	13.69**	---
		HCl	2.96**	---
		Cl ₂	0.72**	---
		SO ₂	0.65**	---
PF41	North ADN Boiler	VOC	1.79**	---
		CO	69.38**	---
		NO _x	637.00**	---
		PM	13.69**	---
		PM ₁₀	13.69**	---
		PM _{2.5}	13.69**	---
		HCl	2.96**	---
		Cl ₂	0.72**	---
		SO ₂	0.65**	---

PF40/PF41	South and North ADN Boiler	VOC	---	5.26
		CO	---	151.34
		NO _x	---	2407.04
		PM	---	15.39
		PM ₁₀	---	15.39
		PM _{2.5}	---	15.39
		HCl	---	4.38
		Cl ₂	---	1.06
		SO ₂	---	1.00
PF416	Boiler Fugitive (5)	VOC	0.22	0.94
PT399	Misc Tanks	VOC	0.01	0.01
PW450	Wastewater Fugitive (5)	VOC	0.05	0.01

Emission Sources - Maximum Allowable Emission Rates

PC22	Carbon Drum	VOC	0.01	0.01
PC425	Drum	VOC	0.03	0.01
PC426	Drum	VOC	0.01	0.01
PC23	Carbon Drum	VOC	0.01	0.01
PF601	North ADN Boiler Analyzer Vent	VOC	0.01	0.01
		CO	0.01	0.04
		NO _x	0.08	0.35
		PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
		HCl	0.01	0.01
		Cl ₂	0.01	0.01
		SO ₂	0.01	0.01

PF600	South ADN Boiler Analyzer Vent	VOC	0.01	0.01
		CO	0.01	0.03
		NO _x	0.06	0.27
		PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
		HCl	0.01	0.01
		Cl ₂	0.01	0.01
		SO ₂	0.01	0.01
FF807-LOADFUG	Loading from FT376/377	VOC	0.09	0.02
FF806-LOADFUG	Loading from FT374/364	VOC	1.45	0.07
FF812-LOADFUG	Loading from FT344/349	VOC	0.01	0.01
FA802-LOADFUG	Loading from FT356/357	VOC	0.14	0.02

Emission Sources - Maximum Allowable Emission Rates

FF813-LOADFUG	Loading from FT361/375	VOC	0.29	0.02
B3056(1)-LOADFUG	B3065 Loading – P123	VOC	1.12	0.01
B3065(2)-LOADFUG	B3065 Loading – P126	VOC	0.48	0.01
PP39-LOADFUG	Loading from FA713	VOC	0.08	0.01
FT129-LOADFUG	Loading from FT350/351/352 Truck Trailers	VOC	0.08	0.01
FF810-LOADFUG	Loading from FT350/351/352 Rail Cars	VOC	0.08	0.01
BDFUG	Barge Dock and BD Pipe Fugitives	VOC	0.45	1.98
BDEDETACH	Butadiene Emissions from Hose Disconnects	VOC	0.06	0.01

BDENGINE	Emergency Diesel Engine	NO _x	0.27	0.01
		CO	2.33	0.07
		VOC	0.13	<0.01
		SO ₂	0.01	<0.01
		PM	0.01	<0.01
		PM ₁₀	0.01	<0.01
		PM _{2.5}	0.01	<0.01
BDENGINE2	Emergency Diesel Engine 2	NO _x	0.42	0.01
		CO	0.44	0.01
		VOC	0.14	<0.01
		SO ₂	<0.01	<0.01
		PM	0.03	<0.01
		PM ₁₀	0.03	<0.01
		PM _{2.5}	0.03	<0.01
BDFIRE1	Fire Pump Diesel Engine 1	NO _x	2.82	0.22
		CO	0.68	0.05
		VOC	1.16	0.09

Emission Sources - Maximum Allowable Emission Rates

		SO ₂	<0.01	<0.01
		PM	0.09	<0.01
		PM ₁₀	0.09	<0.01
		PM _{2.5}	0.09	<0.01

BDFIRE2	Fire Pump Diesel Engine 2	NO _x	2.82	0.22
		CO	0.68	0.05
		VOC	1.16	0.09
		SO ₂	<0.01	<0.01
		PM	0.09	<0.01
		PM ₁₀	0.09	<0.01
		PM _{2.5}	0.09	<0.01
BDFIREPMP	Fire Pump Diesel Engine Combined Annual CAP	NO _x	---	0.32
		CO	---	0.08
		VOC	---	0.13
		SO ₂	---	<0.01
		PM	---	<0.01
		PM ₁₀	---	<0.01
		PM _{2.5}	---	<0.01
BDDIESELTK	Diesel Storage Tank	VOC	0.14	0.01
DUSTCOLLZN	Zinc Chloride Vent Filter	PM	0.10	0.01
		PM ₁₀	0.10	0.01

Emission Sources - Maximum Allowable Emission Rates

		PM _{2.5}	0.10	0.01
DUSTCOLLNI	Nickel Dumping Station Filter	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		PM _{2.5}	<0.01	<0.01
TOTE	Additive Tote	H ₃ PO ₄	0.01	0.01
MGNFUG	Fugitives from MGN Truck Loading from Railcar	VOC	0.03	0.01

FSTLOOPCBS	Fast Loop Cabinets	VOC	<0.01	<0.01
		HCN	<0.13	<0.01
		NH ₃	<0.01	<0.01
TRACERBLR	Tracer Emissions from ADN North and South Boilers	VOC	2.33	1.67
		PM	0.20	0.14
		PM ₁₀	0.20	0.14
		PM _{2.5}	0.20	0.14
B568	B568 Ammonia Tank Fugitive Emissions	NH ₃	0.08	0.35

Maintenance Startup and Shutdown (MSS) Activities

MSS-FUG	MSS Fugitives	VOC	3.36	0.24
		NH ₃	0.01	0.01
		PM	0.01	0.01
		PM ₁₀	0.01	0.01
		PM _{2.5}	0.01	0.01
TKCL-MSS	Combustion Device for Tank Cleaning	NO _x	0.62	0.07
		CO	0.03	0.01
		VOC	3.34	0.31
TOFA-MSS	Thermal Oxidizer for Maintenance	NO _x	1.98	0.93
		CO	1.13	1.31

Emission Sources - Maximum Allowable Emission Rates

		VOC	32.30	0.68
CCTEMP	Carbon Canister Promoter Area MSS	VOC	0.11	0.03
CBA	Carbon Canister during VOC Absorber Maintenance	VOC	2.85	1.05

ENGINE-MSS	Portable Engines	NO _x	8.02	3.78
		VOC	0.16	0.43
		CO	3.61	2.01
		SO ₂	0.01	0.01
		PM	0.10	0.34
		PM ₁₀	0.10	0.34
		PM _{2.5}	0.10	0.34

(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

NO_x- total oxides of nitrogen

SO₂- sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented

PM₁₀ - 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

NH₃- ammonia

HCl - hydrogen chloride

Cl₂ - chlorine

HCN - hydrogen cyanide

H₃PO₄ - phosphoric acid

(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) Hourly maximum allowable MSS emissions of CO and HCl are less than hourly allowable routine emission limits. Annual VOC, CO, NO_x, and SO₂, and HCl MSS emissions are within the annual routine operation limits for this EPN.

(7) Hourly maximum allowable MSS emissions of all contaminants are less than or equal to hourly allowable routine emission limits. Annual MSS emissions are within allowable annual routine limits.

(8) Hourly maximum allowable MSS emissions of all contaminants for this EPN are less than hourly allowable routine emission limits. Annual MSS emissions of each contaminant are within allowable annual routine emission limits.

** lb/hr limits for North and South ADN Boilers are based on a 30-day rolling average.

Date: May 23, 2019