

## EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 31510

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
ACLFUG	Acid Chloride Fugitives (4)	VOC	0.748	3.236
		PCl <sub>3</sub>	0.015	0.064
		H <sub>2</sub> O <sub>2</sub>	0.006	0.025
B1FUG	B-1 Fugitives (4)	VOC	0.355	1.558
B1AFUG	B-1 Alamo Fugitives (4)	VOC	0.545	2.389
B1PKGE	B-1 Packaging East Vent	VOC	0.153	0.183
B1PKGW	B-1 Packaging West Vent	VOC	0.153	0.183
B1WFUG	B-1 Weigh Area Fugitives (4)	VOC	0.114	0.501
		H <sub>2</sub> O <sub>2</sub>	0.019	0.084
B530	Boiler (5 MMBtu/hr)	VOC	0.028	0.120
		NO <sub>x</sub>	0.500	2.190
		SO <sub>2</sub>	0.003	0.013
		PM <sub>10</sub>	0.038	0.166
		CO	0.420	1.840
C1	C-1 Vent Scrubber	VOC	0.443	0.046
		PCl <sub>3</sub>	0.012	
C330	W-2 Vent Scrubber	VOC	0.647	0.001
		Inorganic Bases	0.078	<0.001

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			lb/hr	TPY
C851	M-1 Vent Scrubber	VOC	1.20	5.24
C7000	M-2 Centrifuges	VOC	<0.01	<0.01
CTFUG	Central Tank Farm Fugitives (4)	VOC	0.201	0.878
		H <sub>2</sub> O <sub>2</sub>	0.050	0.219
D35	Phosphorous Acid Reactor	Phosphorous Acid	<0.001	<0.001
		HCl	<0.001	<0.001
D201	B-1 Reactor	VOC	1.020	0.261
		H <sub>2</sub> SO <sub>4</sub>	0.002	<0.001
		H <sub>2</sub> O <sub>2</sub>	0.012	<0.001
D202	B-1 Reactor	VOC	1.020	0.261
		H <sub>2</sub> SO <sub>4</sub>	0.002	<0.001
		H <sub>2</sub> O <sub>2</sub>	0.012	<0.001
D203	H <sub>2</sub> SO <sub>4</sub> /NaOH Mix Tank	H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
D233	B-1 Reactor	VOC	0.62	0.12
		H <sub>2</sub> SO <sub>4</sub>	<0.001	<0.001
		H <sub>2</sub> O <sub>2</sub>	<0.001	<0.001
D700	W-2 Blend Vessel	VOC	0.414	0.016
ETFUG	East Tank Farm Fugitives (4)	VOC	0.221	0.967
		PCl <sub>3</sub>	0.032	0.139
F1	Flare	VOC	11.850	4.356
		NO <sub>x</sub>	0.494	0.494
		SO <sub>2</sub>	0.030	0.036
		CO	8.733	4.239
F103	H <sub>2</sub> SO <sub>4</sub> Weigh Tank	H <sub>2</sub> SO <sub>4</sub>	0.002	<0.001
F121A/B	Dilute Chilled NaOH Tanks	NaOH	<0.001	<0.001

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F201	MEK/DMP Weigh Tank	VOC	1.82	0.19
F202	H <sub>2</sub> SO <sub>4</sub> Weigh Tank	H <sub>2</sub> SO <sub>4</sub>	0.004	<0.001
F203	H <sub>2</sub> O <sub>2</sub> Weigh Tank	H <sub>2</sub> O <sub>2</sub>	0.011	<0.001
F204	Weigh Tank	VOC	2.834	0.062
F206	TXIB Weigh Tank	VOC	<0.001	<0.001
F207	H <sub>2</sub> O <sub>2</sub> Weigh Tank	H <sub>2</sub> O <sub>2</sub>	0.012	0.001
F306	TBHP Blending	VOC	0.162	0.007
F403	Crude MEKP Storage Tank	VOC	1.087	0.056
F419	Sodium Bicarbonate Tank	Sodium Bicarbonate	<0.001	<0.001
F420	Crude MEKP Storage Tank	VOC	0.491	0.031
F421	Crude MEKP Storage Tank	VOC	0.491	0.031
F422	Crude MEKP Storage Tank	VOC	0.002	<0.001
F423	Crude MEKP Storage Tank	VOC	0.002	<0.001
I1001	Incinerator	VOC	0.196	0.287
		NO <sub>x</sub>	0.348	0.507
		SO <sub>2</sub>	0.157	0.230
		PM <sub>10</sub>	0.450	0.657
		CO	0.759	1.109
M1C	M-1 Centrifuge Room Fugitives (4)	VOC	<0.001	0.011
M1CROOF	M-1 Centrifuge Room Centrifuges (4)	VOC	<0.01	<0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
M1FUG	M-1 Fugitive Emissions (4)	VOC	0.525	2.301
M1R	M-1 Reactor Room (4)	VOC	0.295	1.363
M1PKG	M-1 Packaging (4)	VOC	0.024	0.011
M1S	M-1 Storage (4)	VOC	0.234	1.011
M2PKG	M-2 Packaging (4)	VOC	0.304	0.858
M2RM	M-2 Reactor Room Middle (4)	VOC	0.193	0.962
	H <sub>2</sub> O <sub>2</sub>	<0.001	<0.001	
M2RN	M-2 Reactor Room North (4)	VOC	0.193	0.962
	H <sub>2</sub> O <sub>2</sub>	<0.001	<0.001	
M2RS	M-2 Reactor Room South (4)	VOC	0.193	0.962
	H <sub>2</sub> O <sub>2</sub>	<0.001	<0.001	
M2SN	M-2 Storage Fugitives North (4)	VOC	0.154	0.672
M2SS	M-2 Storage Fugitives South (4)	VOC	0.154	0.672
MEKVAC	MEK Vacuum System	VOC	0.138	0.6
Q8000	M-2 Scrubber	VOC	1.2	5.24
T1	T-1 H <sub>2</sub> SO <sub>4</sub> Tank	H <sub>2</sub> SO <sub>4</sub>	0.028	0.001
T2	T-2 KOH Tank	KOH	<0.001	<0.001
T3	T-3 TBA Tank	VOC	9.53	0.276
T4	T-4 DMP Tank	VOC	<0.001	<0.001
T5, T29, and T39	Organic Hydroperoxide Tanks	VOC	1.064	0.593

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
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T6	T-6 H <sub>2</sub> O <sub>2</sub> Tank	H <sub>2</sub> O <sub>2</sub>	0.078	0.003
T6A	T-6A H <sub>2</sub> O <sub>2</sub> Tank	H <sub>2</sub> O <sub>2</sub>	0.060	0.002
T7	T-7 NaOH Tank	NaOH	<0.001	<0.001
T7A	T-7A NaOH Tank	NaOH	<0.001	<0.001
T8	T-8 MEK/DMP Tank	VOC	23.52	0.99
T9	T-9 KOH	KOH	<0.001	<0.001
T10	T-10 NaOH	NaOH	<0.001	<0.001
T11	T-11 H <sub>2</sub> O <sub>2</sub>	H <sub>2</sub> O <sub>2</sub>	0.051	0.003
T12	T-12 TXIB	VOC	0.001	<0.001
T13	T-13 MEK Recovery	VOC	2.44	0.15
T14	T-14 MEK Recovery	VOC	2.97	0.126
T15	T-15 MEK Recovery	VOC	1.846	0.063
T22, T23, T24, and T30	Organic Acid Tanks	VOC	0.26	0.012
T25	T-25 OMS	VOC	0.164	0.022
T25A	T-25A OMS	VOC	0.600	0.017
T35A	T-35A Phosphorous Acid	Phosphorous Acid	<0.001	<0.001
		HCl	<0.001	<0.001
T35B	T-35B Phosphorous Acid	Phosphorous Acid	<0.001	<0.001

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			<u>lb/hr</u>	<u>TPY</u>
		HCl	<0.001	<0.001
T41	T-41 Diesel	VOC	0.020	<0.001
T42	T-42 Diesel	VOC	0.032	<0.001
T43	T-43 Diesel	VOC	0.020	<0.001
T80	T-80 Wastewater	VOC	0.295	1.295
T81	T-81 Wastewater	Emergency Use Only		
T82	T-82 Wastewater	Emergency Use Only		
T83	T-83 Wastewater	VOC	0.296	1.298
T84	T-84 Caustic	NaOH	<0.001	<0.001
T85	T-85 Recovered Acid	VOC	<0.001	0.004
T85A	T-85A Recovered Acid	VOC	<0.001	0.004
T86	T-86 Wastewater	Emergency Use Only		
T87	T-87 Wastewater	Emergency Use Only		
T88	T-88 Wastewater	Emergency Use Only		
T91	T-91 Wastewater	Emergency Use Only		
T92	T-92 Wastewater	Emergency Use Only		
T93	T-93 Wastewater	Emergency Use Only		
T94	T-94 Wastewater	Emergency Use Only		

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
T95	T-95 Wastewater	VOC	0.033	0.001
		PCl <sub>3</sub> 0.029	0.005	
T130	T-130 t-Amyl Hydroperoxide	VOC	0.055	0.018
T150	T-150 Santicizer 160	VOC	<0.001	<0.001
T207	T-207 Red MEKP	VOC	0.002	<0.001
T301	T-301 Still Feed Tank	VOC	0.362	0.040
T311	T-311 DTBP	VOC	1.652	0.392
T312	T-312 DTBP	VOC	1.652	0.392
T313	B-1 Packaging Tank	VOC	7.717	0.249
T525	T-525 Brown Water	VOC	<0.001	<0.001
T552	T-552 MEK	VOC	0.418	0.117
T572	T-572 Glycol	VOC	<0.001	<0.001
T700	T-700 B-1 Wastewater	VOC	0.643	2.815
T702	T-702 DTBP Wastewater	VOC	0.001	0.003
T702A	T-702A DTBP Wastewater	VOC	0.001	0.004
T705	T-705 Sodium Sulfate	Sodium Sulfate	<0.001	<0.001
T720	T-720 DTBP Waste Acid	VOC	<0.001	0.002
T850	T-850 Product	VOC	0.024	0.003
T900	T-900 Product	VOC	0.024	0.003

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
T910	T-910 Product	VOC	0.024	0.003
T920	T-920 Product	VOC	0.024	0.003
T960	T-960 Glycol	VOC	<0.001	<0.001
T980	T-980 M-1 Wastewater	VOC	0.003	0.012
T5050	T-5050 NaOH	NaOH	<0.001	<0.001
T7050	T-7050 Sodium Sulfate	Sodium Sulfate	<0.001	<0.001
T7080	T-7080 Sodium Sulfate	Sodium Sulfate	<0.001	<0.001
T7500	T-7500 Sodium Sulfate	Sodium Sulfate	<0.001	<0.001
T7510	T-7510 Sodium Sulfate	Sodium Sulfate	<0.001	<0.001
T8500	T-8500 Product	VOC	0.009	0.018
T9000	T-9000 Product	VOC	0.009	0.018
T9100	T-9100 Product	VOC	0.009	0.018
T9200	T-9200 Product	VOC	0.009	0.018
T9500	T-9500 Glycol	VOC	<0.001	<0.001
U541	B-1 Cooling Tower	VOC	<0.001	<0.001
W2DRUM	W-2 Drumming Vent	VOC	0.893	0.195
		Ammonia	0.079	0.039
W2FUG	W-2 Unit Fugitives (4)	VOC	0.144	0.628
W930	M-1 Cooling Tower	VOC	<0.001	<0.001



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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
WTFUG	West Tank Farm Fugitives (4)	VOC	0.254	1.112

(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 Section 101.1

NO<sub>x</sub> - total oxides of nitrogen

SO<sub>2</sub> - sulfur dioxide

PM<sub>10</sub> - particulate matter (PM) 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

HCl - hydrochloric acid

H<sub>2</sub>O<sub>2</sub> - hydrogen peroxide

H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

KOH - potassium hydroxide

NaOH - sodium hydroxide

PCl<sub>3</sub> - phosphorous trichloride

(4) 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 \_\_\_\_\_