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:	9.13.2
Background Chapter	4
Reference:	5
Title:	Stack Sampling Report For Hills Brothers Coffee, Inc., Edgewater, New Jersey, On Afterburner #22 Inlet/Outlet, Ambient Engineering, Inc., Parlin, NJ, October 5, 1988

#5

Section 4 Reference ✓
AP-42 Reference __

Emission Test Report Review Checklist--Short Form

Reviewer: TLAPP
Review Date: 8/21/94

A. Background Information

1. Facility name: Hills Brothers Coffee Inc.
   Location: Edgewater NJ
2. Source category: Coffee Roasting
3. Test date: September 15 1988
4. Test sponsor: Hills Bros.
5. Testing contractor: Ambient Engineering Inc.
6. Purpose of test: Compliance Test for Particulate
7. Pollutants measured (include test method and indicate if valid): Total Particulate NJ Test method 1
   Total Hydrocarbons (as methane) NJ Test method 3
   CO EPA method 10
8. Process overview: Attach a process description and a block diagram. Identify processes tested with letters from the beginning of the alphabet (A, B, C, etc...) and APC systems with letters from the end of the alphabet (V, W, X, etc...). Also identify test locations with Arabic numerals (1,2,3, ...). Using the ID symbols from the diagram, complete the table below.

Test ID	Process	Process ID	Emissions tested: Uncontrolled	Emissions tested: Controlled	APCD (controlled emissions only)
	Afterburner #22 Inlet/Outlet	#22 Stack			ID: Type: Model #:
					ID: Type: Model #:
					ID: Type: Model #:
					ID: Type: Model #:

B. Process Information

1. Provide a brief narrative description of the process and attach process flow diagram. (Note: If the process description provided in the test report is adequate, attach a copy here.)

See attached sheets

Filename: COFFEE5.WQ1

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	553	555	554	
ROASTER--	Moisture	%	20.5	19.4	20.1	
AFTERBURNE	Oxygen	%	15.4	15.3	15.5	
INLET	Volumetric flow, actual	acfm	6250	6200	6310	
	Volumetric flow, standard*	dscfm	2640	2650	2670	
	Isokinetic variation	%	106	104	105	
Circle: Production or feed rate Capacity:		TPH	5.1	5.1	5.1	
	Pollutant concentrations:					
	Filterable PM	G/dscf	0.174	0.152	0.169	
	THC as methane	ppmdv	826	988	870	
	CO	ppmdv	492	492	464	
	CO2	%	3.4	3.3	3.3	
	Pollutant mass flux rates:					
	Filterable PM	lb/hr	3.93	3.46	3.87	
	THC as methane	lb/hr	5.49	6.58	5.84	
	CO	lb/hr	5.67	5.69	5.40	
	CO2	lb/hr	615	599	604	
	Emission factors (ENGLISH UNITS):					AVERAGE
	Filterable PM	lb/ton	0.771	0.678	0.759	0.736
	THC as methane	lb/ton	1.076	1.29	1.15	1.17
	CO	lb/ton	1.11	1.12	1.06	1.10
	CO2	lb/ton	121	118	118	119
	Emission factors (METRIC UNITS):					AVERAGE
	Filterable PM	kg/Mg	0.385	0.339	0.379	0.368
	THC as methane	kg/Mg	0.538	0.65	0.573	0.585
	CO	kg/Mg	0.555	0.56	0.530	0.548
	CO2	kg/Mg	60.3	58.8	59.2	59.4

Filename: COFFEE5A.WQ1

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	1142	1203	1205	
ROASTER--AFTERBURNE OUTLET	Moisture	%	11.6	15.8	17.6	
	Oxygen	%	12.8	12.3	12.4	
	Volumetric flow, actual	acfm	14800	19500	18100	
	Volumetric flow, standard*	dscfm	4350	5270	4770	
	Isokinetic variation	%	94	99	101	
Circle: Production or feed rate Capacity:		TPH	5.1	5.1	5.1	
	Pollutant concentrations:					
	Filterable PM	G/dscf	0.009	0.006	0.005	
	THC as methane	ppmdv	37	74	35	
	CO	ppmdv	47	79	77	
	CO2	%	4.9	5.3	5.3	
	Pollutant mass flux rates:					
	Filterable PM	lb/hr	0.320	0.270	0.220	
	THC as methane	lb/hr	0.40	0.97	0.417	
	CO	lb/hr	0.892	1.82	1.60	
	CO2	lb/hr	1461	1914	1733	
	Emission factors (ENGLISH UNITS):					AVERAGE
	Filterable PM	lb/ton	0.0627	0.0529	0.0431	0.0529
	THC as methane	lb/ton	0.0788	0.191	0.0818	0.117
	CO	lb/ton	0.175	0.356	0.314	0.282
	CO2	lb/ton	286	375	340	334
	Emission factors (METRIC UNITS):					AVERAGE
	Filterable PM	kg/Mg	0.0314	0.02647	0.0216	0.0265
	THC as methane	kg/Mg	0.0394	0.0955	0.0409	0.0586
	CO	kg/Mg	0.0874	0.178	0.157	0.141
	CO2	kg/Mg	143	188	170	167

D. Emission Data/Mass Flux Rates/Emission Factors

INLET/OUTLET

Test ID	Parameter	Units	Values reported Run 1	Run 2	Run 3	Run 4
	Stack temperature	°F	553/1142	555/1203	554/1205	
	Moisture	% v/v	20.5/11.6	19.4/15.8	20.1/17.6	
	Oxygen	%V (dry)	15.4/12.8	15.3/12.3	15.5/12.4	
	Volumetric flow, actual	acfm	6250/14800	6200/19500	6310/18100	
	Volumetric flow, standard	dscfm	2640/4350	2650/5270	2670/4770	
	Percent isokinetic		106/94	104/99	105/101	
Circle: Production or feed rate Capacity:		lbs/min	170	170	170	
	Pollutant concentrations:					
	PARTICULATE INLET	grams	0.4084	0.3546	0.3994	
	OUTLET	grams	0.021	0.0178	0.0149	
	Pollutant mass flux rates:					
	PARTICULATE INLET	gr/dscfx	0.174	0.152	0.169	
	OUTLET	"	0.009	0.006	0.005	
	THC INLET	ppmv(dry)	826	988	870	
	OUTLET	ppmv(dry)	37	74	35	
	Emission factors: Emission RATE					
	PARTICULATE INLET	lbs/hr	3.93	3.46	3.97	
	OUTLET	"	0.32	0.27	0.22	
	THC INLET	lbs/hr	5.49	6.58	5.84	
	OUTLET	"	0.40	0.97	0.42	