

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 9654A, PSDTX833M3, and N-60M2

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)	<u>Emission Rates *</u>	
			lb/hr	TPY
1A	No. 1 Recovery Furnace ESP Stack	VOC	19.60	85.84
		NO _x	88.71	337.53
		SO ₂	408.58	1,566.62
		PM	59.62	261.15
		PM ₁₀	45.79	200.56
		CO	266.61	1,167.76
		TRS	16.78	73.49
		H ₂ SO ₄	0.01	0.03
1B	No. 2 recovery Furnace ESP Stack	VOC	19.60	85.84
		NO _x	88.71	337.53
		SO ₂	408.58	1,566.62
		PM	59.62	261.15
		PM ₁₀	45.79	200.56
		CO	266.61	1,167.76
		TRS	16.78	73.49
		H ₂ SO ₄	0.01	0.03
2	Bark Boiler Scrubber Stack	VOC	11.15	41.70
		NO _x	108.62	406.12
		SO ₂	7.44	32.22
		PM	55.76	208.49
		PM ₁₀	55.76	208.49
		PM _{2.5}	54.64	204.32
		CO	262.40	981.12
		TRS	0.01	0.05
		H ₂ SO ₄	0.53	1.93
		NH ₃	16.19	70.93

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2A	No. 1 PFI Boiler Stack	VOC	10.00	44.00
		NO _x	55.53	219.70
		SO ₂	5.71	22.18
		PM	3.00	13.00
		PM ₁₀	3.00	13.00
		CO	70.00	307.00
3	No. 1 Dissolving Tank Scrubber Stack	VOC	0.83	3.64
		NO _x	1.15	5.06
		SO ₂	0.29	1.26
		PM	11.54	50.55
		PM ₁₀	10.36	45.40
		CO	0.46	2.02
		TRS	0.35	1.52
		NH ₃	6.93	30.33
4	No. 2 Dissolving Tank Scrubber Stack	VOC	0.83	3.64
		NO _x	1.15	5.06
		SO ₂	0.29	1.26
		PM	11.54	50.55
		PM ₁₀	10.36	45.40
		CO	0.46	2.02
		TRS	0.35	1.52
		NH ₃	6.93	30.33
9	Lime Silo Scrubber Stack	PM	0.53	0.68
		PM ₁₀	0.53	0.68
10	No. 1 Slaker Scrubber Stack ^{A1}	VOC	0.90	1.50
		PM	0.31	1.36
		PM ₁₀	0.31	1.36
		NH ₃	5.24	8.69
11	Lime Kiln Scrubber Stack	VOC	0.70	2.34
		NO _x	43.09	147.77
		SO ₂	7.00	24.24
		PM	31.58	104.78
		PM ₁₀	27.28	90.53
		CO	2.99	9.92
		TRS	6.11	20.28
		H ₂ SO ₄	0.46	1.53

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13	No. 2 Slaker Scrubber Stack ^{A1}	VOC	0.90	1.50
		PM	0.31	1.36
		PM ₁₀	0.31	1.36
		NH ₃	5.24	8.69
16/17**	Brown Stock Washers A and B ^{B1}	VOC	71.18	138.80
		TRS	1.03	2.00
16/17#	Brown Stock Washers A and B ^{B1}	VOC	27.06	10.82
		TRS	0.39	0.16
27	Brine Storage Tank	VOC	<0.01	<0.01
		TRS	<0.01	<0.01
29	No. 2 Tall Oil Settling Tank	VOC	0.20	0.09
		TRS	0.08	0.03
30	No. 1 Tall Oil Storage Tank ^{A2}	VOC	0.21	0.05
		TRS	0.02	0.01
31	No. 2 Tall Oil Storage Tank ^{A2}	VOC	0.21	0.05
		TRS	0.02	0.01
32	Turpentine Storage Tank ^{B2}	VOC	0.03	0.12
36	No. 5 White Liquor Tank Vent ^{A3}	VOC	0.08	0.07
39	South Mud Tank ^{A4}	VOC	0.03	0.05
		TRS	<0.01	<0.01
40	North Mud Tank ^{A4}	VOC	0.03	0.05
		TRS	<0.01	<0.01
41	No. 3 Green Liquor Clarifier	VOC	0.03	0.10
		TRS	<0.01	0.01
43	Weak Wash Storage Tank	VOC	0.08	0.27

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44	Scrubber Water Clarifier	VOC	0.03	0.09
		TRS	<0.01	<0.01
45	No.1 White Liquor Storage Tank (East) ^{A3}	VOC	0.08	0.07
46	No.1 White Liquor Storage Tank (West) ^{A3}	VOC	0.08	0.07
47	No.1 Green Liquor Storage Tank ^{A5}	VOC	0.03	0.05
		TRS	<0.01	<0.01
49	No.2 Green Liquor Storage Tank ^{A5}	VOC	0.03	0.05
		TRS	<0.01	<0.01
50	Green Liquor Equalization Tank	VOC	0.03	0.10
		TRS	<0.01	0.01
51	No.2 Green Liquor Storage Tank	VOC	0.03	0.10
		TRS	<0.01	0.01
56	"A" Blend Tank ^{A6, B3}	VOC	0.06	0.23
		TRS	0.01	0.02
57	"B" Blend Tank ^{A6, B3}	VOC	0.03	0.12
		TRS	<0.01	0.01
58	Reject Tank ^{B4}	VOC	0.10	0.37
		TRS	<0.01	<0.01
63	No.1 Weak Black Liquor Storage Tank	VOC	0.67	2.93
		TRS	0.12	0.51
64	No.2 Weak Black Liquor Storage Tank	VOC	0.67	2.93
		TRS	0.12	0.51
65	Black Liquor Swing Tank	VOC	0.11	0.48
		TRS	0.19	0.84
66	No.1 Heavy Black Liquor Storage Tank	VOC	0.11	0.48
		TRS	0.19	0.84
67	No.2 Heavy Black Liquor Storage Tank	VOC	0.11	0.48
		TRS	0.19	0.84

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68	Boilout Tank	VOC	0.54	2.37
		TRS	0.19	0.84
72	Gasoline Tank	VOC [†]	--	0.20
80	Wood Yard (4)	PM	7.17	16.33
		PM ₁₀	2.89	6.69
		PM _{2.5}	<0.01	0.02
81	Truck Traffic Fugitives (4)	PM	--	123.69
		PM ₁₀	--	34.37
88	No. 1 Causticizer	VOC	0.02	0.06
		NH ₃	2.41	7.99
89	No. 2 Causticizer	VOC	0.02	0.06
		NH ₃	2.41	7.99
90	No. 3 Causticizer	VOC	0.02	0.06
		NH ₃	2.41	7.99
91	No. 4 Causticizer	VOC	0.02	0.06
		NH ₃	2.41	7.99
92	No. 5 Causticizer	VOC	0.02	0.06
		NH ₃	2.41	7.99
93 - 98	Wastewater Collection and Treatment (4)	VOC	24.95	91.06
		TRS	3.10	11.32
99	No. 3 Power Boiler Stack	VOC	2.26	9.92
		NO _x	21.00	91.98
		SO ₂	0.25	1.44
		PM	3.13	13.71
		PM ₁₀	3.13	13.71
		CO	37.80	165.56
100	Chem-Washer (4) ^{B5}	VOC	0.10	0.03
		TRS	<0.01	0.02
101-130 and	Nos. 1 and 2 Linerboard	VOC	31.72	103.48

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132-158	Machines ^{B6}	TRS	0.53	1.94
159-166	Secondary Fiber System	VOC	0.31	1.13
192	Lime Kiln Precoat Filter	VOC	0.09	0.30
		TRS	0.01	0.02
193	Precoat Mud Filter	VOC	0.40	1.31
	Vacuum Pump West	TRS	0.03	0.10
194	Precoat Mud Filter	VOC	0.40	1.31
	Vacuum Pump East	TRS	0.03	0.10
205	No. 4 White Liquor Storage Tank ^{A3}	VOC	0.08	0.07
210	West Black Liquor Storage Tank	VOC	0.54	2.37
		TRS	0.19	0.84
211	Center Black Liquor Storage Tank	VOC	0.54	2.37
		TRS	0.19	0.84
212	East Black Liquor Storage Tank	VOC	0.54	2.37
		TRS	0.19	0.84
213	Eco-Filter White Liquor Feed Tank	VOC	0.08	0.27
214	White Liquor Eco-Filter	VOC	0.08	0.27
215	Eco-Filter White Liquor Standpipe	VOC	0.08	0.27
216	Eco-Filter Lime Mud Dilution Tank	VOC	0.03	0.09
		TRS	<0.01	<0.01
217	Eco-filter Mud Washer	VOC	0.08	0.28
		TRS	<0.01	0.01
218	Eco-Filter Weak Wash Standpipe	VOC	0.08	0.27
224	Lime Mud Reclaim System (4)	VOC	0.09	0.30
		PM	0.02	0.05

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		PM ₁₀	0.01	0.03
		TRS	0.01	0.02
225	No. 2 Fuel Oil tank	VOC [†]	--	0.20
232	Green Liquor Dregs Filter	VOC	0.03	0.10
	and Vacuum Pump (4)	TRS	<0.01	0.01
235	Liquor Loading (4)	VOC [†]	1.49	1.62
		TRS [†]	0.13	0.21
279	Fuel Oil Day Tank	VOC [†]	0.07	0.01
280	Fuel Oil Storage Tank	VOC [†]	0.07	0.04
281	Pet Coke Silo Stack	PM	0.26	1.13
		PM ₁₀	0.26	1.13
282	Bark Boiler Ash Bin	PM	0.26	1.13
		PM ₁₀	0.26	1.13
283	Cooling Tower No. 1	VOC	0.98	4.30
284	Cooling Tower No. 2	VOC	0.09	0.38
285	Polysulfuric Liquor System	VOC	0.01	0.06
	(Orange Liquor Reactor)	NH ₃	0.82	3.57
286	Caustic Solution Tank	NaSH/Na ₂ S##	0.04	0.04
NCG-FUG 1	Switching LVHC and HVLC NCG Venting for Bypass and Preventive Maintenance (4)(5)	VOC [†]	145.00	0.25
		Acetone	2.40	0.02
		TRS [†]	0.06	<0.01
P-VBURNER	Propane Vaporizer Burner	VOC	0.06	0.02
		NO _x	3.73	0.97
		SO ₂	0.10	0.03
		PM	0.12	0.03
		PM ₁₀	0.12	0.03

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CO

0.63

0.16

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) Exempt Solvent - Those carbon compounds or mixtures of carbon compounds used as solvents which have been excluded from the definition of volatile organic compound.
 - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x - total oxides of nitrogen
 - SO₂ - sulfur dioxide
 - PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
 - PM₁₀ - particulate matter equal to or less than 10 microns in diameter
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - CO - carbon monoxide
 - H₂SO₄ - sulfuric acid
 - TRS - total reduced sulfur
 - NH₃ - ammonia
 - NaSH - sodium hydrosulfide
 - Na₂S - sodiumsulfide
- (4) Fugitive emissions are an estimate only.
- (5) Emissions resulting from re-routing non-condensable gases between combustion sources (Lime Kiln and bark Boiler)

* Emission rates are based on and the facilities are based on the following:

VOC and TRS = are represented as carbon and H₂S, respectively, unless otherwise indicated.

VOC[†] and TRS[†] = are represented as the sum of species.

A1 = For determination of compliance, the annual emissions should be summed for the No. 1 Slaker (EPN 10) and No. 2 Slaker (EPN 13).

B1-B6 = Hourly emission rates are based on 24-hour averaging time.

A2 = For determination of compliance, the annual emissions should be summed for the No. 1 Tall Oil Storage Tank (EPN 30) and the No. 2 Tall Oil Storage Tank (EPN 31).

A3 = For determination of compliance, the annual emissions should be summed for the Nos. 1, 2, 4, and 5 White Liquor Storage Tanks (EPNs 36, 45, 46, and 205).

A4 = For determination of compliance, the annual emissions should be summed for the South Mud Tank (EPN 39) and the North Mud Tank (EPN 40).

A5 = For determination of compliance, the annual emissions should be summed for the No. 1 Green Liquor Storage Tank (EPN 47) and the No. 2 Green Liquor Storage tank (EPN 49).

A6 = For determination of compliance, the annual emissions should be summed for the "A" Blend Tank (EPN 56) and the "B" Blend Tank (EPN 57).

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- ** Brown Stock Washers A and B emissions prior to Phase 2 of 2008 project based on a rolling 12-month average throughput of 1,903 air dry tons pulp per day (ADTPD). EPNs to be deleted by permit alteration prior to implementation of any post-Phase 1 modification.
- # Prior to any post-Phase 1 modifications of 2008 project, the Brown Stock Washers A and B must be hooded and controlled by Bark Boiler (EPN 2).
- ## Emissions conservatively assumed to be 100 percent NaSH or 100 percent Na₂S.

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Date February 28.