Emission Sources - Maximum Allowable Emission Rates

Permit Number 5168

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 (6)	
			lbs/hour	TPY (4)
GWDRY1	Gelwhite #1 Steam Dryer Stack	PM	<0.01	0.02
GWDRY2	Gelwhite #2 Steam Dryer Stack	PM	<0.01	0.02
GWDRY3	Gelwhite #3 Steam Dryer Stack	PM	<0.01	0.02
DC2	Gelwhite Elevator & Rotex Screen Dust Collector Stack	PM	0.08	0.34
		PM_{10}	0.06	0.25
		$PM_{2.5}$	0.01	0.04
DC3	Gelwhite Weigh Hopper & Marion Mixer Dust Collector Stack	PM	0.07	0.31
		PM_{10}	0.06	0.23
		$PM_{2.5}$	0.01	0.04
DC6	Gelwhite Pulverizer Mill w/ Inline Heater Dust Collector Stack	PM	0.31	1.35
		PM_{10}	0.23	1.01
		$PM_{2.5}$	0.05	0.20
		VOC (combustion)	0.01	0.04
		NO_x	0.15	0.64
		SO_2	<0.01	<0.01
		CO	0.12	0.54
DC4	Gelwhite Packaging Dust Collector Stack	PM	0.07	0.30
		PM_{10}	0.05	0.22
		$PM_{2.5}$	<0.01	0.04
BLR4	#4 Cleaver Brooks Boiler Stack	VOC (combustion)	0.04	0.19

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		NO_x	0.13	0.56
		SO_2	<0.01	0.03
		CO	0.45	1.98
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
BLR5	#5 Cleaver Brooks Boiler Stack	VOC (combustion)	0.04	0.19
		NO_x	0.13	0.56
		SO_2	<0.01	0.03
		CO	0.45	1.98
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
BLR6	#6 Cleaver Brooks Boiler Stack	VOC (combustion)	0.04	0.19
		NO_x	0.13	0.56
		SO_2	<0.01	0.03
		CO	0.45	1.98
		PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
B15	Dry Process B15 Crude Silo Dust Collector Vent	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
B16	Dry Process B16 Crude Silo Dust Collector Vent	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01

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TK1	#1 Amine Tank Vent	VOC (ethanol)	5.59	1.45
		VOC (benzyl chloride)	<0.01	<0.01
		VOC (methyl chloride)	0.25	0.03
TK2	#2 Amine Tank Vent	VOC (ethanol)	3.72	1.45
TK3	#3 Amine Tank Vent	VOC (ethanol)	5.59	1.66
		VOC (benzyl chloride)	<0.01	<0.01
		VOC (methyl chloride)	0.25	0.03
TK4	#4 Amine Tank Vent	VOC (ethanol)	3.72	1.42
TK5	#5 Amine Tank Vent	VOC (ethanol)	7.82	1.42
TK6	#6 Amine Tank Vent	VOC (ethanol)	3.72	1.66
QT3	Flash & Fluid Weight Kettle	VOC (ethanol)	4.84	1.95
		VOC (benzyl chloride)	0.02	<0.01
		VOC (methyl chloride)	0.39	0.03
QT4	Flash & Fluid Weight Kettle	VOC (ethanol)	4.84	1.95
		VOC (benzyl chloride)	0.02	<0.01
		VOC (methyl chloride)	0.39	0.03
BLR10	Thermal Oxidizer #1 Stack (The emission rates shown apply during periods when #1 Dry Process Line (DP1), #2 Dry Process Line (DP2), and #3 Dry Process Line (DP3) emissions are routed to Thermal Oxidizer #1. If DP2 and DP3 are not routed to Thermal Oxidizer #1, lower rates that are consistent with the permit application representations apply. Note: Thermal Oxidizer #1 shall be	VOC (ethanol)	0.55	-
		VOC (combustion)	0.04	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	2.30	-
		VOC (methyl chloride)	0.16	-
		NO_x	0.33	-
		SO_2	<0.01	-
		CO	2.66	-
		PM	0.06	-

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		PM_{10}	0.06	-
		$PM_{2.5}$	0.06	-
RBGR	#1 Dry Process Line Mill, Organo Rebagger, and Packaging Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
BLR12	Thermal Oxidizer #3 Stack (Except during periods when no DP line emissions are routed to, or are in the process of being routed to, Thermal Oxidizer #3 and Thermal Oxidizer #3 is shutdown.)	VOC (ethanol)	0.50	-
		VOC (combustion)	0.02	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	0.84	-
		VOC (methyl chloride)	0.06	-
		NO_x	0.63	-
		SO_2	<0.01	-
		CO	3.04	-
		PM	0.02	-
		PM_{10}	0.02	-
		$PM_{2.5}$	0.02	-
DC5	#2 Dry Process Line Mill and Packaging Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
BLR13	Thermal Oxidizer #4 Stack (Except during periods when no DP line emissions are routed to, or are in the process of being routed to, Thermal Oxidizer #4and Thermal Oxidizer #4 is shutdown.)	VOC (ethanol)	0.50	-
		VOC (combustion)	0.02	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	0.84	-
		VOC (methyl chloride)	0.06	-

Emission Sources - Maximum Allowable Emission Rates

		NO_x	0.58	-
		SO_2	<0.01	-
		CO	2.82	-
		PM	0.03	-
		PM_{10}	0.03	-
		$PM_{2.5}$	0.03	-
DC7	#3 Dry Process Line Mill, Rebagger, and Packaging Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
C11	C11 Crude Silo Dust Collector Vent	PM	0.24	1.03
		PM_{10}	0.17	0.76
		$PM_{2.5}$	0.03	0.12
C12	C12 Crude Silo Dust Collector Vent	PM	0.24	1.03
		PM_{10}	0.17	0.76
		$PM_{2.5}$	0.03	0.12
B12	B12 Crude Silo Dust Collector Vent	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
AMD	STPP & Soda Ash Unloading (5)	PM	0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
AMDDC50A	Receiver Hopper Dust Collector Stack	PM	0.07	0.31
		PM_{10}	0.05	0.23
		$PM_{2.5}$	<0.01	0.04
AMDSTPPN	STPP Unloading	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	<0.01	<0.01
AMDSAN	Soda Ash Unloading	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
RXNTK1	#1 Reaction Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.10	0.04
RXNTK2	#2 Reaction Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.10	0.04
PFT1	Flash and Fluid Process #1 Press Feed Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.07	0.03
ROOF3	Flash and Fluid Process #3 Press and Conveyors Roof Vent	VOC (ethanol)	1.40	3.52
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.06	0.02
PFT3	Flash and Fluid Process #3 Press Feed Tank	VOC (ethanol)	0.12	0.35
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
ROOF2	Flash and Fluid Process #2 Press and Conveyors Roof Vent	VOC (ethanol)	0.83	2.75
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.03	0.02
FLOAT1	Flash and Fluid Process #1 Float Cells (5)	VOC (ethanol)	1.81	4.07
		VOC (benzyl alcohol)	0.01	0.01
		VOC (methyl chloride)	0.30	0.17
VFBBGH	Flash and Fluid Process Vibrating	VOC (ethanol)	3.40	3.29

Emission Sources - Maximum Allowable Emission Rates

		VOC (combustion)	0.04	0.16
		VOC (benzyl alcohol)	0.50	0.78
		VOC (methyl chloride)	0.03	<0.01
		NO_x	0.78	2.92
		SO_2	<0.01	0.02
		CO	0.66	2.45
		PM	0.07	0.27
		PM_{10}	0.07	0.26
		$PM_{2.5}$	0.06	0.23
3	Flash and Fluid Process ACM Mill Dust Collector Stack	PM	0.34	1.26
		PM_{10}	0.25	0.94
		$PM_{2.5}$	0.04	0.15
SBAUN	Flash and Fluid Process Schlitterbaun Screen (5)	VOC (ethanol)	0.10	0.23
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
PFT2	Flash and Fluid Process #2 Press Feed Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.07	0.03
ROOF1	Flash and Fluid Process #1 Press and Conveyors Roof Vent	VOC (ethanol)	0.78	2.57
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.03	0.01
8	Flash and Fluid Process Flash Dryer Dust Collector Stack	VOC (ethanol)	2.61	2.95
		VOC (combustion)	0.05	0.18
		VOC (benzyl alcohol)	0.38	0.60
		VOC (methyl chloride)	0.02	<0.01
		NO_x	0.63	2.35

Emission Sources - Maximum Allowable Emission Rates

		SO_2	<0.01	0.02
		CO	0.96	3.57
		PM	1.46	5.42
		PM_{10}	1.09	4.07
		$PM_{2.5}$	0.23	0.87
7	Flash and Fluid Process Impact Mill Dust Collector Stack	PM	0.10	0.38
		PM_{10}	0.08	0.28
		$PM_{2.5}$	0.01	0.05
BLR11	Thermal Oxidizer #2 Stack	VOC (ethanol)	1.12	-
		VOC (combustion)	0.07	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	0.56	-
		VOC (methyl chloride)	0.09	-
		NO_x	1.25	-
		SO_2	<0.01	-
		CO	5.41	-
		PM	0.09	-
		PM_{10}	0.09	-
		$PM_{2.5}$	0.09	-
TK15	Flash and Fluid Process #15 Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.08	0.04
TK16	Flash and Fluid Process #16 Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.08	0.04

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TK19	Flash and Fluid Process #19 Tank	VOC (ethanol)	0.01	0.03
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.08	0.04
FLDBDFR	Fluid Bed Filter Receiver Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP1FR	DP1 Filter Receiver (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP1BBS	DP1 Blendback Station (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP2FR	DP2 Filter Receiver (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP3FR	DP3 Filter Receiver (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP3FR2	DP3 Filter Receiver 2 Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP3BS	DP3 Belt Scale Air Vent Filter Receiver Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DP3BBS	DP3 Blendback Station (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01

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		$PM_{2.5}$	<0.01	<0.01
FLDBDBBS	Fluid Bed Blendback Station (5)	PM	<0.01	0.04
		PM_{10}	<0.01	0.03
		$PM_{2.5}$	<0.01	<0.01
SPUBBS	SPU Blendback Station (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
SPUTK1	#1 SPU Tank	VOC (ethanol)	0.61	0.19
		VOC (benzyl chloride)	<0.01	<0.01
		VOC (methyl chloride)	0.03	<0.01
SPUTK2	#2 SPU Tank	VOC (ethanol)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	0.02
SPUTK3	#3 SPU Tank	VOC (ethanol)	<0.01	0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.01	0.02
SPUBB	SPU Unloading (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
SPUPRESS	SPU Press (5)	VOC (ethanol)	0.25	0.97
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
SPUBC100	SPU Press Belt Conveyor (5)	VOC (ethanol)	0.09	0.39
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
FBDRYER	SPU Fluidized Bed Dryer Dust Collector	VOC (ethanol)	3.63	-

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		VOC (benzyl alcohol)	0.51	-
		VOC (methyl chloride)	0.05	-
		VOC (combustion)	<0.01	0.04
		NO_x	0.16	0.69
		SO_2	<0.01	<0.01
		CO	0.13	0.58
		PM	0.36	1.55
		PM_{10}	0.27	1.16
		$PM_{2.5}$	0.05	0.23
GARASDV810	Garamite Spray Dryer Dust Collector Stack	VOC (ethanol)	3.63	-
		VOC (benzyl alcohol)	0.51	-
		VOC (methyl chloride)	0.05	-
		VOC (combustion)	0.05	0.24
		NO_x	0.76	3.34
		SO_2	<0.01	0.03
		CO	0.38	1.65
		PM	0.08	0.35
		PM_{10}	0.08	0.34
		$PM_{2.5}$	0.08	0.33
FBDRYER & GARASDV810	Total SPU Fluidized Bed Dryer Dust Collector & Spray Dryer Dust Collector Stacks	VOC (ethanol)	-	3.66
		VOC (benzyl alcohol)	-	0.84
		VOC (methyl chloride)	-	0.03
GARABL820	Garamite Spray Dryer Product Receiver Transfer Blower Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
DC8	SPU Mill Dust	PM	0.04	0.16

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		PM_{10}	0.03	0.12
		$PM_{2.5}$	0.01	0.02
BAGGER	SPU Packaging Dust Collector Stack	PM	0.15	0.66
		PM_{10}	0.11	0.49
		$PM_{2.5}$	0.02	0.08
WWTK1	#1 Wastewater Tank	VOC (ethanol)	0.09	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
CLAR	Wastewater Clarifier Tank (5)	VOC (ethanol)	0.46	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
WWTK2	Wastewater Fractionating Sludge Tank	VOC (ethanol)	<0.01	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
POND1	#1 Pond (5)	VOC (ethanol)	<0.01	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
POND2	#2 Pond (5)	VOC (ethanol)	0.41	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
POND3	#3 Pond (5)	VOC (ethanol)	0.51	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
POND6	#6 Pond (5)	VOC (ethanol)	0.89	-
		VOC (benzyl alcohol)	0.01	-
		VOC (methyl chloride)	<0.01	-

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EQTANK	Equalization Tank	VOC (ethanol)	0.02	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
DAFTANK	DAF Tank	VOC (ethanol)	0.68	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	0.02	-
SLUDGETANK	Sludge Tank	VOC (ethanol)	<0.01	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
DAFBP	DAF Belt Press	VOC (ethanol)	0.02	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
DAFBC	DAF Belt Conveyor	VOC (ethanol)	0.02	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
DAFST	DAF Sludge Truck	VOC (ethanol)	0.10	-
		VOC (benzyl alcohol)	<0.01	-
		VOC (methyl chloride)	<0.01	-
	Total Wastewater System (EPNs WWTK1, CLAR, WWTK2, POND1, POND2, POND3, POND6, EQTANK, DAFTANK, SLUDGETANK, DAFBP, DAFBC, and DAFST)	VOC (ethanol)	-	9.74
		VOC (benzyl alcohol)	-	0.06
		VOC (methyl chloride)	-	0.14
FUG	Equipment Leak Fugitives (5)	VOC (ethanol)	0.78	3.41
		VOC (benzyl chloride)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01

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		VOC (methyl chloride)	<0.01	<0.01
HEXMAIN	Heat Exchanger Maintenance	VOC (ethanol)	2.53	0.22
GARADC110	Garamite Sepiolite Day Hopper Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC111	Garamite Saponite Day Hopper Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADT	Garamite Quaternary Amine Day Tanks	VOC (ethanol)	3.92	2.33
		VOC (benzyl alcohol)	0.01	<0.01
		VOC (methyl chloride)	0.10	0.07
GARAR	Garamite Reaction Tanks #1 through #5	VOC (ethanol)	0.10	0.04
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	0.07	0.03
GARABLDG	Garamite Presses #1 & #2, Garamite Building Conveyors (5)	VOC (ethanol)	2.00	7.52
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARADC181	Garamite Fluid Bed Dryer Dust Collector Stack	VOC (ethanol)	2.72	9.15
		VOC (benzyl alcohol)	0.05	0.16
		VOC (methyl chloride)	<0.01	<0.01
		VOC (combustion)	0.04	0.19
		NO_x	0.78	3.44
		SO_2	<0.01	0.02
		CO	0.66	2.89
		PM	0.07	0.32

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		PM_{10}	0.07	0.30
		$PM_{2.5}$	0.06	0.27
GARADC184	FBD Product Receiver Transfer Blower Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC185	Garamite Fine Grinding Mill Dust Collector Stack	PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	<0.01
GARADC186	Garamite Product Transfer Blower Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC190	Product Silo Dust Collector 190 Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC190A	Product Silo Dust Collector 190A Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC190C	Bagging Bin Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC194	Fugitive Dust Collector Exhaust Fan Stack	PM	<0.01	0.02
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	<0.01
GARADC195	Central Vacuum Dust Collector Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

GARAFT	Filter Press Effluent Inventory Tank for Heat Recovery	VOC (ethanol)	0.01	0.04
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARABC606	Transfer Belt Conveyor (5)	VOC (ethanol)	0.14	0.63
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARABC800	SPU FBD Feed Belt Conveyor (5)	VOC (ethanol)	0.05	0.20
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARABC801	Transfer Belt Conveyor (5)	VOC (ethanol)	0.13	0.59
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARABC802	Makedown Tank Feed Belt Conveyor	VOC (ethanol)	0.10	0.45
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
GARAT801	Slurry Makedown Tank	VOC (ethanol)	<0.01	0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	0.01
GARAT802	Spray Dryer Feed Tank	VOC (ethanol)	<0.01	0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	0.01
SPU-CVDC	SPU Central Vacuum Dust Collector Stack	PM	0.03	0.14
		PM_{10}	0.02	0.10
		$PM_{2.5}$	<0.01	0.02
DP-CVDC	DP Central Vacuum Dust Collector Stack	PM	0.04	0.18
		PM_{10}	0.03	0.14

Emission Sources - Maximum Allowable Emission Rates

		$PM_{2.5}$	<0.01	0.02
ORGANOCVDC	Organo Central Vacuum Dust Collector Stack	PM	0.04	0.18
		PM_{10}	0.03	0.14
		$PM_{2.5}$	<0.01	0.02
BLR14	Thermal Oxidizer #5 Stack (During periods when DP1, DP2, and DP3 emissions are routed to Thermal Oxidizer #5. Note: Thermal Oxidizer #5 shall be shut down when Thermal Oxidizer #1 is operating.)	VOC (ethanol)	0.55	-
		VOC (combustion)	0.02	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	2.30	-
		VOC (methyl chloride)	0.16	-
		NO_x	0.32	-
		SO_2	<0.01	-
		CO	0.66	-
		PM	0.02	-
		PM_{10}	0.02	-
		$PM_{2.5}$	0.02	-
BLR15	Thermal Oxidizer #6 Stack	VOC (ethanol)	0.18	-
		VOC (combustion)	0.02	-
		VOC (benzyl chloride)	<0.01	-
		Cl_2	<0.01	-
		HCl	0.22	-
		VOC (methyl chloride)	0.06	-
		NO_x	0.32	-
		SO_2	<0.01	-
		CO	0.66	-
		PM	0.02	-

Emission Sources - Maximum Allowable Emission Rates

		PM_{10}	0.02	-
		$PM_{2.5}$	0.02	-
	Total Thermal Oxidizer Stacks (Thermal Oxidizers #1 through #6)	VOC (ethanol)	-	7.06
		VOC (combustion)	-	0.71
		VOC (benzyl chloride)	-	0.02
		Cl_2	-	0.01
		HCl	-	3.62
		VOC (methyl chloride)	-	0.23
		NO_x	-	13.64
		SO_2	-	0.09
		CO	-	63.91
		PM	-	0.95
		PM_{10}	-	0.95
		$PM_{2.5}$	-	0.95
GARAFUG	Garamite Plant Equipment Leak Fugitives (5)	VOC (ethanol)	0.19	0.81
		VOC (benzyl chloride)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01
PILOTRXN1	Pilot Plant Reaction Tank #1	VOC (ethanol)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
PILOTRXN2	Pilot Plant Reaction Tank #2	VOC (ethanol)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01
		VOC (methyl chloride)	<0.01	<0.01
PILOTPRES1	Pilot Plant Filter Press (5)	VOC (ethanol)	<0.01	<0.01
		VOC (benzyl alcohol)	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

		VOC (methyl chloride)	<0.01	<0.01
PILOTDRYR1	Pilot Plant Niro/Aeromatic Fluid Bed Dryer Dust Collector Stack	VOC (ethanol)	0.09	0.30
		VOC (benzyl alcohol)	<0.01	0.02
		VOC (methyl chloride)	<0.01	<0.01
		PM	0.02	0.08
		PM_{10}	0.01	0.06
		$PM_{2.5}$	<0.01	<0.01
PILOTMILL1	Pilot Plant Hosokawa ACM Dust Collector Stack	PM	0.05	0.20
		PM_{10}	0.03	0.15
		$PM_{2.5}$	<0.01	0.02
PILOTBAG	Pilot Plant Bagging (5)	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01

(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) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
Cl_2 - chlorine
HCl - hydrogen chloride
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Planned startup and shutdown emissions are included. Maintenance activities other than for the Heat Exchangers are not authorized by this permit.

Date: October 15, 2018