EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 2975 and PSD-TX-778M2

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
SM01	No. 1 Smelt Tank Scrubber	PM_{10}	10.9	47.74
		VOC (note a)	1.37	6.02
		SO_2	3.28	14.37
		H_2SO_4	0.15	0.66
		TRS (note b)	1.80	7.88
		NO_x	1.80	7.88
		NH_3	2.51	8.99
SM02	No. 2 Smelt Tank Scrubber	PM_{10}	19.85	86.94
		VOC	2.50	10.95
		SO_2	6.78	29.70
		H_2SO_4	0.31	1.36
		TRS	3.28	14.35
		NO_x	3.28	14.35
		NH_3	4.57	16.37
LK02**	Lime Kiln No. 2	PM_{10}	26.30	115.19
		NO_x	38.91	145.90
		SO_2	1.20	5.26
		H_2SO_4	0.25	1.07
		CO	4.44	19.45
		TRS	2.50	10.95
		VOC 4.00	17.52	
PB02***	Power Boiler No. 2 (note c)	PM_{10}	108.70	466.58
		VOC	51.66	226.26
		NO_x	326.10	1399.75
		SO_2	175.72	769.65
		CO	1102.55	4732.57
		H_2SO_4 14.65	64.14	
		TRS 0.99	4.36	

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
RB01A**	No. 1 Recovery Furnace North Stack # (Normal ops)	PM_{10}	26.58	116.43
		VOC	13.13	57.52
		NO_x	63.12	276.45
		SO_2	210.94	307.98
		H_2SO_4	9.69	14.14
		CO	122.97	538.61
		TRS	1.87	8.19
RB01A**	No. 1 Recovery Furnace North Stack (MSS)	PM_{10}	52.00	0.65
RB01B**	No. 1 Recovery Furnace South Stack # (Normal ops)	PM_{10}	26.58	116.43
		VOC	13.13	57.52
		NO_x	63.12	276.45
		SO_2	210.94	307.98
		H_2SO_4	9.69	14.14
		CO	122.97	538.61
		TRS	1.87	8.19
RB01B**	No. 1 Recovery Furnace South Stack (MSS)	PM_{10}	52.00	0.65
RB02A**	No. 2 Recovery Furnace West Stack # (Normal ops)	PM_{10}	42.59	177.23
		VOC	23.92	99.51
		NO_x	112.42	467.76
		SO_2	375.71	521.11
		H_2SO_4	17.25	23.93
		CO	219.02	911.34
		TRS	3.33	13.86
RB02A**	No. 2 Recovery Furnace West Stack (MSS)	PM_{10}	79.00	0.99
RB02B**	No. 2 Recovery Furnace East Stack # (Normal ops)	PM_{10}	42.59	177.23
		VOC	23.92	99.51

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
		NO_x	112.42	467.76
		SO_2	375.71	521.11
		H_2SO_4	17.25	23.93
		CO	219.02	911.34
		TRS	3.33	13.86
RB02B**	No. 2 Recovery Furnace East Stack (MSS)	PM_{10}	79.00	0.99
BG01	Lime System Baghouse No. 1	PM_{10}	0.06	0.21
BG02	Lime System Baghouse No. 2	PM_{10}	0.10	0.44
LS01	No. 1 Lime Slaker	PM_{10}	0.02	0.08
		VOC	0.39	1.41
		NH_3	9.39	33.63
LS02	No. 2 Lime Slaker	PM_{10}	0.02	0.10
		VOC	0.68	2.99
		NH_3	17.10	61.24
BP0351	Methanol Storage Tank	CH_3OH	19.03	0.73
BP0368	Hydrogen Peroxide Tank	H_2O_2	2.21	0.09
NCG01	NCG Oxidation Unit Scrubber	VOC	0.12	0.53
		NO_x	3.08	13.51
		SO_2	15.84	69.37
		CO	6.25	27.40
		H_2SO_4	6.01	26.28
		TRS	0.99	4.36
NCG02	Combined Contaminated Condensate Tank	TRS	<0.10	0.40
NCGF1	NCG Fugitives (4)	TRS	0.36	1.56
DIG1	Batch Digestor Fugitives (4)	VOC	4.80	19.19
		TRS	0.87	3.46

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
WWTS1	Waste Water Treatment Fugitives (4)	VOC	348.16	740.78
		TRS	22.82	81.72
PTA-1##	Packed Tower Aeration Unit 1	$CHCl_3$	0.07	0.31
		$CHBrCl_2$	0.02	0.08
PTA-2##	Packed Tower Aeration Unit 2	$CHCl_3$	0.07	0.31
		$CHBrCl_2$	0.02	0.08
BP14###	B-Line Bleach Plant Scrubber (North) (5)	Cl_2	0.07	0.32
		ClO_2	4.23	18.51
		CO	29.22	117.37
		VOC	3.06	12.28
		TRS	0.09	0.37
BP15###	B-Line Bleach Plant Scrubber (South) (5)	Cl_2	0.07	0.32
		ClO_2	4.23	18.51
		CO	29.22	117.37
		VOC	3.06	12.28
		TRS	0.09	0.37
BP16###	A-Line Bleach Plant Scrubber (5)	Cl_2	0.20	0.86
		ClO_2	11.31	49.51
		CO	39.00	117.37
		VOC	4.17	12.28
		TRS	0.12	0.37
BP01	Bleach Plant Fugitives (4)	Cl_2	0.2	1.0
		ClO_2	0.2	1.0
CLT01	No. 1 Concentrated Liquor Storage Tank (5)	VOC	0.11	0.48
		TRS	0.19	0.84
CLT02	No. 2 Concentrated Liquor Storage Tank (5)	VOC	0.11	0.48
		TRS	0.19	0.84

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
WLT01	No. 1 Weak Liquor Storage Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
WLT02	No. 2 Weak Liquor Storage Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
HLT01	No. 1 Strong/Heavy Liquor Storage Tank (5)	VOC	0.11	0.48
		TRS	0.19	0.84
HLT02	No. 2 Strong/Heavy Liquor Storage Tank (5)	VOC	0.11	0.48
		TRS	0.19	0.84
SCT01	No. 1 Soap Conc. Tank (5)	VOC	0.03	0.12
		TRS	0.05	0.21
SCT02	No. 2 Soap Conc. Tank (5)	VOC	0.03	0.12
		TRS	0.05	0.21
SS01	No. 1 Soap Separator (5)	VOC	0.03	0.12
		TRS	0.05	0.21
SS02	No. 2 Soap Separator (5)	VOC	0.03	0.12
		TRS	0.05	0.21
SST01	No. 1 Soap Storage Tank (5)	VOC	0.03	0.12
		TRS	0.05	0.21
SST02	No. 2 Soap Storage Tank (5)	VOC	0.03	0.12
		TRS	0.05	0.21
BLDF01	Black Liquor Digester Fill Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
CT01	Spill Collection Tank (5)	VOC	0.54	2.37

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
		TRS 0.12	0.51	
ST01	Swing Tank (5)	VOC	0.54	2.37
		TRS 0.12	0.51	
SLST01	No. 1 Spare Liquor Storage Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
SLST02	No. 2 Spare Liquor Storage Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
SLST03	No. 3 Spare Liquor Storage Tank (5)	VOC	0.54	2.37
		TRS	0.12	0.51
BOT01	Evaporator Boil Out Tank (5)	VOC	0.11	0.48
		TRS 0.19	0.84	
DT01	Black Liquor Dump Tank (5)	VOC	0.54	2.37
		TRS 0.12	0.51	
WLSC01	Weak Liquor Soap Conc Tank (5)	VOC	0.03	0.12
		TRS	0.05	0.21
FOT	Fuel Oil Tank (5)	VOC	1.52	6.64
		TRS 0.19	0.84	
CPFUG (note d)	Caustic Plant Fugitives (4)	NH3	7.31	26.17
		VOC	16.25	68.30
		TRS 3.18	13.91	
CP01	No. 1 Causticizer Tanks (5)	NH_3	2.59	9.28
		VOC	0.01	0.03
CP02	No. 2 Causticizer Tanks (5)	NH_3	4.72	16.89
		VOC	0.01	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
WLOXT1	White Liquor Oxidation Tank (5)	NH_3	0.10	0.44
		VOC	0.26	1.16
		TRS	0.56	2.45
KNCONV	A- and B-Line Knotter Conveyor (4)	VOC	0.04	0.01
AQS	A-Line Quaternary Screen (4)	VOC	<0.01	0.01
		TRS	<0.01	<0.01
BQS	B-Line Quaternary Screen (4)	VOC	0.01	0.03
		TRS	<0.01	<0.01
ASDT	A-Line Screen Dilution Tank (5)	VOC	0.01	0.02
		TRS	<0.01	<0.01
BSDT	B-Line Screen Dilution Tank (5)	VOC	<0.01	0.01
		TRS	<0.01	<0.01
ADHV1/ADSP1	A-Line Decker Hood Vent and A-Line Decker Seal Pit Vent (5)	VOC	9.24	27.20
		TRS	4.06	11.95
BDHV1/BDSP1	B-Line Decker Hood Vent and B-Line Decker Seal Pit Vent (5)	VOC	13.55	54.41
		TRS	5.95	23.89
CPS1 (note e)	Chip/Bark Handling Fugitives (4)	PM	3.35	13.59
		PM_{10}	1.58	6.43
GRIND01	RDF Grinding Device (4)	PM_{10}	0.18	0.79
REJBIN2	Rejects Bin	CH_3OH	0.03	0.10
LOG-1A	Log Processing 1A (4)	PM	0.73	3.20
		PM_{10}	0.22	0.96
HDST1	No. 1 Brown Stock High	VOC	4.80	21.02

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
	Density Stock Tank (5)	TRS	0.44	1.94
HDST2	No. 2 Brown Stock High	VOC	4.80	21.02
	Density Stock Tank (5)	TRS	0.44	1.94
ALDST	A-Line Low Density Chest (5)	VOC	4.80	21.02
		TRS	0.44	1.94
BLDST	B-Line Low Density Chest (5)	VOC	4.80	21.02
		TRS	0.44	1.94
AWTST	A-Line Waste Stock Chest (5)	VOC	4.80	21.02
		TRS	0.44	1.94
BWTST	B-Line Waste Stock Chest (5)	VOC	4.80	21.02
		TRS	0.44	1.94
(note f)	Extruder No. 5 Vents	PM_{10}	3.18	13.91
	and Fugitives (4)	VOC	2.07	9.05
		NO_x	0.29	1.29
		CO	0.25	1.08
		SO_2	<0.01	0.01
(note f)	Extruder No. 7 Vents	PM_{10}	3.18	13.92
	and Fugitives (4)	VOC	2.07	9.05
		NO_x	0.30	1.33
		CO	0.26	1.12
		SO_2	<0.01	0.01
(note g)	Nos. 1 & 3 Paper Machines	PM_{10}	0.19	0.83
	and Dryer Exhaust (5)	VOC	8.74	38.27
		NO_x	2.50	10.93
		CO	2.10	9.18
		SO_2	0.01	0.07
TNK0115, TNK0116 and TNK0175	Starch Silo Nos. 1 - 3	PM_{10}	0.02	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
PAINTYD	Sitewide Painting Activities (4)	PM_{10}	70.31	32.72
		VOC	96.05	28.94
BSS1 - BSS5	Nos. 1 - 5 Bleached Stock Storage Tanks (4)	VOC	0.04	0.17
(note h)	Paper Machine Tanks and Chests (4)	VOC	0.16	0.68
BSW1A - 3A and AFBV1 (note i)	Nos. 1A -3A BSW Vents and A-Line Foam Breaker Vent (5)	VOC	52.58	154.81
		TRS	13.46	39.64
BSW1B - 3B and BFBV1 (note i)	Nos. 1B -3B BSW Vents and B-Line Foam Breaker Vent (5)	VOC	77.09	309.63
		TRS	19.74	79.28
OD1 - OD4 (note i)	Oxygen Delignification System (5)	VOC	28.10	112.86
		TRS	0.10	0.39
		CO	3.19	12.81
AWSST	A-Line Washed Stock Chest (5)	VOC	0.72	3.16
		TRS	0.28	1.21
BWSST	B-Line Washed Stock Chest (5)	VOC	0.74	3.26
		TRS	0.28	1.21

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) PM - particulate matter, suspended in the atmosphere, including PM_{10}.
PM_{10} - particulate matter equal to or less than 10 microns in diameter. When PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
SO_2 - sulfur dioxide
H_2SO_4 - sulfuric acid
TRS - total reduced sulfur
NO_x - nitrogen oxides
NH_3 - ammonia
Cl_2 - chlorine
ClO_2 - chlorine dioxide (chlorine peroxide)
CO - carbon monoxide
H_2S - hydrogen sulfide
CH_3OH - methanol
H_2O_2 - hydrogen peroxide
$CHCl_3$ - chloroform
$CHBrCl_2$ - bromodichloromethane
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
(5) The VOC and TRS emission rates for this point are considered to be estimates only and are not intended to be enforceable limits.

* Unless otherwise specified, emission rates are based on operating 8,760 hours per year or 817,803 air dried unbleached tons per year 736,022 bone dry unbleached tons per year of pulp.
** Pound per hour rates, TRS emissions based on a 12-hour averaging time, PM/PM_{10} and SO_2 based on a 3-hour averaging time, all other pollutants are based on a 24-hour averaging time.
*** Pound per hour rates, SO_2 emissions are based on a 3-hour averaging time while all other

pollutants are based on a 24-hour averaging time.

Emissions from the Recovery Furnace Nos. 1 (EPNs RB01A and RB01B) and 2 (EPNs RB02A and RB02B) are split between the two stacks for accounting purposes. The emission rates from the furnaces are limited to the sum of the emissions from the two stacks rather than each stack. Emissions from the two stacks should be summed up when determining compliance since individual emissions may vary.

Emissions from the Packed Tower Aeration Unit Nos. 1 and 2 should be summed up when determining compliance since individual emissions may vary.

Emissions from the Bleach Plant Scrubbers (EPNs BP14, BP15, and BP16) should be summed up when determining compliance since individual emissions may vary.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Notes:

(a) All VOCs are reported as carbon unless otherwise specified.

(b) All TRS emission rates are reported as H_2S unless otherwise specified.

(c) The SO_2 hourly rates for the Power Boiler No. 2 include combustion of total reduced sulfur compounds during periods when the NCG oxidizer is inoperable.

(d) Green liquor clarifiers (2), green liquor storage tanks (3), weak wash storage tanks (2), white liquor clarifiers (2), white liquor storage tanks (4), white liquor/digestor fill tank, mud washers (2), mud storage tanks (2), mud precoat filters (2), and dregs filter.

(e) These fugitives occur from the chip and RDF handling operations.

(f) Includes the pre-treater stacks (2), the laminator stack (2), the post-treater stack, and fugitives for each extruder.

(g) The Paper Machine Nos.1 and 3 consist of 18 exhaust vents and fugitive emissions.

(h) Includes pine tanks (3), hardwood tanks (2), machine chests (2), and broke storage tanks (3).

(i) These sources are covered under Standard Permit Number 70973 and will be controlled by EPN PB02 (the primary control device). They are listed on the MAERT for record purposes only.