

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit No. 17276

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
S-6	Phenyl Acetate Surge Tank, V-2728	Phenyl Acetate (7)	0.01	0.04
P-10	4-HAP Flaker Filter, MS-1916	PM <sub>10</sub>	0.09	0.38
		4-HAP (7)	0.38	1.68
P-11	4-HAP Flaker, MD-57	PM	0.75	0.07
		4-HAP (7)	<0.01	0.03
P-12	APAP Product Mill, MG-30	PM	<0.01	0.04
		VOC	<0.01	<0.01
P-13	APAP Premill Blower Filter, MS-1946	PM <sub>10</sub>	0.02	0.10
		VOC	<0.01	<0.01
S-14	Flare, T-510	Hexane	1.60	7.01
		CO (7)	0.10	0.43
		NO <sub>x</sub>	<0.01	0.03
		HF	<0.01	<0.01
S-15	SO <sub>2</sub> Vent Scrubber, T-508	SO <sub>2</sub>	0.12	0.08
		VOC	0.10	0.29
S-17	Acetic Acid Tank Scrubber, (6, 7) V-2814	HAc	0.03	0.04
		Acetic Anhydride	<0.01	<0.01
S-18	Acetic Anhydride Storage Tank, V-2813	Acetic Anhydride	7.54	0.79
S-19	Phenol Storage Tank, V-2812	C <sub>6</sub> H <sub>5</sub> OH (7)	2.35	0.34

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			lb/hr	TPY
S-20	Unit Process Fugitives (4)	VOC	1.89	6.28
		SO <sub>2</sub>	1.24	5.42
		HF	0.56	2.48
		NH <sub>3</sub>	0.28	1.21
		SOCl <sub>2</sub> (5)	0.16	0.73
S-21	Tank Farm Fugitives (4)	VOC	1.73	7.59
		SO <sub>2</sub>	0.48	2.01
		HF	0.28	1.22
		HAS	0.03	0.10
S-23	HAS Storage Tank, V-2747	HAS	0.02	0.08
		NH <sub>3</sub>	0.09	0.37
		N <sub>2</sub> O	0.11	0.48
S-24	Oxime Crystallizer Vent, V-2750	VOC	<0.03	<0.02
		NH <sub>3</sub> (7)	0.01	0.06
		N <sub>2</sub> O (7)	0.02	0.07
		HAS	<0.01	<0.01
P-25	4-HAP Rework System, V-2740	PM	1.10	<0.01
		VOC	<0.01	<0.01
P-26	4-HAP Manual Charge Fugitives, V-2750 (4)	PM	1.32	0.77
		VOC	<0.01	<0.01
P-28	Oxime Bin Vent Filter, MS-1920	PM <sub>10</sub>	0.02	0.08
		VOC	<0.01	<0.01
P-29	Oxime Bin Vent Filter, MS-1921	PM <sub>10</sub>	0.02	0.08
		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
S-30	Centrate Surge Tank, V-2753	VOC	<0.02	<0.02
		NH <sub>3</sub>	<0.01	<0.01
		N <sub>2</sub> O	<0.01	<0.01
		HAS	<0.01	<0.01
S-31	Oxime Wash Water Tank, V-2754	VOC	<0.02	<0.02
		NH <sub>3</sub>	<0.01	<0.01
		N <sub>2</sub> O	<0.01	<0.01
		HAS	<0.01	<0.01
P-32	Oxime Transfer Filter, MS-1926	PM <sub>10</sub> (7)	0.16	0.13
		VOC	<0.01	<0.01
P-33	APAP Bin Vent Filter, MS-1942	PM <sub>10</sub>	<0.01	<0.01
		VOC	<0.01	<0.01
P-34	APAP Bin Vent Filter, MS-1943	PM <sub>10</sub>	<0.01	<0.01
		VOC	<0.01	<0.01
P-35	Carbon Bin Vent Filter, MS-1941	PM <sub>10</sub>	0.04	0.01
P-36	Precoat "A" Tank Filter, MS-2051	PM <sub>10</sub>	<0.01	<0.01
P-37	Loading Vent	Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> -PM	1.00	0.02
P-38	Charging Vent	PM	0.04	<0.01
P-39	Acid Loading Filter, MS-2053	PM <sub>10</sub>	1.00	0.01
		VOC	<0.01	<0.01
P-40	APAP Rework Blower Filter, MS-1928	PM <sub>10</sub>	0.02	0.10
		VOC	<0.01	<0.01
S-41	APAP Wastewater Tank,	VOC	<0.05	<0.05

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
	V-2823	N <sub>2</sub> O (7)	0.01	0.05
		NH <sub>3</sub> (7)	<0.01	0.04
S-42	Oxime Wastewater Tank, V-2822	VOC	<0.05	<0.05
		N <sub>2</sub> O (7)	0.01	0.05
		NH <sub>3</sub> (7)	<0.01	0.04
S-44	Storage Tank, V-2740	VOC	<0.02	<0.02
S-46	Centrate Tank, V-2772	VOC	<0.02	<0.02
		Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	<0.01	<0.01
S-47	APAP Centrate Surge Tank, V-2797	VOC	<0.02	<0.02
		Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	<0.01	<0.01
S-48	APAP Wash Water Tank, V-2796	VOC	<0.02	<0.02
		Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	<0.01	<0.01
P-50	Dust Collection Filter, MS-1984	Dust-PM <sub>10</sub>	0.23	0.99
		VOC	<0.01	<0.01
P-51	APAP Rework Blower Filter, MS-1927	PM <sub>10</sub>	0.02	<0.01
		VOC	<0.01	<0.01
P-52	APAP Bin Vent Filter, MS-1952	PM <sub>10</sub>	<0.01	0.04
		VOC	<0.01	<0.01
P-54	Carbon Blower Filter, MS-1931	PM <sub>10</sub>	0.02	<0.01
P-55	Precoat Recirculation Tank Filter, MS-2059	PM <sub>10</sub>	0.13	0.02
S-56	Storage Tank, V-2779	VOC	<0.01	0.03
S-57	Tower Vacuum Hotwell, V-2741	VOC	<0.02	<0.02

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY
S-59	Vacuum System Hotwell, V-2759	VOC	<0.01	<0.01
S-60	Oxime Centrifuge Feed Tank, V-2751	VOC	<0.03	<0.03
		NH <sub>3</sub>	<0.01	0.01
		N <sub>2</sub> O (7)	<0.01	0.02
		HAS (7)	<0.01	<0.01
S-61	Centrifuge, MS-1907	VOC	<0.01	<0.01
S-62	Storage Tank, V-2755	VOC	<0.01	<0.01
S-63	Vacuum System Hotwell, V-2780	VOC	<0.01	<0.01
S-64	Vacuum Jet Vent, HE-2904	VOC	<0.01	<0.01
S-65	APAP Purification Vent Header	Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>	<0.01	<0.01
S-66	Drying System, V-2799	VOC	<0.01	<0.01
P-67	APAP Bin Vent Filter	PM <sub>10</sub>	0.02	0.07
		VOC	<0.01	<0.01
S-68	Oxime Vacuum Jet Vent HE-2885	VOC	3.00	<0.01
		NH <sub>3</sub> (7)	0.10	0.46
		N <sub>2</sub> O (7)	0.14	0.59
S-69	4-HAP Tower Jet Condenser Vent <0.01		VOC	<0.01
P-70	4-HAP Packaging Room Fugitives (4)	PM	<0.01	0.03
		VOC	<0.01	<0.01
S-71	Thionyl Chloride Unloading	SO <sub>2</sub>	4.00	0.36
		HCl	4.56	0.35
P-72	Oxime Rework Guard Filter MS-1969	PM	0.18	<0.01
		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
P-73	Precoat "B" Tank Filter, MS-2052	PM <sub>10</sub>	<0.01	<0.01
P-74	APAP Packaging Room Fugitives (4)	PM	<0.01	0.03
		VOC	<0.01	<0.01
P-75	Acid Solution Tank Filter, MS-2050	PM <sub>10</sub>	0.28	0.02
		VOC	<0.01	<0.01
P-76	APAP Packaging Hopper Vent, MS-3052	PM <sub>10</sub>	<0.01	0.02
		VOC	<0.01	<0.01
P-77	Rework Conveyor APAP Part to Blend (4)	PM	<0.01	0.03
		VOC	<0.01	<0.01
P-78	APAP Packaging System Filter, MS-2054	PM	0.02	0.07
		VOC	<0.01	<0.01
P-79	Dust Collection Blower Filter, MS-2061	PM	0.23	0.99
		VOC	<0.01	<0.01
P-80	APAP Rework Bin Vent Filter, MS-1951	PM	<0.01	<0.01
		VOC	<0.01	<0.01
S-81	Oxime Centrifuge	PM	<0.01	<0.01
S-82	Continuous 4-Stage Oxime Reaction Vessel	VOC	0.04	<0.03
		NH <sub>3</sub> (7)	0.01	0.06
		N <sub>2</sub> O (7)	0.02	0.07
		HAS (7)	<0.01	<0.01
P-83	Crystal Blender Bin Vent Filter	PM	<0.01	<0.01
		VOC	<0.01	<0.01

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY
P-84	Crystal Blender Bin Vent Filter	PM	0.05	0.20
		VOC	<0.01	<0.01
P-85	Crystal Blender Bin Vent Filter	PM	<0.01	<0.01
		VOC	<0.01	<0.01
P-86	Crystal Blender Bin Vent Filter	PM	<0.01	0.03
P-87	Oxime Dryer Vent, MS-1923	PM	0.03	0.14
		VOC	<0.01	<0.01
P-88	APAP Dryer Vent, MS-1939	PM	0.03	0.14
		VOC	<0.01	<0.01
P-90	APAP Packaging Hopper Filter, MS-3050	PM (7)	<0.01	0.02
		VOC	<0.01	<0.01
S-92	HAS Storage Tank	HAS (7)	0.06	0.13
		NH <sub>3</sub> (7)	0.10	0.46
		N <sub>2</sub> O (7)	0.14	0.59
P-93	Phenyl Acetate Tank Truck Loading Spot	Phenyl Acetate	<0.01	<0.01

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- (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>.
  - 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
  - HF - hydrogen fluoride
  - HAc - acetic acid
  - NH<sub>3</sub> - ammonia
  - N<sub>2</sub>O - nitrous oxide
  - HCl - hydrogen chloride
  - APAP - acetaminophen
  - 4-HAP - 4-hydroxyacetophenone
  - SOCl<sub>2</sub> - thionyl chloride
  - Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> - sodium dithionite
  - HAS - hydroxyl ammonium sulfate
  - C<sub>6</sub>H<sub>5</sub>OH - phenol
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emissions rate.
- (5) New/increased emissions associated with the 2,000 gallon Thionyl Chloride Storage Facility which was previously authorized under Standard Exemption Registration No. 33572.
- (6) The replacement Acetic Acid Storage Tank V-2814 Scrubber was previously authorized under Exemption Registration No. 41979.
- (7) New/increased emissions associated with the 4-HAP production increases which were previously authorized under Exemption Registration No. 38889.

\* 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



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Dated \_\_\_\_\_