

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:	16
Title:	Dos Palos Coop Gin--PM-10 and Total Particulate Testing, Unloading, Dryer #2, Overflow, Battery Condenser, & Motes Cyclones, AIRx Testing, Ventura, CA, October 31 through November 2, 1994.

Filename: F:\PRIVATE\BRI\AP42\COTTON\COTTON16.WQ1

DOS PALOS COOP GIN--OCT. 31-NOV. 2, 1994

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	73	81.4	86.4	
UNLOADIN CYCLONE (1 OF 4)	Pressure	in. HG	30.05	30.05	30.05	
	Moisture	%	0.851	0.216	1.598	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	5059	5232	5202	
	Volumetric flow, standard*	dscfm	4915	5036	4893	
	Isokinetic variation	%	91.25	91.62	93.77	
Circle: Production or feed rate Capacity:		bales/hr	40.3	45.2	33.8	
Pollutant concentrations:						
	Total PM--reported	g	0.1493	0.2775	0.1826	
	Total PM--actual**	g	0.1493	0.2777	0.1839	
	Total PM--reported	G/dscf	0.0598	0.0910	0.0734	
	Total PM--actual	G/dscf	0.0598	0.0911	0.0739	
	PM-10	% of total	33.60%	41.60%	32.70%	
Pollutant mass flux rates:						
	Total PM	lb/hr	2.52	3.93	3.10	3.18
	PM-10	lb/hr	0.846	1.64	1.01	1.17
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.063	0.087	0.092	0.080
	PM-10	lb/bale	0.021	0.036	0.030	0.029
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.028	0.039	0.042	0.036
	PM-10	kg/bale	0.010	0.016	0.014	0.013

*DSCFM BASED ON A STANDARD TEMPERATURE OF 60 DEGREES FAHRENHEIT

**Actual grams does not include negative impinger catches in the calculation of the total PM catch

TO OBTAIN TOTAL PROCESS EMISSION FACTORS, MULTIPLY THE CALCULATED EMISSION FACTORS BY THE TOTAL NUMBER OF PROCESS CYCLONES (4)

Source	Emission factors (ENGLISH UNITS):					AVERAGE
UNLOADIN SYSTEM	Total PM	lb/bale	0.25	0.35	0.37	0.32
	PM-10	lb/bale	0.084	0.14	0.12	0.12

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DOS PALOS COOP GIN--OCT. 31-NOV. 2, 1994

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	96.1	96	93.8	
OVERFLOW CYCLONE (1 OF 2)	Pressure	in. HG	30.05	30.05	30.05	
	Moisture	%	0.069	0.132	0.025	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	6053	5888	5638	
	Volumetric flow, standard*	dscfm	5681	5523	5316	
	Isokinetic variation	%	92.39	91.01	91.39	
Circle: Production or feed rate Capacity:		bales/hr	33.3	43	35	
Pollutant concentrations:						
	Total PM--reported	g	0.0888	0.1211	0.1695	
	Total PM--actual**	g	0.0889	0.1211	0.1710	
	Total PM--reported	G/dscf	0.0338	0.0481	0.0697	
	Total PM--actual	G/dscf	0.0338	0.0481	0.0703	
	PM-10	% of total	42.40%	33.80%	19.90%	
Pollutant mass flux rates:						
	Total PM	lb/hr	1.65	2.28	3.20	2.38
	PM-10	lb/hr	0.70	0.77	0.64	0.70
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.049	0.053	0.092	0.065
	PM-10	lb/bale	0.021	0.018	0.018	0.019
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.022	0.024	0.042	0.029
	PM-10	kg/bale	0.010	0.0081	0.0083	0.0086

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TO OBTAIN TOTAL PROCESS EMISSION FACTORS, MULTIPLY THE CALCULATED EMISSION FACTORS BY THE TOTAL NUMBER OF PROCESS CYCLONES (2)

Source	Emission factors (ENGLISH UNITS):					AVERAGE
OVERFLOW SYSTEM	Total PM	lb/bale	0.099	0.11	0.18	0.13
	PM-10	lb/bale	0.042	0.036	0.036	0.038

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DOS PALOS COOP GIN--OCT. 31-NOV. 2, 1994

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	63.3	74.5	81.7	
MOTES CYCLONE (1 OF 4)	Pressure	in. HG	28.83	28.83	28.83	
	Moisture	%	0.377	0.078	0	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	8033	8019	8072	
	Volumetric flow, standard*	dscfm	7663	7511	7466	
	Isokinetic variation	%	93.39	103.98	99.13	
Circle: Production or feed rate Capacity:		bales/hr	42.9	46.8	24.2	
Pollutant concentrations:						
	Total PM--reported	g	0.0279	0.0458	0.0311	
	Total PM--actual**	g	0.0283	0.0469	0.0319	
	Total PM--reported	G/dscf	0.0113	0.0170	0.0122	
	Total PM--actual	G/dscf	0.0115	0.0174	0.0125	
	PM-10	% of total	34.80%	35.90%	88.80%	
Pollutant mass flux rates:						
	Total PM	lb/hr	0.75	1.12	0.80	0.89
	PM-10	lb/hr	0.26	0.40	0.71	0.46
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.018	0.024	0.033	0.025
	PM-10	lb/bale	0.0061	0.0086	0.029	0.015
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.0080	0.011	0.015	0.011
	PM-10	kg/bale	0.0028	0.0039	0.0133	0.0067

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TO OBTAIN TOTAL PROCESS EMISSION FACTORS, MULTIPLY THE CALCULATED EMISSION FACTORS BY THE TOTAL NUMBER OF PROCESS CYCLONES (4)

Source	Emission factors (ENGLISH UNITS):					AVERAGE
MOTES SYSTEM	Total PM	lb/bale	0.070	0.096	0.13	0.099
	PM-10	lb/bale	0.024	0.034	0.12	0.059

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DOS PALOS COOP GIN--OCT. 31-NOV. 2, 1994

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	116.5	114.4	119.3	
#2 DRYER CYCLONE (1 OF 4)	Pressure	in. HG	28.84	28.84	28.84	
	Moisture	%	0.883	0.484	0.838	
	Oxygen	%	20.9	20.9	20.9	
	Volumetric flow, actual	acfm	4775	4837	4741	
	Volumetric flow, standard*	dscfm	4115	4200	4068	
	Isokinetic variation	%	95.51	95.24	101.92	
Circle: Production or feed rate		bales/hr	26.5	38.4	41.6	
Capacity:						
Pollutant concentrations:						
	Total PM--reported	g	0.0602	0.0521	0.0497	
	Total PM--actual**	g	0.0624	0.0543	0.0513	
	Total PM--reported	G/dscf	0.0283	0.0240	0.0221	
	Total PM--actual	G/dscf	0.0293	0.0250	0.0228	
	PM-10	% of total	42.40%	24.10%	40.00%	
Pollutant mass flux rates:						
	Total PM	lb/hr	1.03	0.90	0.80	0.91
	PM-10	lb/hr	0.44	0.22	0.32	0.32
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.039	0.023	0.019	0.027
	PM-10	lb/bale	0.017	0.0057	0.0076	0.0100
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.018	0.011	0.0087	0.012
	PM-10	kg/bale	0.0075	0.0026	0.0035	0.0045

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TO OBTAIN TOTAL PROCESS EMISSION FACTORS, MULTIPLY THE CALCULATED EMISSION FACTORS BY THE TOTAL NUMBER OF PROCESS CYCLONES (4)

Source	Emission factors (ENGLISH UNITS):					AVERAGE
#2 DRYER	Total PM	lb/bale	0.16	0.094	0.076	0.11
	PM-10	lb/bale	0.066	0.023	0.031	0.040

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DOS PALOS COOP GIN--OCT. 31-NOV. 2, 1994

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	67.4	69.6	72.3	
BATTERY	Pressure	in. HG	28	28	28	
CONDENSE	Moisture	%	0.454	0	0.014	
CYCLONE	Oxygen	%	20.9	20.9	20.9	
(1 OF 4)	Volumetric flow, actual	acfm	6305	6399	6735	
	Volumetric flow, standard*	dscfm	5791	5880	6156	
	Isokinetic variation	%	94.04	103.33	95.42	
Circle: Production or feed rate		bales/hr	45.4	45	44.6	
Capacity:						
Pollutant concentrations:						
	Total PM--reported	g	0.0149	0.0061	0.0087	
	Total PM--actual**	g	0.0159	0.0079	0.0099	
	Total PM--reported	G/dscf	0.0073	0.0027	0.0039	
	Total PM--actual	G/dscf	0.0078	0.0035	0.0044	
	PM-10	% of total	12.00%	91.00%	33.40%	
Pollutant mass flux rates:						
	Total PM	lb/hr	0.39	0.18	0.23	0.27
	PM-10	lb/hr	0.046	0.160	0.078	0.095
Emission factors (ENGLISH UNITS):						AVERAGE
	Total PM	lb/bale	0.0085	0.0039	0.0053	0.0059
	PM-10	lb/bale	0.0010	0.0036	0.0018	0.0021
Emission factors (METRIC UNITS):						AVERAGE
	Total PM	kg/bale	0.0039	0.0018	0.0024	0.0027
	PM-10	kg/bale	0.00046	0.0016	0.00080	0.00096

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Source	Emission factors (ENGLISH UNITS):					AVERAGE
BATTERY	Total PM	lb/bale	0.034	0.016	0.021	0.024
CONDENSE	PM-10	lb/bale	0.0041	0.014	0.0070	0.0085