

Note: This is a reference cited in *AP 42, Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

AP42 Section:	9.7
Background Chapter	4
Reference:	9
Title:	Dos Palos Cooperative--PM10 & Total Particulate Testing--Motes, Suction, Lint Cleaner, Overflow, #1 Drying, Battery Condenser, and #2 Drying Cyclones, BTC Environmental, Inc., Ventura, CA, November 27-29, 1992.

SECTION 4
REF. 9

Process rates
adjusted. Emission
factors represent
entire process, not just
emissions from the
cyclone tested.

Filename: F:\PRIVATE\BRI\AP42\COTTON\COTTON9.WQ1

DOS PALOS COOP GIN
DOS PALOS, CA

D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
1	Stack temperature	Deg F	81	85.3	86.1	
MOTES	Pressure	in. HG	30.05	30.05	30.05	
CYCLONES	Moisture	%	0.9	0.9	0.9	
4-42"	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	7530	7673	7535	
	Volumetric flow, standard*	dscfm	7204	7283	7141	
	Isokinetic variation	%	99.4	102	103.4	
Circle: Production or feed rate		bales/hr	5.6	5.6	5.6	
Capacity:						
Pollutant concentrations:						
Total PM		G/dscf	0.0156	0.0126	0.0174	
PM-10		% of total	66.22%	70.78%	55.16%	
Pollutant mass flux rates:						
Total PM		lb/hr	0.963	0.787	1.07	0.938
PM-10		lb/hr	0.638	0.557	0.587	0.594
Emission factors (ENGLISH UNITS):						AVERAGE
Total PM		lb/bale	0.172	0.140	0.190	0.168
PM-10		lb/bale	0.114	0.0994	0.105	0.106
Emission factors (METRIC UNITS):						AVERAGE
Total PM		kg/bale	0.0780	0.0637	0.0863	0.0760
PM-10		kg/bale	0.0517	0.0451	0.0476	0.0481

*DSCFM BASED ON A STANDARD TEMPERATURE OF 60 DEGREES FAHRENHEIT

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D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
2	Stack temperature	Deg F	90.4	87.8	87.3	
BATTERY CONDENSE CYCLONE	Pressure	in. HG	29.93	29.93	29.91	
	Moisture	%	2.8	1.5	3.4	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	6109	6080	6101	
	Volumetric flow, standard*	dscfm	5612	5687	5598	
	Isokinetic variation	%	104.9	102.7	108.2	
Circle: Production or feed rate Capacity:		bales/hr	6.35	6.35	6.35	
Pollutant concentrations:						
Total PM		G/dscf	0.0054	0.0049	0.0038	
PM-10		% OF TOTAL	56.60%	66.27%	92.58%	
Pollutant mass flux rates:						
Total PM		lb/hr	0.260	0.239	0.182	0.227
PM-10		lb/hr	0.147	0.158	0.169	0.158
Emission factors (ENGLISH UNITS):						AVERAGE
Total PM		lb/bale	0.0409	0.0376	0.0287	0.0357
PM-10		lb/bale	0.0232	0.0249	0.0266	0.0249
Emission factors (METRIC UNITS):						AVERAGE
Filterable PM		kg/bale	0.0186	0.0171	0.0130	0.0162
PM-10		kg/bale	0.0105	0.0113	0.0121	0.0113

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Filename: F:\PRIVATE\BRI\AP42\COTTON\COTT9B.WQ1

D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
3	Stack temperature	Deg F	70.4	72.8	77.9	
OVERFLOW CYCLONE	Pressure	in. HG	30.05	30.05	30	
	Moisture	%	1	0.9	0.8	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	4355	4327	4369	
	Volumetric flow, standard*	dscfm	4245	4203	4201	
	Isokinetic variation	%	103.4	103.3	106.6	
Circle: Production or feed rate		bales/hr	23.8	23.8	23.8	
Capacity:						
Pollutant concentrations:						
Total PM		G/dscf	0.0046	0.0091	0.0082	
PM-10		% OF TOTAL	32.53%	42.50%	42.04%	
Pollutant mass flux rates:						
Total PM		lb/hr	0.167	0.328	0.295	0.264
PM-10		lb/hr	0.054	0.139	0.124	0.106
Emission factors (ENGLISH UNITS):						AVERAGE
Total PM		lb/bale	0.00703	0.0138	0.0124	0.0111
PM-10		lb/bale	0.00229	0.00585	0.00522	0.00445
Emission factors (METRIC UNITS):						AVERAGE
Total PM		kg/bale	0.00319	0.00625	0.00563	0.00502
PM-10		kg/bale	0.00104	0.00266	0.00237	0.00202

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D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
4	Stack temperature	Deg F	84.6	84.4	84.8	
LINT CLEANER CYCLONE	Pressure	in. HG	30	30	30	
	Moisture	%	0.8	0.7	0.8	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	6687	6501	6756	
	Volumetric flow, standard*	dscfm	6351	6183	6414	
	Isokinetic variation	%	102.4	99.9	102.7	
Circle: Production or feed rate		bales/hr	4.08	4.08	4.08	
Capacity:						
Pollutant concentrations:						
Total PM		G/dscf	0.0115	0.0087	0.0084	
PM-10		% OF TOTAL	46.34%	48.40%	53.57%	
Pollutant mass flux rates:						
Total PM		lb/hr	0.626	0.461	0.462	0.516
PM-10		lb/hr	0.290	0.223	0.247	0.254
Emission factors (ENGLISH UNITS):						AVERAGE
Total PM		lb/bale	0.153	0.113	0.113	0.126
PM-10		lb/bale	0.0710	0.0546	0.0606	0.0621
Emission factors (METRIC UNITS):						AVERAGE
Total PM		kg/bale	0.0695	0.0512	0.0513	0.0574
PM-10		kg/bale	0.0322	0.0248	0.0275	0.0282

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D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
5	Stack temperature	Deg F	134.9	130.4	126.2	
#1	Pressure	in. HG	29.97	29.9	29.97	
DRYING	Moisture	%	2.3	2.2	2.4	
CYCLONE	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	7643	7536	7545	
	Volumetric flow, standard*	dscfm	6538	6487	6543	
	Isokinetic variation	%	109.3	106	108.5	
Circle: Production or feed rate		bales/hr	12.15	12.15	12.15	
Capacity:						
Pollutant concentrations:						
	Total PM	G/dscf	0.0841	0.0927	0.0780	
	PM-10	% OF TOTAL	20.25%	23.02%	25.30%	
Pollutant mass flux rates:						
	Total PM	lb/hr	4.71	5.15	4.37	4.75
	PM-10	lb/hr	0.954	1.19	1.11	1.08
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.388	0.424	0.360	0.391
	PM-10	lb/bale	0.0785	0.0977	0.0911	0.0891
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.176	0.192	0.163	0.177
	PM-10	kg/bale	0.0356	0.0443	0.0413	0.0404

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D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
6	Stack temperature	Deg F	66.8	67	70	
SUCTION CYCLONE	Pressure	in. HG	29.87	29.87	29.87	
	Moisture	%	0.5	1	0.8	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	5143	5401	4882	
	Volumetric flow, standard*	dscfm	5043	5267	4744	
	Isokinetic variation	%	104.9	92.9	106.2	
Circle: Production or feed rate		bales/hr	8.20	8.20	8.20	
Capacity:						
	Pollutant concentrations:					
	Total PM	G/dscf	0.0120	0.0201	0.0194	
	PM-10	% OF TOTAL	69.26%	56.40%	55.89%	
	Pollutant mass flux rates:					
	Total PM	lb/hr	0.519	0.907	0.789	0.738
	PM-10	lb/hr	0.359	0.512	0.441	0.437
	Emission factors (ENGLISH UNITS):					AVERAGE
	Total PM	lb/bale	0.0633	0.111	0.0962	0.0900
	PM-10	lb/bale	0.0438	0.0624	0.0538	0.0533
	Emission factors (METRIC UNITS):					AVERAGE
	Total PM	kg/bale	0.0287	0.0502	0.0436	0.0408
	PM-10	kg/bale	0.0199	0.0283	0.0244	0.0242

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D. Emission Data/Mass Flux Rates/Emission Factors

Test ID	Parameter	Units	Values reported			
			Run 1	Run 2	Run 3	Run 4
7	Stack temperature	Deg F	114.8	120.1	120.1	
#2 DRYING CYCLONE	Pressure	in. HG	29.92	29.92	29.92	
	Moisture	%	1.5	2.2	1.2	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	8682	9108	8777	
	Volumetric flow, standard*	dscfm	7736	7985	7773	
	Isokinetic variation	%	99.5	93.1	100.1	
Circle: Production or feed rate		bales/hr	12.15	12.15	12.15	
Capacity:						
Pollutant concentrations:						
Total PM		G/dscf	0.0366	0.0426	0.0320	
PM-10		% OF TOTAL	26.85%	29.69%	11.36%	
Pollutant mass flux rates:						
Total PM		lb/hr	2.43	2.92	2.13	2.49
PM-10		lb/hr	0.652	0.866	0.242	0.587
Emission factors (ENGLISH UNITS):						AVERAGE
Total PM		lb/bale	0.200	0.240	0.175	0.205
PM-10		lb/bale	0.0536	0.0712	0.0199	0.0483
Emission factors (METRIC UNITS):						AVERAGE
Total PM		kg/bale	0.0906	0.109	0.0796	0.0930
PM-10		kg/bale	0.0243	0.0323	0.00904	0.0219

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