

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 8052

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 **			
107	Ammonia PSV	Emergency Relief Only (6)		
138	Multipurpose Spray Dryer and Baghouse FC/FD-11-038	SO <sub>2</sub>	0.01	0.04
		CO	0.39	1.71
		VOC	0.06	0.28
		NO <sub>x</sub>	1.54	6.75
		Methanol	1.714	7.51
		CH <sub>2</sub> O	0.58	2.54
		PM <sub>10</sub>	2.03	8.90
151	Ammonia Scrubber	NH <sub>3</sub>	3.52	15.42
		VOC	0.34	0.70
		CO	0.15	0.07
172	Hydrogen Cyanide Scrubber	HCN	0.026	0.09
		VOC	<0.01	<0.01
185	Flash Dryer	PM <sub>10</sub>	0.02	0.09
		SO <sub>2</sub>	<0.01	<0.01
		CO	0.04	0.17
		VOC	0.002	0.01
		NO <sub>x</sub>	0.05	0.20
203	H <sub>2</sub> SO <sub>4</sub> Storage Tank	H <sub>2</sub> SO <sub>4</sub>	<0.01	<0.01
225	HCN Surge Tank	Emergency Relief Only (6)		

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	TPY **			
232	Flash Dryer	PM <sub>10</sub>	0.01	0.04
		SO <sub>2</sub>	<0.01	<0.01
		CO	0.03	0.11
		VOC	0.002	<0.01
		NO <sub>x</sub>	0.03	0.13
237	Hydrogen Cyanide Tank Scrubber	HCN	0.0009	0.0002
239	Formaldehyde P/V Vent	Emergency Relief Only (6)		
242	Aqua Ammonia Storage Tank	Emergency Relief Only (6)		
245	Formaldehyde Storage Tank Scrubber	CH <sub>2</sub> O	0.042	0.008
		VOC (5)	0.47	0.13
		CO	0.006	0.002
262	Amine Scrubber	VOC	0.02	0.02
407	DAXAD Storage Tank 1	Methanol	0.06	0.015
		CH <sub>2</sub> O 0.08	0.019	
408	Loading Rack No. 4	Methanol	0.012	0.002
		CH <sub>2</sub> O 0.015	0.002	
430	Spray Dryer	PM <sub>10</sub>	2.40	10.51
		SO <sub>2</sub>	0.01	0.03
		CO	4.10	16.00
		NO <sub>x</sub>	2.35	10.29
		CH <sub>2</sub> O	0.98	4.29
		VOC (5)	21.77	92.42
442	DAXAD Storage Tank 4	Methanol	0.06	0.014
		CH <sub>2</sub> O 0.08	0.019	

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	TPY **			
443	DAXAD Storage Tank 3	Methanol CH <sub>2</sub> O 0.08	0.06 0.019	0.014
444	DAXAD Storage Tank 2	Methanol CH <sub>2</sub> O 0.08	0.06 0.019	0.014
516	Furan Utility Tank	Methanol CH <sub>2</sub> O	0.28 0.74	0.013 0.035
531	DAXAD Storage Tank 5	Methanol CH <sub>2</sub> O 0.08	0.06 0.019	0.014
546	Fluid Bed Dryer	VOC (5) NO <sub>x</sub> SO <sub>2</sub> PM <sub>10</sub> CO CH <sub>2</sub> O	8.22 0.91 0.01 0.53 0.68 0.10	35.00 4.00 0.011 2.32 3.00 0.44
566	Naphthalene Storage Tank A	VOC	2.85	0.97
568	Filter Aid Tank	Emergency Relief Only (6)		
569	Cake Wash Tank	Emergency Relief Only (6)		
571	Product Receiver Tank	Emergency Relief Only (6)		
572	Prefilter Tank	Emergency Relief Only (6)		
573	Filter Press	Methanol CH <sub>2</sub> O	<0.01 <0.01	0.001 <0.001

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	TPY **			
598	DAXAD Thermal Oxidizer	CH <sub>2</sub> O	0.133	0.251
		Methanol	0.995	3.99
		PM <sub>10</sub>	0.06	0.26
		SO <sub>2</sub>	0.003	0.013
		CO	0.17	0.58
		Combustion VOC	0.03	0.13
		NO <sub>x</sub>	0.50	2.19
723	East Cooling Tower	VOC	0.01	0.01
772	Cooling Tower	VOC	0.01	0.01
817	Fuel Oil Tank	VOC	0.0002	0.001
819	Firewater Pump	PM <sub>10</sub>	0.26	0.0033
		SO <sub>2</sub>	0.24	0.0030
		CO	0.80	0.0100
		VOC	0.29	0.0038
		NO <sub>x</sub>	3.70	0.0460
859	Boiler (3 total)	PM <sub>10</sub>	0.32	1.41
		SO <sub>2</sub>	0.03	0.11
		CO	3.57	15.64
		VOC	0.23	1.02
		NO <sub>x</sub>	4.25	18.62
895	Naphthalene Storage Tank B	Naphthalene	2.85	1.06
1129	Glycine Saponifier A	Water Vapor Only		
1132	Glycine Saponifier B	Water Vapor Only		
1134	Glycine Saponifier C	Water Vapor Only		
1290	DSIDA Tank	VOC	<0.01	<0.01

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	TPY **			
1560	Purge Liquor Tank	VOC	0.01	0.01
2884	DAXAD Storage Tank 13	Methanol CH <sub>2</sub> O 0.02	0.07 0.018	0.061
2914	Naphthalene Storage Tank C	Naphthalene	2.81	0.33
4032	Lime Silo Baghouse	PM <sub>10</sub>	0.08	<0.01
4033	Lime Slaker Scrubber	PM <sub>10</sub>	0.06	0.01
4034	LCA DAXAD Prefilter Tank	Emergency Relief Only (6)		
4035	LCA DAXAD Unfiltered	Emergency Relief Only (6)		
4037	LCA DAXAD Filter Press	CH <sub>2</sub> O Methanol	<0.01 <0.01	<0.001 0.003
4038	LCA DAXAD Cake Wash H <sub>2</sub> O Tank	Emergency Relief Only (6)		
4039	LCA DAXAD Product Receiver Tank	Emergency Relief Only (6)		
4040	Third Product Receiver Tank H <sub>2</sub> O Tank	Emergency Relief Only (6)		
4290	DAXAD Product Receiver Tank	Emergency Relief Only (6)		
4297	Loading Rack No. 2	CH <sub>2</sub> O Methanol	0.015 0.012	0.002 0.002
4338	Third Filter Press	CH <sub>2</sub> O Methanol	<0.01 0.01	<0.001 0.002
4513	Prefilter Tank	Emergency Relief Only (6)		

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	TPY **			
5019	Bersworth Reactor I	NH <sub>3</sub>	0.93	0.17
		VOC	0.42	0.08
5319	Bersworth Reactor II	NH <sub>3</sub>	0.93	0.17
		VOC	0.42	0.08
5357	DSIDA Centrifuge	HCN	0.028	0.02
5361	DSIDA Steam Jet	HCN	0.028	0.02
6031	DAXAD Storage Tank 6	CH <sub>2</sub> O	0.05	0.035
		Methanol	0.07	0.057
6032	DAXAD Storage Tank 7	CH <sub>2</sub> O	0.09	0.077
		Methanol	0.071	0.062
6033	Chelate Storage Tank	VOC	<0.01	<0.01
6034	DAXAD Storage Tank 9	CH <sub>2</sub> O	0.05	0.040
		Methanol	0.07	0.064
6035	Chelate Storage Tank	VOC	<0.01	<0.01
6036	NTA-150 Storage Tank	VOC	<0.01	<0.01
6064	Loading Rack No. 5	Methanol	0.012	0.002
		CH <sub>2</sub> O 0.015	0.002	
6065	Loading Rack No. 1	water vapor only		
6121	Loading Rack No. 9	Methanol	0.01	0.001
		CH <sub>2</sub> O 0.012	0.001	
6122	Loading Rack No. 8	Methanol	0.01	0.001
		CH <sub>2</sub> O 0.012	0.001	

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	TPY **			
6123	Loading Rack No. 7	Methanol CH <sub>2</sub> O 0.012	0.01 0.001	0.001
7432	CH <sub>2</sub> O PV	Emergency Relief Only (6)		
7717	DAXAD Storage Tank 12	Methanol CH <sub>2</sub> O 0.04	0.07 0.009	0.014
8000	DSIDA Storage Tank	VOC	<0.01	<0.01
8003	Chelate Acid Centrifuge Discharge Hopper	PM <sub>10</sub>	0.03	0.03
155171	DAXAD Storage Tank	CH <sub>2</sub> O Methanol	0.05 0.07	0.011 0.018
155181	DAXAD Storage Tank	CH <sub>2</sub> O Methanol	0.05 0.07	0.017 0.03
1700901	Cartridge Dust Collector	PM <sub>10</sub>	<0.01	<0.001
1700905	Glycine Conditioning Train Baghouse	PM <sub>10</sub>	0.03	0.14
Fugitives	Fugitives (4)	VOC NH <sub>3</sub>	0.26 0.06	1.14 0.26

(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) PM - particulate matter, suspended in the atmosphere, including PM<sub>10</sub>.

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PM<sub>10</sub> - 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.

VOC - volatile organic compounds as defined in 30 Texas Administrative Code Section 101.1

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

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

CO - carbon monoxide

HCN - hydrogen cyanide

CH<sub>2</sub>O - formaldehyde

NH<sub>3</sub> - ammonia

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

- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Volatile organic compounds exclusive of formaldehyde.
- (6) There are no emissions authorized by this permit at these points.

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

Hrs/day\_\_\_\_Days/week\_\_\_\_Weeks/year\_\_\_\_or Hrs/year 8,760

\*\* Compliance with annual emission limits is based on a rolling 12-month period.

Dated \_\_\_\_\_