

# EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 4351

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, sources, and related activities. 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	
			lbs/hour	TPY (8)
ANI-ABS62	Ammonia Scrubber	Aniline	0.01	0.01
		Benzene	0.43	1.31
		Nitrobenzene	0.02	0.05
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
ANI-AN262A	Aniline Reactor Off-Gas Analyzer Vent	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Cyclohexanone	0.01	0.01
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
ANI-CAD192	Tar Tank Vent	Aniline	0.01	0.01
		Diphenylamine	0.01	0.01
		n-phenylbenzenediamine	0.01	0.01
		Cyclohexanone	0.01	0.01
		p-aminophenol	0.01	0.01
		m-phenylenediamine	0.01	0.01
		Biphenyl	0.01	0.01
		Nitrobenzene	0.01	0.01

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ANI-CT208A	Aniline Cooling Tower South Stack	VOC	0.26	1.13
		Aniline	0.02	0.10
		Benzene	0.18	0.79
		Nitrobenzene	0.06	0.25
		PM <sub>10</sub>	0.01	0.01
ANI-CT208B	Aniline Cooling Tower Center Stack	VOC	0.26	1.13
		Aniline	0.02	0.10
		Benzene	0.18	0.79
		Nitrobenzene	0.06	0.25
		PM <sub>10</sub>	0.01	0.01
ANI-CT208C	Aniline Cooling Tower North Stack	VOC	0.26	1.13
		Aniline	0.02	0.10
		Benzene	0.18	0.79
		Nitrobenzene	0.06	0.25
		PM <sub>10</sub>	0.01	0.01
ANI-CTF286	Centrifuge Vent	Benzene	0.01	0.02
		Nitrobenzene	0.01	0.01
ANI-DCN257	Aniline Product Decanter	Aniline	0.02	0.01
		Benzene	0.01	0.01
ANI-DCN258	Aniline Off-Spec Decanter	Aniline	0.01	0.01
		Benzene	0.01	0.01
ANI-DWTRK	Deepwell Area Truck Loading	Aniline	0.01	0.01
		Benzene	0.01	0.01

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		Nitrobenzene	0.02	0.01
ANI-F1304	Aniline T/C Spot 1304 Fugitive (4)	Aniline	0.01	0.01
ANI-FANAL	Aniline Analysis Area Fugitive (4)	Aniline	0.01	0.02
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-FANBLK	Aniline Bulk Storage Area Fugitive (4)	Aniline	0.01	0.01
		Benzene	0.04	0.19
ANI-FANFLR	Aniline Flare Fugitives (4)	Aniline	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-FANMFG	Aniline Fugitives (4)	Aniline	0.10	0.42
		Benzene	0.05	0.22
		Nitrobenzene	0.23	1.00
		Diphenylamine	0.01	0.01
		Phenylbenzenediamine	0.01	0.01
		Cyclohexanone	0.01	0.01
		p-aminophenol	0.01	0.01
		m-phenylenediamine	0.01	0.01
		Phenol	0.01	0.01
		VOC (5)	0.01	0.01
ANI-FBARGE	Aniline Barge Loading Fugitive (4)	Aniline	0.01	0.03
		Benzene	0.02	0.36
ANI-FBZBLK	Aniline Benzene Bulk Storage Tank Fugitive (4)	Benzene	0.04	0.18
ANI-FCOOLT	Aniline Cooling Tower Piping Fugitive (4)	VOC	0.04	0.20

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ANI-FCRDTF	Aniline Crude Tank Farm Fugitive (4)	Aniline	0..01	0.04
		Benzene	0.01	0.01
		Nitrobenzene	0.02	0.10
ANI-FDHN	DHN Fugitives (4)	Benzene	1.06	4.63
		Nitrobenzene	0.30	1.31
ANI-FIL190	Filter and Thickener Vent	Aniline	0.26	1.14
ANI-FFIL190	Filter and Thickener Fugitives (4)	Aniline	0.01	0.04
ANI-FLR296	Backup Flare	VOC	0.04	0.16
		NOx	0.04	0.15
		CO	0.07	0.31
		SO <sub>2</sub>	0.01	0.06
ANI-FLR373	NOx Flare Discharge (5)(6)	VOC (5)	0.27	1.18
		Aniline	0.02	0.09
		Benzene	0.81	3.47
		Nitrobenzene	0.10	0.41
		Cyclohexanone	0.01	0.02
		NOx	173.99	385.64
		CO	5.95	24.29
		SO <sub>2</sub>	0.61	2.64
		H <sub>2</sub> S	0.01	0.01
		NH <sub>3</sub>	0.01	0.03
ANI-FLR373	NOx Flare Discharge (5)(7)	VOC (5)	1.38	0.61
		Aniline	0.02	0.02
		Benzene	0.26	0.11

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		Nitrobenzene	0.58	0.26
		Cyclohexanone	0.01	0.01
		NOx	118.91	30.73
		CO	5.89	2.69
		SO <sub>2</sub>	0.65	0.31
		H <sub>2</sub> S	0.01	0.01
		NH <sub>3</sub>	0.03	0.01
ANI-FNOXFL	Aniline NOx Flare Fugitive (4)	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
ANI-FPRCBL	Aniline PRC Battery Limit Fugitive (4)	Aniline	0.01	0.01
		Benzene	0.01	0.02
		Nitrobenzene	0.01	0.01
ANI-FREDOX	Redox Unit Fugitive (4)	Aniline	0.01	0.01
		Benzene	0.02	0.10
		Nitrobenzene	0.01	0.02
ANI-FRRTUN	Aniline RR/Truck Unload Fugitives (4)	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-FSITE	Aniline OSBL Fugitives (4)	Aniline	0.01	0.01
		Benzene	0.03	0.14
ANI-FWELL	Deepwell Injection Area Fugitives (4)	Nitrobenzene	0.01	0.01

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		Benzene	0.01	0.01
ANI-LBA96	Aniline Barge Loading	Aniline	1.79	0.35
ANI-LRC195	Rework Railcar Loading	Aniline	0.19	0.01
ANI-LRC97	Aniline Railcar Loading	Aniline	0.48	0.05
		Benzene	1.43	0.01
		Nitrobenzene	0.25	0.01
ANI-LTR98	Aniline Product Truck Loading	Aniline	0.48	0.01
		Benzene	1.27	0.03
		Nitrobenzene	0.03	0.01
ANI-ORGTRK	Decant Organic Liquid Truck Loading	Aniline	0.01	0.01
		Benzene	0.32	0.01
		Nitrobenzene	0.01	0.01
ANI-RED373	Redox Unit (9)	NOx	3.07	12.22
		CO	2.05	8.15
		VOC	0.54	1.37
		N <sub>2</sub> O	0.45	1.97
		Benzene	0.11	0.47
		Nitrobenzene	0.01	0.06
		SO <sub>2</sub>	0.64	2.79
		PM <sub>10</sub>	0.05	0.23
		Aniline	0.01	0.04
		H <sub>2</sub> S	0.01	0.01
		Cyclohexanone	0.01	0.01

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ANI-STK169	Ammonia Blowdown Pot Vent	NH <sub>3</sub>	4.79	0.06
ANI-STK83	AOP Abater Discharge	VOC	1.84	8.06
		NO <sub>x</sub>	44.28	127.75
		SO <sub>2</sub>	1.56	6.82
ANI-STR69A	Wastewater Column Vent No. 1	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-STR69B	Wastewater Column Vent No. 2	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-TF189E	East Wastewater Tank Vent	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
		Phenol	0.01	0.01
ANI-TF203A	South Urea Storage Tank Vent	Urea	0.01	0.01
ANI-TF203B	North Urea Storage Tank Vent	Urea	0.01	0.01
ANI-TF2561	Aniline Crude Analysis Tank Vent No. 1	Aniline	0.01	0.01
		Benzene	0.02	0.08
		Nitrobenzene	0.01	0.01
ANI-TF2562	Aniline Crude Analysis Tank Vent No. 2	Aniline	0.01	0.01
		Benzene	0.02	0.08
		Nitrobenzene	0.01	0.01
ANI-TFL75	Benzene Bulk Storage Tank Vent	Benzene	0.40	1.37

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ANI-TFX59	Deepwell Injection Tank Vent	Ammonia	0.25	0.01
		Aniline	0.01	0.01
		Benzene	0.02	0.01
		Nitrobenzene	0.01	0.01
ANI-TFX61	Deepwell Surge Tank Vent	Ammonia	0.24	0.01
		Aniline	0.01	0.01
		Benzene	0.02	0.01
		Nitrobenzene	0.01	0.01
ANI-TFX70	Catalyst Mix Tank Vent	Aniline	0.02	0.01
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX72	Water Draw-Off Tank Vent	Aniline	0.01	0.01
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX73	No. 2 Top N and B Hold Tank	Nitrobenzene	0.02	0.07
		Benzene	0.02	0.06
ANI-TFX74	Wastewater Column OVHD Separator	Aniline	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX84	Reactor Catalyst Feed Tank	Aniline	0.38	0.01



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		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Cyclohexanone	0.02	0.01
ANI-TFX85	Thickener Feed Storage Tank	Aniline	1.18	0.03
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Cyclohexanone	0.05	0.01
ANI-TFX90	Alternate Wastewater Diversion Tank	Aniline	0.01	0.01
		Benzene	0.14	0.01
		Nitrobenzene	0.01	0.01
ANI-TFX91A	Aniline Bulk Storage Tank - North	Aniline	0.12	0.40
		Benzene	0.01	0.01
		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX91B	Aniline Bulk Storage Tank - South	Aniline	0.12	0.40
		Benzene	0.01	0.01
		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX92A	Aniline No. 1 Analysis Storage Tank	Aniline	0.05	0.12
		Benzene	0.01	0.01
		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX92B	Aniline No. 2 Analysis Storage Tank	Aniline	0.05	0.12
		Benzene	0.01	0.01

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		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX92C	Aniline No. 3 Analysis Storage Tank	Aniline	0.05	0.12
		Benzene	0.01	0.01
		Phenol	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX193	West Aniline Extractor Hold Tank Vent	Nitrobenzene	0.02	0.08
		Benzene	0.04	0.14
ANI-TFX194	Aniline Extractor Feed Tank Vent	Nitrobenzene	0.02	0.08
		Benzene	0.04	0.15
ANI-TFX205	Acid Recovery Tank Vent	Benzene	1.12	0.06
		Nitrobenzene	0.01	0.01
		H <sub>2</sub> SO <sub>4</sub>	0.01	0.01
ANI-TFX255	Aniline Rework Storage Tank Vent	Aniline	0.06	0.02
ANI-TFX259	Aniline Safety Tank Vent	Aniline	0.01	0.01
		Phenol	0.01	0.01
		NH <sub>3</sub>	0.07	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX260	Crude Aniline Storage Tank Vent	Aniline	0.02	0.01
		Benzene	0.10	0.01
		Nitrobenzene	0.01	0.01
ANI-TFX261	Nitrobenzene Storage	Benzene	0.36	0.01
		Nitrobenzene	0.49	0.01
ANI-TFX282	Purge Column Feed Tank Vent	Aniline	0.01	0.01

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		Phenol	0.01	0.01
		NH <sub>3</sub>	0.01	0.01
		Cyclohexanone	0.01	0.01
ANI-TFX283	Coarse Water Feed Tank Vent	Aniline	0.02	0.01
		NH3	1.99	0.02
ANI-TFX290	Reactor Nitrobenzene Feed Tank	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-TFX301	Consolidated Effluent Tank Vent	Aniline	0.01	0.01
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
ANI-VNT196	Aniline Building Process Water Sump Vent	Aniline	0.01	0.02
		Benzene	0.01	0.01
		Nitrobenzene	0.01	0.01
		Phenol	0.01	0.01
ANI-VNT264	AOP NOx Analyzer Vent	NO	0.01	0.01
ANI-VT263A	AOP Oxygen Analyzer Vent	NO	0.01	0.01
		N <sub>2</sub> O	0.01	0.01
		NOx	0.01	0.01
ANI-VT263B	AOP Methane Analyzer Vent	NOx	0.01	0.01
		CH <sub>4</sub>	0.01	0.01
MAINTENANCE, START-UP & SHUTDOWN EMISSION RATES (10)				
ANI-AOPFUGMSS	AOP Drain Emission MSS	NOx	35.00	0.80
		N <sub>2</sub> O	1.00	0.02

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ANI-STK83MSS	AOP Abater Discharge MSS	VOC	1.84	(11)
		NOx	905.00	(11)
		SO <sub>2</sub>	1.63	(11)
		N <sub>2</sub> O	300.00	4.03
ANI-FLR373MSS	NOx Flare Maintenance	Benzene	0.015	<0.01
		Nitrobenzene	<0.01	<0.01
		NOx	0.03	0.02
ANI-ABS62MSS	Ammonia Scrubber Maintenance	Benzene	0.02	0.01
		Nitrobenzene	<0.01	<0.01
		Aniline	0.01	0.01
		NH <sub>3</sub>	0.03	0.02
ANI-TKMSS	Aniline Tank Maintenance	Aniline	3.35	0.39
ANI-DHNTKMSS	DHN Tank Maintenance	Aniline	0.40	0.12
		Benzene	0.50	0.15
		Nitrobenzene	0.60	1.24
		Nitric Acid	1.96	0.01
		VOC	0.44	<0.01
		NOx	5.58	0.03
		CO	1.20	<0.01
		SO <sub>2</sub>	0.37	<0.01
		PM	0.40	<0.01
ANI-PMPMSS	Pump Maintenance	Aniline	0.08	<0.01
		Benzene	0.11	<0.01
		Nitrobenzene	0.10	<0.01

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		VOC	0.03	<0.01
ANI-LINEMSS	Piping Component Maintenance	Aniline	0.04	0.34
		Benzene	0.08	0.68
		Nitrobenzene	0.06	0.51
		VOC	0.02	0.17
ANI-VACTRUCK	Vacuum Truck Emissions (Heel and Wastewater Removal)	Benzene	1.27	<0.01
		Nitrobenzene	0.09	<0.01
		Aniline	<0.01	<0.01
ANI-TFL75MSS	Roof Landing Operations	Benzene	2.01	0.05

- (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)
  - NH<sub>3</sub> - ammonia
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - PM<sub>10</sub> - particulate matter (PM) 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.
  - CO - carbon monoxide
  - SO<sub>2</sub> - sulfur dioxide
  - H<sub>2</sub>S - hydrogen sulfide
  - H<sub>2</sub>SO<sub>4</sub> - hydrogen sulfate
  - NO - nitrogen oxide
  - N<sub>2</sub>O - nitrous oxide
  - CH<sub>4</sub> - methane
- (4) Emission rate is an estimate and is enforceable though compliance with the applicable special condition(s) and permit application representations.
- (5) The VOC emission estimates do not include emissions of VOC which are specifically identified by chemical name.
- (6) The permit holder is authorized to emit these emission rates until the two-stage thermal oxidizer EPN ANI-RED373 is constructed and operational. The construction and operation of this unit shall occur within 18-months of the date of issuance of this amendment.
- (7) The permit holder is authorized to emit these emission rates once the two-stage thermal oxidizer EPN ANI-RED373 is constructed and operational. The construction and operation of this unit shall occur within 18 months of the date of issuance of this amendment. At such time the permit holder shall submit

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an alteration request to remove the existing emission rates for the flare EPN ANI-FLR373 and footnote (6).

- (8) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
- (9) Emissions rates from the Redox Unit (EPN ANI-RED373) are authorized once the construction and operation of the two-stage thermal unit has been completed, not to exceed 18-months from the date of issuance of this amendment.
- (10) From activities specified in Special Condition No. 21 of this permit.
- (11) Annual VOC, NO<sub>x</sub> and SO<sub>2</sub> emissions from ANI-STK83MSS are included in the annual emissions from ANI-STK83.

Date: \_\_\_\_\_