

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

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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			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	

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

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
		VOC	0.01	<0.01
PA1-T5120	WWPT Tank T5120	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-T5130	WWPT Tank T5130	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-T5150	Process BPCTank T5150	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

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

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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	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01

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			lb/hr	TPY
PA4-SMXFER2	Smelter Matte Transfer to Diverter/Mixer	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 (4) (East)	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
GR-1 LDB	Gondola Loading Fugitives (4) (West)	PM	<0.01	<0.01
		PM ₁₀	<0.01	<0.01
		Pb	<0.01	<0.01
GR-2 LOAD	Gondola Railcar Loading (Containment Building)	PM	0.004	0.004
		PM ₁₀	0.014	0.014
		Pb	0.001	0.001
NP-LS-BF	Neutralizing Plant	PM/PM ₁₀	0.17	0.75

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MPSB-FUG	Main Product Storage (5) Building Fugitives	PM	0.67	2.92
		PM ₁₀	0.23	1.02
		Pb	0.08	0.37
		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.
- 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

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- (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 October 13, 2000