EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 1733A

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**
1-1-Barge	Capro Barge Loading Fugitives	VOC	0.03	0.01
7-1-1	Neutralization Standpipe	VOC	0.01	0.01
7-1-2	Neutralization Standpipe	VOC	0.01	0.01
7-1-8	Benzene Scrubber Vent	Benzene	0.01	0.01
		VOC	0.01	0.02
7-1-9	Slurry Settling Drum	VOC	0.01	0.01
7-1-11	Wash Water Storage Tank	VOC	0.07	0.01
7-1-12	Wash Water Storage Tank	VOC	0.01	0.01
7-1-15	Neutralization Separator Drum	VOC	0.49	0.01
7-1-16	Neutralization Circulation Drum	VOC	0.54	0.01
7-1-17	Neutralization Crude Storage Tank	VOC	1.00	0.09
7-1-20	Kettle Dump Drum	VOC	0.01	0.01
7-1-21	Overhead Drum	VOC	0.01	0.01
7-1-23	Vessel D-525A2	VOC	1.32	0.04

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 **
7-1-25	Storage Tank Vent	VOC	1.64	0.10
7-1-26	Kettles Overhead Tank	VOC	0.01	0.01
7-1-27	Bottoms Drum	VOC	0.18	0.01
7-1-28	Check Tank	VOC	0.01	0.01
7-1-29	Anone Surge Tank	VOC	6.65	0.06
7-1-30	Oleum Scrubber Vent	SO_3/H_2SO_4	0.01	0.02
7-1-31	Oxime Holdup Tank	VOC	0.22	0.01
7-1-32	Neutralization Separator Tank Drum	VOC	0.62	0.01
7-1-33	Neutralization Circulation Drum	VOC	0.32	0.01
7-1-34	Neutralization Crude Storage Tank	VOC	0.05	0.01
7-1-36	Overheads Drum	VOC	0.02	0.01
7-1-37	Bottoms Tank	VOC	0.10	0.01
7-1-38	Product Check Tank	VOC	0.15	0.01
7-1-40	Overheads Drum	VOC	0.02	0.01
7-1-41	Poly Return Storage Tank	VOC	0.01	0.01
7-1-42	Oxime Salt Storage Tank	VOC	0.01	0.01
7-1-43	Mother Liquor Storage Tank	VOC	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 **
7-1-45	Product Check Tank	VOC	0.01	0.01
7-1-46	SO_4 Scrubber	PM	4.86	21.29
		VOC	4.98	21.81
7-1-48	Jet Vent	VOC	0.02	0.09
7-1-50	Hot Well Tank	VOC	0.01	0.01
7-1-51	Hot Well Tank	VOC	0.01	0.01
7-1-53	Hot Well Tank	VOC	0.01	0.01
7-1-54	Hot Well Tank	VOC	0.01	0.01
7-1-55	Hot Well Tank	VOC	0.01	0.01
7-1-56	Hot Well Tank	VOC	0.01	0.01
7-1-58	Jet Vent	VOC	0.02	0.10
7-1-59	Jet Vent	VOC	0.02	0.10
7-1-60	Jet Vent	VOC	0.01	0.01
7-1-61	Jet Vent	VOC	0.01	0.01
7-1-62	Jet Vent	VOC	0.02	0.08
7-1-63	Jet Vent	VOC	0.01	0.03
7-1-64	N_2 Drying Tower	VOC	0.01	0.01
7-1-65	Vacuum System	VOC	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 **
7-1-66	Tank Farm Process Fugitives (4)	Benzene	0.42	1.84
		NH_3	0.03	0.14
		VOC	0.17	0.73
7-1-71	Caprolactam Rail and Truck Loading Losses	VOC	0.52	0.14
7-1-73	SO_2 Scrubber	Benzene	0.14	0.63
		NH_3	0.05	0.21
		SO_2	3.30	14.47
		VOC	0.26	1.14
7-1-74	Ammonium Sulfate Loading	PM_{10}	0.23	0.34
		VOC	0.04	0.06
7-1-75	Kettle Dump	VOC	1.13	0.09
7-1-91	Extract Storage Tank	VOC	0.01	0.01
7-1-100	Ammonia Flare (Pilot Fuel Emissions)	CO	0.02	0.09
		NO_x	0.01	0.05
		VOC	0.01	0.01
7-2-2	Process Fugitives (4)	NH_3	0.06	0.24
		VOC	1.52	6.66
7-2-3/7-2-4	Truck and Rail Loading Losses	VOC	11.07	0.48
7-2-6	Dehydro Methane Burner BR370	CO	0.36	1.56
		NO_x	0.42	1.85
		PM_{10}	0.03	0.14
		SO_2	0.01	0.01
		VOC	0.02	0.10
7-2-7	Dehydro Methane Burner BR370	CO	0.36	1.56
		NO_x	0.42	1.85

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 **
		PM_{10}	0.03	0.14
		SO_2	0.01	0.01
		VOC	0.02	0.10
7-2-8	Dilute Acid Water Tank	Organic Acids	0.01	0.01
7-2-9	Anolon Storage Tank	VOC	0.60	0.28
7-2-11	Tech Anol Feed Tank	VOC	0.02	0.06
7-2-12	Tech Anol Feed Tank	VOC	0.02	0.06
7-2-13	D-Anone Storage Tank	VOC	11.92	2.07
7-2-14	Dehydro Feed Tank	VOC	0.20	0.02
7-2-16	Cyclohexanol Tank	VOC	0.20	0.13
7-2-17	Cyclohexanone Storage Tanks	VOC	4.24	0.37
7-2-18	Cyclohexanone Storage Tank	VOC	0.99	0.66
7-2-19	Cyclohexanone Storage Tank	VOC	0.99	0.66
7-2-21	Concentrated Catalyst Tank	VOC	0.36	0.01
7-2-22	Cyclohexanone Storage Tank	VOC	4.24	0.18
7-2-23	Cyclohexanone Storage Tank	VOC	4.24	0.18
7-2-24	Anolon Storage Tank	VOC	0.02	0.03
7-2-25	Dehydro Feed Tank	VOC	21.71	2.12
7-2-27	Dilute Catalyst Tank	VOC	1.22	0.02

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 **
9-1-24	Cyclohexane Tank	VOC	0.41	0.53
9-1-25	Cyclohexane Tank	VOC	0.26	0.66
9-1-26	Cyclohexane Tank	VOC	0.26	0.66
9-1-27	Concentrated Acid Water Tank	Organic Acids	0.01	0.01
11-1-2	Catalytic Incinerator	CO	16.23	71.09
		NO_x	0.03	0.13
		PM_{10}	0.01	0.03
		VOC	21.44	93.95
11-1-3	Dehydro Methane Burner	CO	0.36	1.56
		NO_x	0.42	1.85
		PM_{10}	0.03	0.14
		SO_2	0.01	0.01
		VOC	0.02	0.10
11-1-4	Dehydro Methane Burner	CO	0.36	1.56
		NO_x	0.42	1.85
		PM_{10}	0.03	0.14
		SO_2	0.01	0.01
		VOC	0.02	0.10
11-1-5	Dehydro Methane Burner	CO	0.36	1.56
		NO_x	0.42	1.85
		PM_{10}	0.03	0.14
		SO_2	0.01	0.01
		VOC	0.02	0.10
11-1-6	Dehydro Methane Burner	CO	0.36	1.56
		NO_x	0.42	1.85
		PM_{10}	0.03	0.14

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 **
		SO_2	0.01	0.01
		VOC	0.02	0.10
11-1-9	Vent Condenser	VOC	4.30	2.09
11-1-10	Anolon Tank	VOC (6)	19.79	0.67
11-1-21	EP 316/223 Tank	VOC	0.38	0.26
11-1-25	Concentrated Catalyst Tank	VOC	0.77	0.01
11-1-26	Dilute Catalyst Tank	VOC	3.96	0.48
11-1-29	Anolon Tank	VOC	0.01	0.01
11-1-35	Cyclohexanone Tanks	VOC (6)	11.24	14.48
11-1-36	Dehydro Feed Tank	VOC (6)	64.81	3.95
11-1-37	Dehydro Feed Tank	VOC (6)	64.81	3.95
11-1-38	Dehydro Feed Tank	VOC (6)	64.81	3.95
11-1-39	Dehydro Feed Tank	VOC	1.83	0.13
11-1-40	Heavies Cracking Feed	VOC	0.42	0.35
11-1-41	EP-316 Storage Tank	VOC	1.30	0.08
11-1-42	EP-316 Storage Tank	VOC	0.59	0.78
11-1-43	Dehydro Methane Burner	CO	0.64	2.81
		NO_x	0.76	3.34
		PM_{10}	0.06	0.25

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 **
		SO_2	0.01	0.02
		VOC	0.04	0.18
11-1-47	Process Fugitives (4)	VOC	4.79	20.99
11-1-49	Process Fugitives (4)	NH_3	0.12	0.52
11-1-50/11-1-51	Railcar and Truck Loading Losses	VOC	25.47	0.50
11-1-52	Off-Site Barge Loading	VOC	6.88	0.76
11-1-72	Cyclohexanone Tank	VOC	3.68	1.31
11-1-100	Thermal Oxidizer R180 (700 hours per calendar year)	CO	37.44	13.11
		NO_x	14.91	4.50
		PM_{10}	0.60	0.21
		SO_2	0.05	0.02
		VOC	0.89	0.31
12-1-1	Vent Gas Flare	CO	0.02	0.10
		NO_x	121.51	532.20
		VOC	0.01	0.01
12-1-2	Burner Flare 1 FL-170B	CO	4.37	19.13
		NO	756.00	(5)
		NO_x	2.19	9.58
		VOC	0.09	0.39
12-1-29	Catalytic Converter Vent	PM_{10}	0.01	0.01
12-1-30	Scrubber Vent	Acids	0.11	0.02
12-1-31	Catalyst Oven Vent	PM_{10}	0.01	0.01
12-1-33	Catalyst Oven Vent	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 **
12-1-34	Catalyst Oven Vent	PM_{10}	0.01	0.01
12-1-35	Catalyst Oven Vent	PM_{10}	0.01	0.01
12-1-36	Catalyst Oven Vent	PM_{10}	0.01	0.01
12-1-44	Catalyst Transfer Station	PM_{10}	1.56	0.25
12-1-45	Process Fugitives (4)	NH_3	0.20	0.87
12-1-46	Ammonia Flare	CO	0.28	1.24
		NH_3	3.06	0.02
		NO_x	27.57	0.85
		VOC	0.01	0.03
12-1-47	Carbon Beds	1, 1, Trichloroethane	1.90	0.18
		Carbon Tetrachloride	1.90	0.18
		VOC	2.36	0.23
12-1-48	Burner Flare 2 FL-171	CO	5.80	25.37
		NO	1172.00	(5)
		NO_x	2.90	12.71
		VOC	0.12	0.52
12-1-49	Nitric Acid Loading Losses	Nitric Acid	0.13	0.45
12-2-48	Deepwell Tank	VOC	0.01	0.01
12-2-49	Deepwell Tank	VOC	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 **
12-2-50	Deepwell Tank	VOC	0.01	0.01
12-2-51	Deepwell Tank	VOC	0.01	0.01
12-2-52	Deepwell Tank	VOC	0.01	0.01
12-2-53	Deepwell Tank	VOC	0.01	0.01
12-2-54	Deepwell Tank	VOC	0.01	0.01
14-1-1	Ammonium Sulfate Loading	PM_{10}	0.51	0.41
		VOC	0.09	0.07
14-1-8	Lactam Separator	VOC	0.05	0.01
14-1-10	Purge Drums	VOC	0.01	0.01
14-1-11	Overhead Drum	VOC	0.01	0.01
14-1-12	Centrifuge Feed Tank	VOC	0.01	0.01
14-1-13	Centrifuge Feed Tank	VOC	0.01	0.01
14-1-16	Storage Tank	VOC	0.07	0.01
14-1-20	Hot Well Tank	VOC	0.01	0.02
14-1-21	Hot Well Tank	VOC	0.01	0.01
14-1-22	Hot Well Tank	VOC	0.01	0.01
14-1-23	Hot Well Tank	VOC	0.01	0.01
14-1-27	Crude Lactam Storage	VOC	0.01	0.01
14-1-29	Extract Storage	VOC	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 **
14-1-30	Extract Storage	VOC	0.01	0.01
14-1-31	Extract Storage	VOC	0.01	0.01
14-1-32	Storage Tank	VOC	0.01	0.01
14-1-35	Extract Storage	VOC	0.15	0.01
14-1-36	Foreruns Receiver	VOC	0.22	0.07
14-1-37	Lights Storage	VOC	0.01	0.01
14-1-38	Kettle Feed Drum	VOC	0.01	0.01
14-1-39	Kettle Overheads	VOC	0.01	0.01
14-1-40	Mother Liquor Storage	VOC	0.01	0.01
14-1-41	Mother Liquor Receiver	VOC	0.01	0.01
14-1-44	Water Storage	VOC	0.01	0.01
14-1-45	Concentrated Storage	VOC	0.01	0.01
14-1-46	Oxime Salt Storage	VOC	0.12	0.03
14-1-47	Mother Liquor Storage	VOC	0.01	0.01
14-1-56	Foreruns Tower Receiver	VOC	0.20	0.89
14-1-57	Finishing Tower	VOC	0.01	0.04
14-1-58	E-511	VOC	0.01	0.01
14-1-60	D-431	VOC	0.01	0.02

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

14-1-61	Kettle	VOC	0.02	0.10
14-1-64	E-720	VOC	0.01	0.05
14-1-68/14-1-83	Caprolactam Rail and Truck Loading Losses	VOC	0.52	0.56
14-1-69	Scrubber	PM	1.17	5.12
		VOC	4.98	21.81
14-1-70	Vacuum Jet	VOC	0.02	0.10
14-1-73	Capro 2 Process Fugitives (4)	Benzene	0.33	1.44
		NH_3	0.02	0.09
		VOC	0.02	0.09
14-1-75	Benzene Crude Scrubber	Benzene	0.01	0.01
		VOC	0.01	0.02
14-1-76	SO_2 Scrubber	Benzene	0.25	1.10
		NH_3	0.03	0.12
		SO_2	2.32	10.17
		VOC	0.53	2.32
14-1-78	Overhead Drum	VOC	3.11	0.15
14-1-86	Kettle Dump Trailer	VOC	2.06	0.11
14-1-90	Extraction Tower Bottoms	VOC	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.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(3) CO - carbon monoxide
H_2SO_4 - sulfuric acid
NO_x - total oxides of nitrogen. This does not include any NO emissions listed separately.
NH_3 - ammonia
NO - nitric oxide
PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - 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.
SO_2 - sulfur dioxide
SO_3 - sulfur trioxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

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

(5) Total combined annual non-pilot/non-assist gas NO emissions from EPNs 12-1-2 and 12-1-48 shall not exceed the following limits:

Year	TPY
2003	46.0
2004	42.0
2005	38.0
2006	35.0
2007	31.1

Compliance with the annual emissions limit shall be made on a calender year basis through 2007. After that year, compliance shall be based on a rolling 12-month average.

(6) Pre control emission limit to comply with Special Condition No. 5.

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

Hrs/day 24 Days/week 7 Weeks/year 52

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

Dated _____