EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 1790

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**
05COM-001	Portable Compressors	CO	5.64	6.35
		NO_x	0.20	0.23
		PM	2.74	3.08
		SO_2	2.25	2.53
		VOC	2.82	3.17
05LDR-051	Cyclohexane Drum Loading	VOC	0.61	0.001
05LTR-034	KA Trailer Loading	VOC	0.36	0.03
05LBA-048	KA Barge Loading	VOC	1.07	0.61
5LTR-054	NVR Trailer Loading	VOC	0.56	0.025
PD-50	N_2O/NO_x Abater (6)	CO	6.20	25.84
		NH_3	2.11	4.50
		NO_x	47.39	20.25
		N_2O	2922.08	6243.75
		VOC	2.11	4.50
PD-16A	No. 1 Dryer Dust Scrubber	PM	0.01	0.05
PD-16B	No. 2 Dryer Dust Scrubber	PM	0.01	0.05
PD-17	Adipic Acid Loading	PM	0.35	1.13
PD-32	Adipic Acid Solution Tank	NO_x	0.45	1.08
PD-33	No. 1 Vacuum Jet Seal Tank	NO_x	0.21	0.50
PD-34	No. 2 Vacuum Jet Seal Tank	NO_x	0.05	0.12
PD-35	Semi-Refined WML Receiver	NO_x	0.02	0.10

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
PD-36	RML Receiver	NO_x	0.02	0.10
PD-37	Semi-Refined WML Storage Tank 1.14	NO_x		0.47
PD-38	RML Storage Tank	NO_x	0.22	0.53
PD-39	Solution Water Receiver	NO_x	0.02	0.10
PD-40	Solution Water Tank	NO_x	0.47	1.13
PD-41	No. 1 Refined Solution Receiver	NO_x	0.02	0.10
PD-42	No. 2 Refined Solution Receiver	NO_x	0.02	0.10
PD-43	PML Tank Vent	NO_x	0.01	0.01
PD-49	Refined Solution Storage Tank	NO_x	0.22	0.54
PD-4	West Cone Burner (5)	CO	5.10	22.30
		NO_x	52.90	39.80
		VOC	0.10	0.44
PD-5	East Cone Burner (5)	See footnote		
05CLT-095	Adipic Acid Cooling Tower	PM	0.78	3.41
NA-CLT	Nitric Acid Cooling Tower	PM	0.30	1.30
PC-9	Vent Stack	NH_3	2.12	8.50
		NO_x	79.50	210.00
		N_2O	1097.70	2072.50
PC-14	Batch Stripping	NH_3	2.98	1.10
05FUG-050	KA Fugitives (4)	VOC	2.80	12.25
MEOH-FUG	Methanol Area Fugitives (4)	VOC	0.15	0.64

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AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
FD-27	AA Plant Fugitives (4)	VOC	0.07	0.30
FD-28	AA Inorganic Fugitives (4)	HNO_3	0.03	0.10
FC-10	Fugitives (4)	HNO_3	0.01	0.05
		NH_3	0.04	0.19
		NO_x	0.02	0.07
		N_2O	0.01	0.01
05TFL-07B	No. 3 Cyane Tank	VOC	0.34	0.38
05TFL-07C	No. 4 Cyane Tank	VOC	0.33	0.38
05TFL-07D	No. 6 De-Inventory Tank	VOC	0.09	0.31
05TFL-07E	No. 61 Cyane Tank	VOC	0.34	0.38
05TFX-008	Lean Oil Tank	VOC	0.40	0.03
05TFX-011	EDTA Storage Tank	VOC	0.01	0.01
05TFX-012	EDTA Metering Tank	VOC	0.01	0.01
05TFX-015	Seal Flush Tank	VOC	0.01	0.01
05TFX-016	Cobalt Catalyst Tank	VOC	0.17	0.03
05TFX-18A	No. 5 KA Tank	VOC	0.97	0.36
05TFX-18B	No. 11 KA Tank	VOC	1.36	0.57
05TFX-18C	No. 52 KA Tank	VOC	1.36	0.57
05TFX-18D	No. 53 KA Tank	VOC	1.36	0.57
05TFX-020	NVR Storage Tank K-2	VOC	0.04	0.05
05TFX-021	NVR Storage Tank K-1	VOC	0.04	0.05

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
05TFX-022	Divert Tank K-6	VOC	0.71	0.10
05TFL-023	Divert Tank K-8	VOC	0.71	0.10
05TFX-024	NVR Storage Tank K-7	VOC	0.04	0.03
05TFX-025	Divert Tank K-10	VOC	0.71	0.10
05TFX-026	KA Storage Tank K-51	VOC	1.29	0.92
05TFX-027	50A Tank	VOC	0.80	0.11
05TFX-028	50B Tank	VOC	0.80	0.11
05TFX-029	50C Tank	VOC	0.80	0.11
05TFX-030	50D Tank	VOC	0.80	0.11
05TFX-032	Unichem Tank	VOC	0.03	0.01
05TFX-033	Crude KA/KALL Tank	VOC	6.82	16.06
05TFX-035	Aqueous Waste Divert Tank	VOC	0.13	0.02
05TFX-038	Spill Containment Collection Tank	VOC	0.01	0.01
05TFX-049	Portable Diesel Tank	VOC	0.25	0.01
PD-45	DBE Process Tank Vent	VOC	0.19	0.80
PJ-14I	Methanol Tank No. 41	VOC	0.143	0.12
PJ-14J	Methanol Tank No. 42	VOC	0.143	0.12
WWFUG	Wastewater Fugitives (4)	VOC	0.69	3.11

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	TPY**
PC-12	Ammonia Flare (MSS)	CO	1.073	0.861
		NH_3	3.410	1.840
		NO_x	1.903	1.079
		VOC	0.408	0.322
PD-25	Absorber Vent (MSS)	CO	53.00	19.13
		NO_x	72.90	18.98
		N_2O	14985.00	5852.00
		VOC	10.80	4.22
05VNT-031	Aqueous Waste Decanter Vent (MSS)	CO	0.04	0.01
		VOC	0.14	0.02
05VNT-014	Steam Still Vent (MSS)	CO	13.13	0.32
		VOC	0.57	0.05
05VNT-037	Steam Still Decanter Vent (MSS)	CO	2.63	0.06
		VOC	0.11	0.01
5ABS-005	High Pressure Scrubber (MSS)	CO	542.08	0.81
		VOC	175.29	0.27
5ABS-013	Low Pressure Scrubber (MSS)	CO	206.09	0.31
		VOC	25.81	0.04
MSS-FUG	MSS Emissions to Atmosphere (MSS)	CO	6.71	0.39
		NO_x	5.84	0.44
		PM_{10}	0.87	0.02
		SO_2	0.01	0.01
		VOC	151.19	1.84

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION

(1) Emission point identification - either specific equipment designation or emission point number (EPN) from plot plan.

(2) Specific point source name. For fugitive sources use area name or fugitive source name. Source name abbreviations:

- Cyane - cyclohexane
- DBE - dibasic esters
- EDTA - Ethylenediaminetetraacetic acid
- KA - Ketone-Alcohol mixture of cyclohexanone and cyclohexanol
- KALL - Ketone-Alcohol lower layer
- NVR - non volatile residue
- PML - Purge Mother Liquor (dibasic acid and water)
- RML - Refined Mother Liquor (adipic acid and water)
- WML - Water Mother Liquor

(3)
- CO - carbon monoxide
- NH_3 - ammonia
- NO_x - total oxides of nitrogen
- N_2O - nitrous 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 PM greater than 10 microns is emitted.
- SO_2 - sulfur dioxide
- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- HNO_3 - nitric acid

(4) Emission rate is an estimate and compliance is demonstrated by meeting the requirements of the applicable special conditions and permit application representations.

(5) The holder of this permit, at his option, may emit all or part of the emissions allowed from the West Cone Burner (EPN PD-4) through the East Cone Burner (EPN PD-5). The sum of all emissions from both EPNs PD-4 and PD-5 may not exceed the maximum allowable emission rates shown for EPN PD-4.

(6) The emissions allowed from the N_2O/NO_x Abater (EPN PD-50) include emissions referenced in Standard Permit Number 81904.

* 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: June 20, 2011