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 S-300	Benzene VOC	0.01 0.02	0.01 0.03
7-1-9	Slurry Settling Drum	PM	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
7-1-25	Storage Tank Vent	VOC	6.42	0.34

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 **
7-1-26	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
7-1-31	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
7-1-45	Product Check Tank	VOC	0.01	0.01
7-1-46	SO_4 Scrubber S-400	PM	4.86	21.29
		VOC	4.98	21.81

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 **
7-1-48	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
7-1-66	Tank Farm Process Fugitives (4)	Benzene	0.42	1.84
		NH_3	0.03	0.14
		VOC	0.59	2.57
7-1-71/7-1-72	Caprolactam Rail and Truck Loading Losses	VOC	0.52	0.14
7-1-73	SO_2 Scrubber S-500	Benzene	0.14	0.63
		NH_3	0.05	0.21

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	3.30	14.47
		VOC	0.64	1.77
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
7-1-80	D600	VOC	0.22	0.02
7-1-90	Cooling Tower CT-700 (4)	VOC	2.10	9.20
7-1-91	Extract Storage Drum	VOC	0.01	0.01
7-2-2	Process Fugitives (4)	NH_3	0.06	0.24
		VOC	1.52	6.67
7-2-3/7-2-4	Truck and Rail Loading Losses	VOC	11.07	0.48
7-2-6	Dehydro Methane Burner BR360	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
		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

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 **
7-2-12	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	8.49	0.73
7-2-18	Cyclohexanone Storage Tank	VOC	1.00	0.66
7-2-19	Cyclohexanone Storage Tank	VOC	1.00	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
7-2-40	Cyclohexanone Tank	VOC	2.48	0.65
7-2-101	Dehydrogenation Vent	VOC	18.94	0.45
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	Organic Acids	0.08	0.36

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 **
	Tank	VOC	0.85	3.70
11-1-2	Catalytic Incinerator	CO	17.78	75.86
		NO_x	0.03	0.13
		PM_{10}	0.01	0.03
		VOC	28.29	108.22
11-1-3	Dehydro Methane Burner BR300	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 BR310	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 BR320	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 BR330	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
11-1-9	Vent Condenser	VOC	4.30	2.09
11-1-10	Tank D157B (6)	VOC	2.18	0.11
11-1-21	EP 316/223 Tank	VOC	0.38	0.26

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 **
11-1-25	Concentrated Catalyst Tank	VOC	0.77	0.01
11-1-26	Dilute Catalyst Tank	VOC	3.96	0.48
11-1-39	Dehydro Feed Tank	VOC	1.84	0.13
11-1-40	Heavies Cracking Feed	VOC	0.42	0.36
11-1-41	D-400 Vent	VOC	1.32	0.10
11-1-42	D-405 Vent	VOC	0.61	0.80
11-1-43	Dehydro Methane Burner BR340	CO	0.64	2.81
		NO_x	0.76	3.34
		PM_{10}	0.06	0.25
		SO_2	0.01	0.02
		VOC	0.04	0.18
11-1-47	Process Fugitives (4)	VOC	4.79	21.00
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	6.89	0.77
11-1-72	Cyclohexanone Tank	VOC	7.36	2.61
11-1-91	Cooling Tower CT-1100 (4)	VOC	0.63	2.76
11-1-100	Thermal Oxidizer R180	CO	37.44	13.11
		PM_{10}	0.60	0.21
		SO_2	0.05	0.02
		VOC	0.89	0.31
		NOx	14.91	4.50

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 **
11-1-101	Dehydrogenation Vent	VOC	1.44	0.50
11-1-104	Anone 2 Low Pressure Vents	CO	140.00	1.60
		VOC	278.00	3.11
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
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

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 **
12-1-47	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	0.31	1.01
12-2-4	Cooling Tower CT-20 (4)	VOC	1.55	6.81
12-2-48	Deepwell Tank	VOC	0.01	0.01
12-2-49	Deepwell Tank	VOC	0.01	0.01
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	0.51	0.41
		VOC	0.09	0.07
14-1-8	Lactam Separator	VOC	0.05	0.01
14-1-9	Cooling Tower CT-30 (4)	VOC	0.84	3.68
14-1-10	Purge Drums	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 **
14-1-11	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
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

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 **
14-1-41	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
14-1-52-01	D203A	VOC	0.01	0.01
14-1-52-02	D203B	VOC	0.01	0.01
14-1-54	D-140/EV-140	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
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 S601	PM VOC	5.14 4.98	15.00 21.81
14-1-70	Vacuum Jet	VOC	0.02	0.10

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 **
14-1-73	Capro 2 Process Fugitives (4)	Benzene	0.33	1.44
		NH_3	0.02	0.09
		VOC	0.35	1.53
14-1-75	Benzene Crude Scrubber S-260	Benzene	0.01	0.01
		VOC	0.02	0.03
14-1-76	SO_2 Scrubber S625	Benzene	0.25	1.10
		NH_3	0.03	0.12
		SO_2	2.32	10.17
		VOC	1.05	3.42
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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(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) 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) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable Special Conditions and permit application representations.
(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
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) Tank emissions shall be routed to the catalytic incinerator (EPN 11-1-2) by May 1, 2006.

* 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

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

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

Dated November 16, 2005