Emission Sources - Maximum Allowable Emission Rates

Permit Number 8221A

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 (7)	
			lbs/hour	TPY (4)
1	Milling #2 Oversized Baghouse Stack (6)	PM	0.03	0.14
		PM_{10}	0.03	0.14
		$PM_{2.5}$	0.01	0.02
7A	T-820s Splits Transfer Out Baghouse Stack (6)	PM	0.04	0.09
		PM_{10}	0.04	0.09
		$PM_{2.5}$	0.01	0.01
7B	T-820s Splits Transfer Out Baghouse Stack (6)	PM	0.04	0.09
		PM_{10}	0.04	0.09
		$PM_{2.5}$	0.01	0.01
8	T-820s Splits Transfer Out Baghouse Stack (6)	PM	0.21	0.38
		PM_{10}	0.21	0.38
		$PM_{2.5}$	0.04	0.06
9	Splits Railcar Unloading Baghouse Stack (6)	PM	0.04	0.08
		PM_{10}	0.04	0.08
		$PM_{2.5}$	0.01	0.01
11	New SMCA Mix Tank Baghouse Stack (6)	PM	0.12	0.53
		PM_{10}	0.12	0.53
		$PM_{2.5}$	0.02	0.09
23	TPS Bean Cleaner Baghouse Stack (6)	PM	0.09	0.05
		PM_{10}	0.09	0.05
		$PM_{2.5}$	0.02	0.01
25	TK 13-14 Outlet Baghouse Stack (6)	PM	0.03	0.07
		PM_{10}	0.03	0.07
		$PM_{2.5}$	0.01	0.01
49A	TK No. 811A Baghouse Stack (6)	PM	0.04	0.19
		PM_{10}	0.04	0.19
		$PM_{2.5}$	0.01	0.03

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49B	TK No. 811B Baghouse Stack (6)	PM	0.04	0.19
		PM_{10}	0.04	0.19
		$PM_{2.5}$	0.01	0.03
54	TK No. 809A Baghouse Stack (6)	PM	0.04	0.09
		PM_{10}	0.04	0.09
		$PM_{2.5}$	0.01	0.02
55	TK No. 809B Baghouse Stack (6)	PM	0.04	0.09
		PM_{10}	0.04	0.09
		$PM_{2.5}$	0.01	0.02
56	TK No. 801A Baghouse Stack (6)	PM	0.04	0.19
		PM_{10}	0.04	0.19
		$PM_{2.5}$	0.01	0.03
57	TK No. 801B Baghouse Stack (6)	PM	0.04	0.19
		PM_{10}	0.04	0.19
		$PM_{2.5}$	0.01	0.03
60A	M2 Exhaust Blower A (Food Grade) Cyclone Stack [Furnace]	PM	0.87	3.60
		PM_{10}	0.74	3.08
		$PM_{2.5}$	0.16	0.66
		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
60B	M2 Exhaust Blower B (Food Grade) Cyclone Stack [Furnace]	PM	0.87	3.60
		PM_{10}	0.74	3.08
		$PM_{2.5}$	0.16	0.66
		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
66	M-2 Vacuum System Baghouse Stack (6)	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	<0.01	<0.01
67	M-2 Fin. Product Baghouse Stack (6)	PM	0.03	0.11
		PM_{10}	0.03	0.11
		$PM_{2.5}$	<0.01	0.02

Emission Sources – Maximum Allowable Emission Rates

70	901, 902, 903 Splits HB Baghouse Stack (6)	PM	0.21	0.90
		PM_{10}	0.21	0.90
		$PM_{2.5}$	0.04	0.15
72	Scrubber Vent	HAP	0.95	5.07
PP-3	Pilot Plant VOC Vent	HAP	0.01	<0.01
SC-1	BigSky HAP Scrubber	HAP	<0.01	<0.01
SC-2	Reactor Scrubber	HAP	0.36	0.27
80	Splits Receiving Before 902s and 903s Baghouse Stack (6)	PM	0.07	0.30
		PM_{10}	0.07	0.30
		$PM_{2.5}$	0.01	0.05
131	Mill 4A Product Receiving Cyclone Stack [Furnace]	PM	1.59	6.57
		PM_{10}	1.36	5.62
		$PM_{2.5}$	0.26	1.07
		VOC	0.04	0.11
		NO_X	0.41	1.79
		CO	0.34	1.50
		SO_2	0.06	0.26
132	Mill 4B Product Receiving Cyclone Stack [Furnace]	PM	1.88	7.78
		PM_{10}	1.60	6.61
		$PM_{2.5}$	0.30	1.24
		VOC	0.04	0.11
		NO_X	0.41	1.79
		CO	0.34	1.50
		SO_2	0.06	0.26
133	Mill 4D Product Receiving Cyclone Stack [Furnace]	PM	1.31	5.41
		PM_{10}	1.12	4.62
		$PM_{2.5}$	0.22	0.90
		VOC	0.04	0.11
		NO_X	0.41	1.79
		CO	0.34	1.50
		SO_2	0.06	0.26
134	Mill 4C Product Receiving Cyclone Stack [Furnace]	PM	1.59	6.57
		PM_{10}	1.36	5.62
		$PM_{2.5}$	0.26	1.07

Emission Sources – Maximum Allowable Emission Rates

		VOC	0.04	0.11
		NO_X	0.41	1.79
		CO	0.34	1.50
		SO_2	0.06	0.26
135	Mill 4 Side A Sifter Baghouse Stack (6)	PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.01	0.03
136	Mill 4 Side B Sifter Baghouse Stack (6)	PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.01	0.03
137	Mill 4 Side A Product Receiving Baghouse Stack (6)	PM	0.02	0.09
		PM_{10}	0.02	0.09
		$PM_{2.5}$	<0.01	0.01
138	Mill 4 Side B Product Receiving Baghouse Stack (6)	PM	0.02	0.09
		PM_{10}	0.02	0.09
		$PM_{2.5}$	<0.01	0.01
139A	Mill 4 Product Receiving Cyclone Stack	PM	0.08	0.34
		PM_{10}	0.07	0.29
		$PM_{2.5}$	0.01	0.05
139B	Mill 4 Product Receiving Cyclone Stack	PM	0.08	0.34
		PM_{10}	0.07	0.29
		$PM_{2.5}$	0.01	0.05
140	Old Bulk 10K Headbin Baghouse Stack (Food Grade) (6)	PM	0.13	0.54
		PM_{10}	0.13	0.54
		$PM_{2.5}$	0.02	0.09
141	Food Grade 40K Storage Tank Baghouse Stack (6)	PM	0.13	0.13
		PM_{10}	0.13	0.13
		$PM_{2.5}$	0.02	0.02
143	Old Bulk 20K Blender Baghouse Stack (6)	PM	0.13	0.54
		PM_{10}	0.13	0.54
		$PM_{2.5}$	0.02	0.09
146A	Old Bulk Bagging Station 20K Blender Baghouse Stack (6)	PM	0.20	0.82
		PM_{10}	0.20	0.82
		$PM_{2.5}$	0.03	0.14
146B	Old Bulk Bagging Station	PM	0.20	0.82

Emission Sources – Maximum Allowable Emission Rates

	20K Blender Baghouse Stack (6)	PM_{10}	0.20	0.82
		$PM_{2.5}$	0.03	0.14
152	Old Bulk Dump Back Station Baghouse Stack (6)	PM	0.09	0.04
		PM_{10}	0.09	0.04
		$PM_{2.5}$	0.01	0.01
153	Food Grade 40K Storage Tank Baghouse Stack (6)	PM	0.13	0.13
		PM_{10}	0.13	0.13
		$PM_{2.5}$	0.02	0.02
155	Food Grade 10K Blender Baghouse Stack (6)	PM	0.13	0.13
		PM_{10}	0.13	0.13
		$PM_{2.5}$	0.02	0.02
157A	Dry Enzyme Dump Station Baghouse Stack (6)	PM	0.07	0.09
		PM_{10}	0.07	0.09
		$PM_{2.5}$	0.01	0.02
157B	Dry Enzyme Dump Station Baghouse Stack (6)	PM	0.04	0.05
		PM_{10}	0.04	0.05
		$PM_{2.5}$	0.01	0.01
158	Food Grade Dump Back Station Baghouse Stack (6)	PM	0.07	0.07
		PM_{10}	0.07	0.07
		$PM_{2.5}$	0.01	0.01
160	Bulk 1 10K Weighbin Baghouse Stack (6)	PM	0.20	0.79
		PM_{10}	0.20	0.79
		$PM_{2.5}$	0.03	0.13
161	Bulk 1 10K Blender Baghouse Stack (6)	PM	0.08	0.37
		PM_{10}	0.08	0.37
		$PM_{2.5}$	0.01	0.06
162	Bulk 1 20K Blender Baghouse Stack (6)	PM	0.07	0.31
		PM_{10}	0.07	0.31
		$PM_{2.5}$	0.01	0.05
164	Bulk 1 Offline Bagging Baghouse Stack (6)	PM	0.07	0.29
		PM_{10}	0.07	0.29
		$PM_{2.5}$	0.01	0.05
165	Bulk 1 Tank 1 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01

Emission Sources – Maximum Allowable Emission Rates

166	Bulk 1 Tank 2 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
167	Bulk 1 Tank 3 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
168	Bulk 1 Tank 4 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
169	Bulk 1 Tank 5 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
170	Bulk 1 Tank 6 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
171	Bulk 1 Tank 7 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
172	Bulk 1 Tank 8 Baghouse Stack (6)	PM	0.03	0.02
		PM_{10}	0.03	0.02
		$PM_{2.5}$	0.01	<0.01
173	Bulk 1 Dump Back Station Baghouse Stack (6)	PM	0.08	0.32
		PM_{10}	0.08	0.32
		$PM_{2.5}$	0.01	0.05
176	Bulk 1 Vacuum System Baghouse Stack (6)	PM	0.02	0.01
		PM_{10}	0.02	0.01
		$PM_{2.5}$	<0.01	<0.01
180A	Bulk 2 10K Weighbin Baghouse Stack (6)	PM	0.01	0.06
		PM_{10}	0.01	0.06
		$PM_{2.5}$	<0.01	0.01
180B	Bulk 2 10K Weighbin Baghouse Stack (6)	PM	0.01	0.06
		PM_{10}	0.01	0.06
		$PM_{2.5}$	<0.01	0.01
181	Bulk 2 10K Blender	PM	0.07	0.31

Emission Sources – Maximum Allowable Emission Rates

	Baghouse Stack (6)	PM_{10}	0.07	0.31
		$PM_{2.5}$	0.01	0.05
182	Bulk 2 Vacuum System Baghouse Stack (6)	PM	0.01	0.06
		PM_{10}	0.01	0.06
		$PM_{2.5}$	<0.01	0.01
183	Bulk 3 Vacuum System Baghouse Stack (6)	PM	0.01	0.06
		PM_{10}	0.01	0.06
		$PM_{2.5}$	<0.01	0.01
184	Bulk 2 Offline Bagging East Baghouse Stack (6)	PM	0.07	0.29
		PM_{10}	0.07	0.29
		$PM_{2.5}$	0.01	0.05
186	Bulk 2 Offline Bagging East Baghouse Stack (6)	PM	0.13	0.52
		PM_{10}	0.13	0.52
		$PM_{2.5}$	0.02	0.09
188	Bulk 2 Dump Back Station Baghouse Stack (6)	PM	0.06	0.06
		PM_{10}	0.06	0.06
		$PM_{2.5}$	0.01	0.01
189	Bulk 2 Tank 16 Baghouse Stack (6)	PM	0.07	0.27
		PM_{10}	0.07	0.27
		$PM_{2.5}$	0.01	0.05
190	Bulk 2 Tank 15 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
191	Bulk 2 Tank 14 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
192	Bulk 2 Tank 13 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
193	Bulk 2 Tank 12 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
194	Bulk 2 Tank 11 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01

Emission Sources – Maximum Allowable Emission Rates

195	Bulk 2 Tank 10 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
196	Bulk 2 Tank 9 Baghouse Stack (6)	PM	0.07	0.04
		PM_{10}	0.07	0.04
		$PM_{2.5}$	0.01	0.01
202	Quaternary Amine Storage Tank	VOC (Quaternary Amine)	0.07	< 0.01
203	Boiler No. 1 Stack	PM	0.14	0.61
		PM_{10}	0.14	0.61
		$PM_{2.5}$	0.14	0.61
		VOC	0.10	0.44
		NO_X	1.83	8.01
		CO	1.54	6.73
		SO_2	0.27	1.16
204	Boiler No. 2 Stack	PM	0.14	0.61
		PM_{10}	0.14	0.61
		$PM_{2.5}$	0.14	0.61
		VOC	0.10	0.44
		NO_X	1.83	8.01
		CO	1.54	6.73
		SO_2	0.27	1.16
206	Propane Tank	VOC	0.02	0.09
210	Brine Maker Operation	PM	0.07	0.02
		PM_{10}	0.04	0.01
		$PM_{2.5}$	0.01	<0.01
220	Mill 5 A Product Receiving Cyclone Stack	PM	0.05	0.19
		PM_{10}	0.04	0.16
		$PM_{2.5}$	0.01	0.03
221	Mill 5 B Product Receiving Cyclone Stack	PM	0.05	0.19
		PM_{10}	0.04	0.16
		$PM_{2.5}$	0.01	0.03
222	Mill 5 A Product Receiving Cyclone Stack [Furnace]	PM	1.31	5.43
		PM_{10}	1.12	4.64
		$PM_{2.5}$	0.22	0.93

Emission Sources – Maximum Allowable Emission Rates

		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
223	Mill 5 B Product Receiving Cyclone Stack [Furnace]	PM	1.31	5.43
		PM_{10}	1.12	4.64
		$PM_{2.5}$	0.22	0.93
		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
224	Mill 5 A Product Receiving Cyclone Stack [Furnace]	PM	1.31	5.43
		PM_{10}	1.12	4.64
		$PM_{2.5}$	0.22	0.93
		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
225	Mill 5 B Product Receiving Cyclone Stack [Furnace]	PM	1.31	5.43
		PM_{10}	1.12	4.64
		$PM_{2.5}$	0.22	0.93
		VOC	0.03	0.12
		NO_X	0.49	2.15
		CO	0.41	1.80
		SO_2	0.07	0.31
226	Mill 5 A Sect Recycle Collector Baghouse Stack (6)	PM	0.04	0.16
		PM_{10}	0.04	0.16
		$PM_{2.5}$	0.01	0.03
227	Mill 5 B Sect Recycle Collector Baghouse Stack (6)	PM	0.04	0.16
		PM_{10}	0.04	0.16
		$PM_{2.5}$	0.01	0.03
228	Mill 5 A Sect Product Receiver Baghouse Stack (6)	PM	0.02	0.06
		PM_{10}	0.02	0.06
		$PM_{2.5}$	<0.01	0.01
229	Mill 5 B Sect Producer	PM	0.02	0.06

Emission Sources – Maximum Allowable Emission Rates

	Receiver Baghouse Stack (6)	PM_{10}	0.02	0.06
		$PM_{2.5}$	<0.01	0.01
240	Bulk 3 20K Headbin Baghouse Stack (6)	PM	0.12	0.47
		PM_{10}	0.12	0.47
		$PM_{2.5}$	0.02	0.08
241	Bulk 3 Bagging Station Baghouse Stack (6)	PM	0.07	0.29
		PM_{10}	0.07	0.29
		$PM_{2.5}$	0.01	0.05
242	Bulk 3 Bagging Station Baghouse Stack (6)	PM	0.44	1.76
		PM_{10}	0.44	1.76
		$PM_{2.5}$	0.07	0.30
243	Bulk 3 Air Mix Blender Baghouse Stack (6)	PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.01	0.03
244	Bulk 2 Dry Chem Additive Station Baghouse Vent (6)	PM	0.14	0.25
		PM_{10}	0.14	0.25
		$PM_{2.5}$	0.02	0.04
245	Granulated Guar Process Baghouse Stack (6)	PM	0.26	0.13
		PM_{10}	0.26	0.13
		$PM_{2.5}$	0.04	0.02
254	Cooling Tower C Stack	PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.05	0.20
255	Cooling Tower D Stack	PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.05	0.20
258	Bulk 3 Dumpback Station Baghouse Stack (6)	PM	0.10	0.10
		PM_{10}	0.10	0.10
		$PM_{2.5}$	0.02	0.02
PP-1	Pilot Plant Primary Cyclone Stack	PM	0.04	0.09
		PM_{10}	0.04	0.07
		$PM_{2.5}$	0.01	0.01
PP-2	Pilot Plant Secondary Cyclone Stack	PM	0.04	0.09
		PM_{10}	0.04	0.07
		$PM_{2.5}$	0.01	0.01

Emission Sources – Maximum Allowable Emission Rates

260	Milling 4 Vacuum System Baghouse Stack (6)	PM	0.03	0.14
		PM_{10}	0.03	0.14
		$PM_{2.5}$	0.01	0.02
261	Milling 5 Vacuum System Baghouse Stack (6)	PM	0.02	0.08
		PM_{10}	0.02	0.08
		$PM_{2.5}$	<0.01	0.01
263	TK#809A Discharge Baghouse Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
264	TK#809B Discharge Baghouse Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
265	TK#811A Discharge Baghouse Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
266	TK#811B Discharge Baghouse Stack	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
267	Milling 2 Gel Cyclones Stack	PM	0.04	0.18
		PM_{10}	0.04	0.15
		$PM_{2.5}$	0.01	0.03
FV-101	Prox Equipment Leak Fugitives (5)	HAP (propylene oxide)	0.94	4.11

(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
HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
(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) Bag or pleated filter replacement is an authorized maintenance activity. The emissions associated with this maintenance activity are de minimis.

Emission Sources – Maximum Allowable Emission Rates

(7) Planned startup and shutdown emissions are included. Maintenance activities, except for bag or pleated filter replacement, are not authorized by this permit.

Date: January 24, 2018