

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 5221

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

Emission *	Source	Air Contaminant	Emission Rates	
Point No. (1)	Name (2)	Name (3)	lb/hr	TPY
PA1-S39	Group 1 Tank Scrubber (4)	H ₂ SO ₄	<0.01	
		HNO ₃	<0.01	
		IOC-U	<0.01	
		HCl	0.01	
		CrO ₃	<0.01	
		VOC	0.01	
		NH ₃	0.05	
		PM ₁₀	0.01	
PA1-S39A	Group 1 Tank Scrubber (4)	H ₂ SO ₄	<0.01	
		HNO ₃	<0.01	
		IOC-U	<0.01	
		HCl	0.01	
		CrO ₃	<0.01	
		VOC	0.01	
		NH ₃	0.05	
		PM ₁₀	0.01	
PA1-S41	Group 1 Tank Scrubber (4)	H ₂ SO ₄	<0.01	
		HNO ₃	<0.01	
		IOC-U	<0.01	
		HCl	0.03	
		CrO ₃	<0.01	
		VOC	0.02	
		NH ₃	0.05	
		PM ₁₀	0.01	
Total Annual Allowables for PA1-S39, S39A, S41			H ₂ SO ₄	
<0.01				

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		HNO ₃		<0.01
		IOC-U		<0.01
		HCl		<0.01
Total Annual Allowables for PA1-S39, S39A, S41 (con't)			CrO ₃	
	<0.01			
		VOC		<0.01
		NH ₃		0.05
		PM ₁₀		<0.01
PA1-S42	Group 1 Tank Scrubber	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	<0.01	<0.01
		IOC-U	<0.01	<0.01
		HCl	0.03	<0.01
		CrO ₃	<0.01	<0.01
		VOC	0.01	<0.01
		NH ₃	0.05	0.05
		PM ₁₀	0.04	<0.01
PA1-T5010	Process Surge Tank T5010	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.09	0.01
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	<0.01	<0.01
PA1-T5020	Process Surge Tank T5020	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.09	0.01
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	<0.01	<0.01
PA1-T5040	WWPT Tank T5040	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.11	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	0.01	<0.01
PA1-T5120	WWPT Tank T5120	H ₂ SO ₄	<0.01	<0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA1-T5130	WWPT Tank T5130	HNO ₃	0.11	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.11	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
PA1-T5150	Process BPCTank T5150	VOC	0.01	<0.01
		H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.06	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		NH ₃	0.15	0.07
		VOC	<0.01	<0.01
PA1-T5170	WWPT Tank T5170	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.11	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	0.01	<0.01
PA1-T5310	WWPT Tank T5310	H ₂ SO ₄	<0.01	<0.01
		HNO ₃	0.11	0.03
		IOC-U	<0.01	<0.01
		HCl	<0.01	<0.01
		VOC	0.01	<0.01
PA1-T5629	Check Tank T5629	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15
PA1-T5630	Check Tank T5630	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA1-T5631	Check Tank T5631	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15
PA1-T5632	Check Tank T5632	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15
PA1-T5633	Check Tank T5633	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15
PA1-T5634	Check Tank T5634	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.03	0.15
PA1-T715120	Feed Tank T715120	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		HCl	0.08	0.36
		VOC	0.17	0.73
		PM	0.02	0.10
		PM ₁₀	0.01	0.03
		Pb	<0.01	0.02
PA1-TKLOAD	Tank Nos. T5250/T5260 ESP Ash Loading	PM	0.46	0.05
		PM ₁₀	0.16	0.02
		Pb	0.07	<0.01
PA2-S14	Group 2 Tank Water Scrubber	H ₂ SO ₄	<0.01	
		HNO ₃	0.01	
		IOC-U	<0.01	
		HCl	0.05	
		CrO ₃	<0.01	
		VOC	0.03	
		NH ₃	0.05	
		PM ₁₀	0.05	

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
PA2-S15	Group 2 Tank Water Scrubber	H ₂ SO ₄		<0.01
		HNO ₃	0.01	
		IOC-U	<0.01	
		HCl	0.05	
		CrO ₃	<0.01	
		VOC	0.03	
		NH ₃	0.05	
		PM ₁₀	0.05	
Total Annual Allowables for PA2-S14 and S15		H ₂ SO ₄		<0.01
		HNO ₃		<0.01
		IOC-U		<0.01
		HCl		0.04
		CrO ₃		<0.01
		VOC		0.02
		NH ₃		0.05
		PM ₁₀		0.04
PA2-S19	Group 2 Tank Water Scrubber	H ₂ SO ₄		<0.01
	<0.01	HNO ₃	<0.01	<0.01
		IOC-U	<0.01	<0.01
		HCl	0.03	0.02
		CrO ₃	<0.01	<0.01
		VOC	0.01	<0.01
		NH ₃	0.24	1.03
		PM ₁₀	0.01	<0.01
PA2-T5058	Thickener Tank No. 1	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.16	0.71
PA2-T5059	Thickener Tank No. 2	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.16	0.71

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AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA2-T5060	Thickener Tank No. 3	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.16	0.71
PA2-T5061	Thickener Tank No. 4	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.10	0.42
PA2-T5062	Thickener Tank No. 5	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.10	0.42
PA2-T5063	Thickener Tank No. 6	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.10	0.42
PA2-T5075	Wash Tank No. 2	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.35	1.52
PA2-T5080	Thickener Tank No. 7	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.08	0.34
PA2-T5128	Wash Tank No. 1	H ₂ SO ₄	<0.01	<0.01
		IOC-U	<0.01	<0.01
		VOC	0.35	1.52
PA2-T605080	H ₂ SO ₄ Storage Tank	H ₂ SO ₄	<0.01	<0.01
PA2-T605070	NaOH Storage Tank	NaOH	<0.01	<0.01

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Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA2-T655170	Feed Tank T655170	H ₂ SO ₄	<0.01	<0.01
		IOCl-U	<0.01	<0.01
		HCl	0.08	0.36
		VOC	0.17	0.73
		PM	0.02	<0.01
		PM ₁₀	0.01	<0.01
		Pb	<0.01	<0.01
PA2-T823042	Outdoor NaOH Storage Tank	NaOH	<0.01	<0.01
PA2-T823043	Outdoor NaOH Storage Tank	NaOH	<0.01	<0.01
PA2-B7	Soda Ash Hopper Baghouse	PM/PM ₁₀	0.43	0.21
PA2-DRY1	Combustion By-Product Emissions Dryer No. 1	NO _x	0.47	2.05
		CO	0.10	0.43
		VOC	0.02	0.11
		PM/PM ₁₀	0.83	3.64
		SO ₂	<0.01	0.01
PA2-DRY2	Combustion By-Product Emissions Dryer No. 2	NO _x	0.47	2.05
		CO	0.10	0.43
		VOC	0.02	0.11
		PM/PM ₁₀	0.83	3.64
		SO ₂	<0.01	0.01
PA2-CONV1	Conveying of Product to Rail or Bin	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA2-CONV2	Conveying of Product Direct to Dryer Feed	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA2-RBLOAD	Loading Dryer Material Railcar or Bin	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA2-LSTLO	Solid Waste Loading to Leach Surge Tank	PM	0.04	0.01
		PM ₁₀	0.01	<0.01
		Pb	<0.01	<0.01
		VOC	0.04	0.17
PA3-S90	Water Scrubber	H ₂ SO ₄	0.01	0.04
		AsH ₂	0.06	0.26
		Cl ₂	0.43	1.90
		Br ₂	0.05	0.20
		PM/PM ₁₀	0.05	0.23
PA4-S1111	Scrubber	H ₂ SO ₄	<0.01	0.01
		HNO ₃	<0.01	<0.01
		IOC-U	<0.01	<0.01
		AsH ₂	0.06	0.26
		Cl ₂	0.11	0.47
		HCl	0.01	0.05
		CrO ₃	<0.01	<0.01
		VOC	0.01	0.02
		H ₂ S	0.01	0.05
		PM/PM ₁₀	0.02	0.06
PA4-B5246	Storage Hopper Baghouse	PM/PM ₁₀	0.10	0.45
		Pb	0.03	0.13
PA4-SMSCR	Smelter Matte Screening	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA4-SMXFER1	Smelter Matte Belt Transfer <0.01	PM		<0.01
		PM ₁₀	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
PA4-SMXFER2	Smelter Matte Transfer to Diverter/Mixer	Pb	<0.01	<0.01
		PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA4-SMSCU	Smelter Matte Crushing	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA4-SMUNL	Smelter Matte Railcar Unloading	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
PA4-SMLOAD	Smelter Matte Hopper Loading	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
NTB-AT-10	H ₂ SO ₄ Storage Tank	H ₂ SO ₄	<0.01	<0.01
NP-AT-13	H ₂ SO ₄ Storage Tank	H ₂ SO ₄	<0.01	<0.01
CTB-T226004	NaOH Storage Tank 1	NaOH	<0.01	<0.01
CTB-T226002	NaOH Storage Tank 2	NaOH	<0.01	<0.01
CTB-T226001	H ₂ SO ₄ Storage Tank	H ₂ SO ₄	<0.01	<0.01
GR-1 LDA	Gondola Loading Fugitives (5) <0.01 (East)	PM		<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
GR-1 LDB	Gondola Loading Fugitives (5) <0.01 (West)	PM		<0.01
		PM ₁₀	<0.01	<0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission *	Source	Air Contaminant	<u>Emission Rates</u>	
<u>Point No. (1)</u>	<u>Name (2)</u>	<u>Name (3)</u>	<u>lb/hr</u>	<u>TPY</u>
		Pb	<0.01	<0.01

EMISSIONS SOURCE INFORMATION AND EMISSION RATES

AIR CONTAMINANTS DATA

Emission * Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hr	TPY
GR-2 LOAD	Gondola Railcar Loading (Containment Building)	PM	0.08	0.08
		PM ₁₀	0.03	0.03
		Pb	<0.01	<0.01
NP-LS-BF	Neutralizing Plant	PM/PM ₁₀	0.17	0.75
MPSB-FUG	Main Product Storage (5) Building Fugitives	PM	0.20	0.48
		PM ₁₀	0.07	0.17
		Pb	0.04	0.10
		VOC	0.35	1.55
EPSB-FUG	East Product Storage (5) Building Fugitives	PM	0.05	0.13
		PM ₁₀	0.02	0.05
		Pb	<0.01	<0.01
CONT-FUG	Containment (5) Building Fugitives	PM	0.01	0.03
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
		VOC	0.14	0.62
GR3-LOAD	Gondola Railcar Loading (North of Building B)	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01

(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 30 Texas Administrative Code Section 101.1

IOC-U - inorganic compounds (unspeciated)

NO_x - total oxides of nitrogen

SO₂ - sulfur dioxide

PM - particulate matter, suspended in the atmosphere, including PM₁₀.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

PM₁₀ - particulate matter equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.

CO - carbon monoxide

Cl₂ - chlorine

AsH₃ - arsine

HNO₃ - nitric acid

CrO₃ - chromium trioxide

NH₃ - ammonia

H₂SO₄ - sulfuric acid

HCl - hydrogen chloride

H₂S - hydrogen sulfide

Pb - lead

NaOH - sodium hydroxide

(4) No more than three tanks may be routed to any one scrubber at the same time.

(5) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

_____Hrs/day _____Days/week _____Weeks/year or 8,760 Hrs/year

Dated _____