

# EPA Certification Test Report

The following models are EPA certified under the following attached test report:

**H200**

	<u>Model #</u>
Wood Stoves	H200
Wood Inserts	n/a
Wood Fireplaces	n/a
Pellet Stoves	n/a
Pellet Inserts	n/a

Full US Environmental Protection Agency (“EPA”) certification test reports have been reported to the EPA. Test reports may contain sensitive, confidential business information which has been specifically excluded and/or redacted from this publicly posted test report.

Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

# Certification Test Report

## Fireplace Products International, Ltd.

### Insert Wood Stove Model: H-200

**Prepared for:** Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

**Prepared by:** OMNI-Test Laboratories, Inc.  
5465 SW Western Avenue, Suite G  
Beaverton, Oregon 97005  
(503) 643-3788

**Test Period:** June 6, 2005 through June 9, 2005

**Report Date:** June 2005

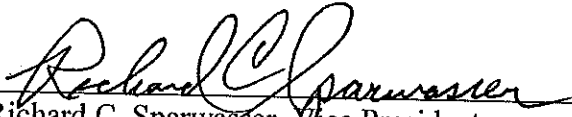
**Project Number:** 219-S-09-3

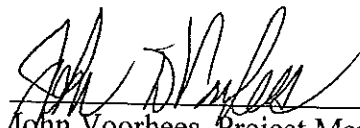
*All data and information contained in this report are confidential and proprietary to Fireplace Products International, Ltd. Its significance is subject to the adequacy and representative character of the samples and to the comprehensiveness of the tests, examinations, or surveys made. The contents of this report cannot be copied or quoted, except in full, without specific, written authorization from Fireplace Products International, Ltd. and OMNI-Test Laboratories, Inc. No use of the OMNI-Test Laboratories, Inc. (O-TL) name, logo, or registered (O-TL) mark is permitted, except as expressly authorized by OMNI-Test Laboratories, Inc. in writing.*


Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

## AUTHORIZED SIGNATORIES

This report has been reviewed and approved by the following authorized signatories.

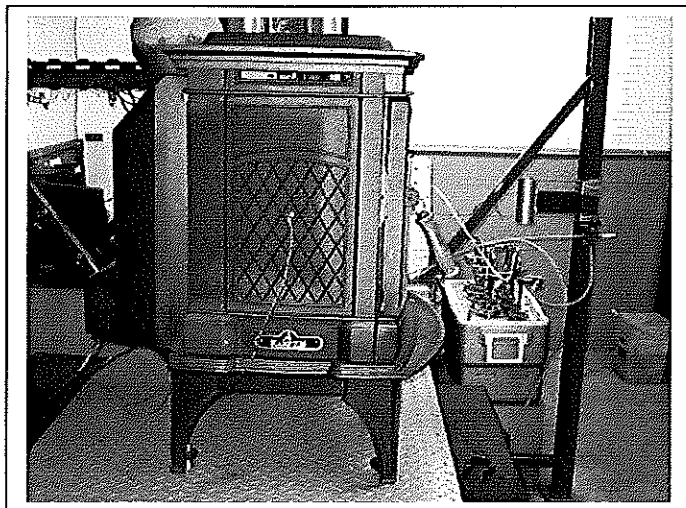
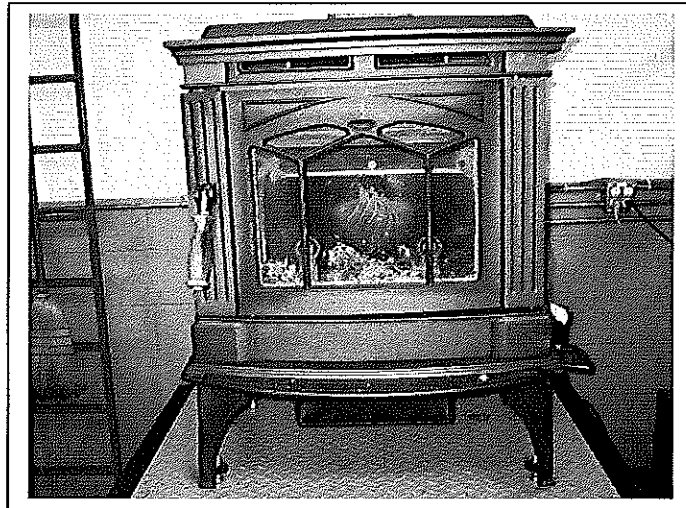
  
Richard C. Sparwasser, Vice President  
OMNI-Test Laboratories, Inc.

  
John Voorhees, Project Manager  
OMNI-Test Laboratories, Inc.

  
Bruce Davis, Technician  
OMNI-Test Laboratories, Inc.

Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

**Fireplace Products International, Ltd.**  
**Model: H-200**  
**Test Dates: June 6, 2002 to June 9, 2005**



Model: H-200  
 Fireplace Products International, Ltd.  
 6988 Venture Street  
 Delta, BC V4G 1H4  
 CANADA


**Table 1.1 – Particulate Emissions**

Run	Burn Rate (kg/hr dry)	Method 5G Emissions (g/hr)
1	0.91	3.97
2	0.96	4.58
5	1.56	2.96
6	1.61	4.45
Weighted particulate emission average of four test runs: 3.9 grams per hour.		

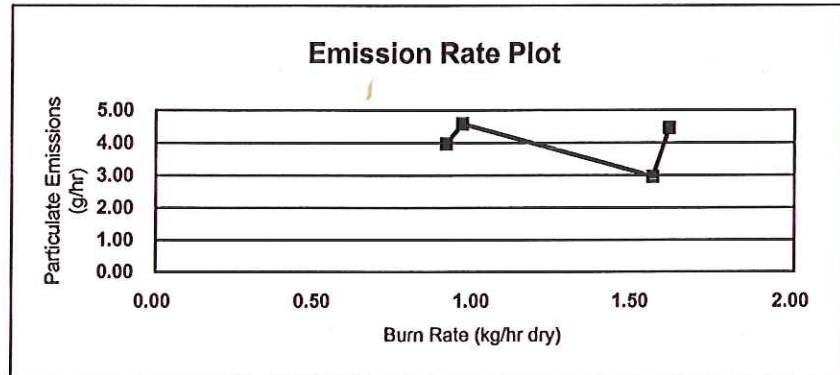
**Table 1.2 – Test Facility Conditions**

Run	Room Temperature (°F)		Barometric Pressure (in Hg)		Air Velocity (ft/min)	
	Before	After	Before	After	Before	After
1	72	76	29.87	29.93	<50	<50
2	76	77	29.93	29.92	<50	<50
5	72	74	29.96	29.96	<50	<50
6	75	79	29.97	29.97	<50	<50

# EPA Weighted Average Emissions EPA Method 28

Client: FPI                                  Status: Final  
 Stove Model: H-200                      Stove Type: Non-Catalytic Stove  
 Test Dates: June 6 through June 9, 2005  
 Project Number: 219-S-09-3  
 Tracking Number: 698  
 Signature/Date: 

Weighted Average (g/hr) 3.9
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Run #	1
Burn Rate (dry kg/hr)	0.91
Category	2
Overall Efficiency (%)	63%
Emissions (g/hr)	3.97
Cap (g/hr)	15
Weighting Factor	0.338                  22.57%
Heat Output (BTU/hr)	10996

Run #	2
Burn Rate (dry kg/hr)	0.96
Category	2
Overall Efficiency (%)	63%
Emissions (g/hr)	4.58
Cap (g/hr)	15
Weighting Factor	0.478                  31.85%
Heat Output (BTU/hr)	11600

Run #	5
Burn Rate (dry kg/hr)	1.56
Category	3
Overall Efficiency (%)	63%
Emissions (g/hr)	2.96
Cap (g/hr)	18
Weighting Factor	0.467                  31.12%
Heat Output (BTU/hr)	18850

Run #	6
Burn Rate (dry kg/hr)	1.61
Category	3
Overall Efficiency (%)	63%
Emissions (g/hr)	4.45
Cap (g/hr)	18
Weighting Factor	0.217                  14.46%
Heat Output (BTU/hr)	19454

Model: H-200  
Fireplace Products International, Ltd.  
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## Run 1

# Wood Heater Test Data - EPA Method 5G

Run: **1**  
 Manufacturer: FPI  
 Model: H-200  
 Tracking No.: 698  
 Project No.: 219-S-09-3  
 Test Date: 06-Jun-05  
 Beginning Clock Time: 11:29  
 Recording Interval: 10 min.  
 Total Sampling Time: 220 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.025	0.045	0.050	0.028	0.025	0.043	0.050	0.028
Initial Temp.	94	94	94	94	94	94	94	94

OMNI Equipment Numbers: \_\_\_\_\_

PM Control Module: W009  
 Dilution Tunnel MW(dry): 29.00 lb/lb-mole  
 Dilution Tunnel MW(wet): 28.56 lb/lb-mole  
 Dilution Tunnel H2O: 4.00 percent  
 Dilution Tunnel Static: -0.580 "H2O  
 Pitot Tube Cp: 0.99  
 Meter Box Y Factor: 1.001  
 Barometric Pressure: Begin Middle End Average  
 29.87 29.92 29.93 29.91 "Hg

Signature/Date: *[Signature]* 7-7-05  
 Tunnel Velocity: 13.10 ft/sec.  
 Initial Tunnel Flow: 139.0 scfm  
 Average Tunnel Flow: 140.2 scfm  
 Tunnel Area: 0.196 ft<sup>2</sup>  
 Post-Test Leak Check: .006@8 cfm@"Hg  
 Fuel Moisture (dry basis): 20.27 %  
 Total Particulate: 33.0 mg  
 Filter Holder No.: A

Elapsed Time	Particulate Sampling Data								Fuel Weight, lb		Wood Heater Temperature Data, oF											Stack
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter oF	Meter Vac. In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10%)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient	Draft In. H2O
0	0.000		0.05	74	0.063	94	0.037		8.8		371	241	302	320	326	3218	312.0	295	68	69	72	-0.026
10	5.038	0.50	0.85	75	1.1063	94	0.037	102	7.8	-0.95035	372	244	302	301	308	3218	305.4	290	76	51	72	-0.028
20	10.065	0.50	0.85	76	1.0566	97	0.037	102	6.9	-0.98708	488	242	278	285	294	3218	317.4	445	78	53	73	-0.045
30	15.101	0.50	0.85	78	1.0696	103	0.037	102	5.7	-1.16481	638	235	278	286	296	3218	346.6	510	80	53	73	-0.050
40	20.134	0.50	0.85	80	1.0222	107	0.037	102	4.5	-1.22036	634	227	256	299	310	3218	345.2	535	82	53	74	-0.055
50	25.175	0.50	0.85	82	1.0376	108	0.037	102	3.4	-1.09023	628	220	264	312	323	3218	349.4	515	83	53	73	-0.050
60	30.227	0.51	0.85	83	1.0512	106	0.037	102	2.4	-0.94899	607	215	287	324	335	3218	353.6	497	84	53	75	-0.047
70	35.278	0.51	0.85	84	1.0293	103	0.037	101	1.8	-0.61732	539	211	364	333	342	3218	357.8	423	83	53	74	-0.040
80	40.338	0.51	0.85	85	1.0643	98	0.037	101	1.6	-0.24122	431	210	375	331	337	3218	336.8	336	82	53	74	-0.029
90	45.405	0.51	0.85	86	1.0376	95	0.037	100	1.4	-0.1333	350	210	354	319	325	3218	311.6	289	81	53	74	-0.024
100	50.477	0.51	0.85	86	1.0512	94	0.037	100	1.3	-0.09998	309	211	336	304	310	3218	294.0	268	80	53	74	-0.020
110	55.550	0.51	0.85	86	1.024	93	0.037	100	1.2	-0.14124	284	211	317	291	297	3218	280.0	257	80	52	74	-0.018
120	60.619	0.51	0.84	87	1.0376	92	0.037	100	1.1	-0.11743	272	211	292	281	285	3218	268.2	248	80	51	75	-0.016
130	65.693	0.51	0.84	87	1.0252	92	0.037	100	1.0	-0.10791	259	213	275	272	275	3218	258.8	236	80	50	75	-0.015
140	70.766	0.51	0.85	87	1.0359	92	0.037	100	0.9	-0.08728	248	214	261	264	265	3218	250.4	228	80	50	75	-0.014
150	75.840	0.51	0.85	87	1.0317	92	0.037	100	0.8	-0.09204	237	214	251	256	255	3218	242.6	220	80	50	76	-0.012
160	80.918	0.51	0.84	87	1.0216	92	0.037	100	0.7	-0.10791	228	212	245	249	247	3218	236.2	215	80	50	75	-0.011
170	85.996	0.51	0.85	88	1.0465	92	0.037	100	0.6	-0.10157	221	209	242	242	239	3218	230.6	209	80	50	75	-0.010
180	91.070	0.51	0.84	88	1.0678	93	0.037	100	0.5	-0.09839	216	205	239	235	234	3218	225.8	208	80	50	76	-0.010
190	96.138	0.51	0.84	88	1.0518	93	0.037	100	0.4	-0.08252	211	202	227	230	229	3218	219.8	205	81	50	76	-0.010
200	101.207	0.51	0.84	88	1.0471	93	0.037	100	0.3	-0.10632	210	200	217	225	225	3218	215.4	207	81	50	76	-0.010
210	106.276	0.51	0.85	88	1.0483	93	0.037	100	0.2	-0.12537	214	199	218	222	222	3218	215.0	208	81	50	76	-0.010
220	111.347	0.51	0.85	88	1.0258	92	0.037	100	0.0	-0.20313	213	198	219	221	220	3218	214.2	207	81	50	76	-0.010
Avg/Total	111.347	0.51	0.81	84.26		96.00	0.037	100.69									98		80.04	52.17		-0.024



## Wood Heater Test Data - EPA Method 5G Preburn

<b>Run:</b> <u>1</u>	<b>FPI</b>	<b>Coal Bed Range:</b> 1.8-2.2	
<b>Manufacturer:</b>	H-200	<b>Actual Coal Bed:</b> 2	
<b>Model:</b>	698		
<b>Tracking No.:</b>	219-S-09-3		
<b>Project No.:</b>	06-Jun-05	<b>Signature/Date:</b> <u>ESR 7-7-05</u>	
<b>Preburn Date:</b>			

Recording Interval: 10 min.

OMNI Equipment Numbers: \_\_\_\_\_

Elapsed Time	Fuel Weight, lb		Wood Heater Temperature Data, oF											Stack Draft In. H2O
	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Ambient			
0	7.3		720	193	442	281	280	3218	383.2	684	70	-0.068		
10	5.9	-1.39809	595	219	352	301	302	3218	353.8	523	70	-0.057		
20	4.5	-1.38698	613	233	331	316	319	3218	362.4	520	70	-0.058		
30	3.4	-1.15847	612	237	325	332	333	3218	367.8	488	71	-0.055		
40	2.6	-0.79347	548	237	320	341	344	3218	358.0	420	71	-0.044		
50	2.2	-0.36341	437	237	328	337	343	3218	336.4	330	70	-0.032		
60	2.0	-0.18885	351	240	305	323	329	3218	309.6	287	72	-0.025		
<b>Avg/Total</b>									74			-0.048		

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Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

## Run 2

# Wood Heater Test Data - EPA Method 5G

Run: 2  
 Manufacturer: FPI  
 Model: H-200  
 Tracking No.: 698  
 Project No.: 219-S-09-3  
 Test Date: 07-Jun-05  
 Beginning Clock Time: 09:42  
 Recording Interval: 10 min.  
 Total Sampling Time: 220 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.026	0.045	0.050	0.030	0.028	0.050	0.053	0.027
Initial Temp.	101	101	101	101	100	100	100	100

OMNI Equipment Numbers: \_\_\_\_\_

PM Control Module: W009  
 Dilution Tunnel MW(dry): 29.00 lb/lb-mole  
 Dilution Tunnel MW(wet): 28.56 lb/lb-mole  
 Dilution Tunnel H2O: 4.00 percent  
 Dilution Tunnel Static: -0.590 "H2O  
 Pitot Tube Cp: 0.99  
 Meter Box Y Factor: 1.001  
 Barometric Pressure: Begin Middle End Average  
29.93 29.92 29.92 29.92 "Hg

Signature/Date: B. J. 6-20-05  
 Tunnel Velocity: 13.49 ft/sec.  
 Initial Tunnel Flow: 141.7 scfm  
 Average Tunnel Flow: 143.0 scfm  
 Tunnel Area: 0.196 ft<sup>2</sup>  
 Post-Test Leak Check: .006@8 cfm@"Hg  
 Fuel Moisture (dry basis): 19.72 %  
 Total Particulate: 38.3 mg  
 Filter Holder No.: A

Elapsed Time	Particulate Sampling Data								Fuel Weight, lb		Wood Heater Temperature Data, oF											Stack
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter oF	Meter Vac. In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10%)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient	Draft In. H2O
0	0.000	/	0.05	79	0.0547	101	0.039	/	9.3	/	341	254	326	335	334	3218	318.0	304	71	73	76	-0.026
10	5.032	0.50	0.84	79	1.1028	103	0.039	101	8.3	-0.98062	369	255	322	316	314	3218	315.2	312	76	50	77	-0.035
20	10.067	0.50	0.85	80	1.114	107	0.039	102	7.2	-1.08388	507	250	293	302	300	3218	330.4	473	78	50	77	-0.050
30	15.111	0.50	0.85	82	1.1235	112	0.039	102	6.0	-1.22353	655	242	290	303	301	3218	358.2	530	80	50	77	-0.052
40	20.152	0.50	0.85	84	1.0678	117	0.039	102	4.7	-1.27907	666	234	263	315	312	3218	358.0	574	81	50	77	-0.052
50	25.205	0.51	0.85	86	1.0785	118	0.039	102	3.4	-1.30605	699	226	276	331	328	3218	372.0	568	82	50	77	-0.052
60	30.252	0.50	0.85	87	1.1188	116	0.039	101	2.4	-0.99818	670	222	302	348	345	3218	377.4	529	83	50	77	-0.048
70	35.310	0.51	0.85	88	1.0915	110	0.039	101	1.8	-0.59352	577	219	373	356	356	3218	376.2	437	83	50	78	-0.041
80	40.386	0.51	0.85	89	1.1111	105	0.039	101	1.6	-0.23011	464	220	384	354	352	3218	354.8	358	83	50	78	-0.032
90	45.457	0.51	0.84	90	1.0696	102	0.039	100	1.5	-0.15235	389	222	342	343	342	3218	327.6	323	82	50	79	-0.027
100	50.546	0.51	0.85	90	1.0743	100	0.039	100	1.3	-0.146	344	226	310	329	330	3218	307.8	298	82	50	78	-0.025
110	55.629	0.51	0.85	90	1.0803	99	0.039	100	1.2	-0.13489	316	229	290	315	317	3218	293.4	282	82	50	78	-0.022
120	60.728	0.51	0.85	90	1.0584	98	0.039	100	1.0	-0.13806	295	229	278	301	305	3218	281.6	269	82	50	78	-0.020
130	65.841	0.51	0.85	91	1.088	97	0.039	100	0.9	-0.1095	277	228	262	290	294	3218	270.2	259	82	50	78	-0.020
140	70.956	0.51	0.85	91	1.0844	97	0.039	100	0.8	-0.10315	261	226	255	280	283	3218	261.0	246	82	49	78	-0.017
150	76.071	0.51	0.85	91	1.088	97	0.039	100	0.7	-0.0968	249	223	252	269	273	3218	253.2	237	82	49	78	-0.016
160	81.197	0.51	0.86	91	1.0915	96	0.039	100	0.6	-0.09363	240	219	249	260	263	3218	246.2	229	81	49	78	-0.016
170	86.314	0.51	0.85	91	1.0998	96	0.039	100	0.5	-0.09204	231	214	245	251	253	3218	238.8	223	81	49	78	-0.014
180	91.428	0.51	0.85	91	1.0891	95	0.039	100	0.4	-0.09204	222	209	239	243	245	3218	231.6	217	81	49	78	-0.013
190	96.546	0.51	0.86	91	1.1105	94	0.039	100	0.3	-0.11267	217	204	236	235	238	3218	226.0	215	81	49	77	-0.014
200	101.665	0.51	0.86	91	1.0927	94	0.039	100	0.2	-0.12378	221	200	230	230	233	3218	222.8	226	81	49	77	-0.015
210	106.797	0.51	0.85	91	1.0915	93	0.039	100	0.1	-0.11267	224	198	228	229	230	3218	221.8	227	81	49	77	-0.016
220	111.924	0.51	0.85	90	1.0974	92	0.039	100	0.0	-0.1222	223	199	227	229	228	3218	221.2	222	80	49	77	-0.015
Avg/Total	111.924	0.51	0.82	87.96	/	101.67	0.039	100.69	/	/	/	/	/	/	/	97	/	80.74	50.61	/	/	-0.028

# Wood Heater Test Data - EPA Method 5G Preburn

Run: 2

Manufacturer: FPI  
 Model: H-200  
 Tracking No.: 698  
 Project No.: 219-S-09-3  
 Preburn Date: 07-Jun-05

Coal Bed Range: 1.9-2.3  
 Actual Coal Bed: 2.1

Signature/Date: *BR* 7-7-05

Recording Interval: 10 min.

OMNI Equipment Numbers: \_\_\_\_\_

Elapsed Time	Fuel Weight, lb		Wood Heater Temperature Data, oF											Stack
	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Ambient	Draft In. H2O		
0	7.9		755	206	450	307	312	3218	406.0	720	74	-0.068		
10	6.4	-1.54885	655	223	348	321	331	3218	375.6	558	75	-0.058		
20	4.7	-1.69009	692	235	319	333	347	3218	385.2	591	75	-0.061		
30	3.4	-1.25368	665	241	325	350	363	3218	388.8	531	76	-0.054		
40	2.6	-0.77919	592	244	356	363	371	3218	385.2	449	76	-0.043		
50	2.4	-0.26978	441	248	352	361	365	3218	353.4	335	76	-0.031		
60	2.2	-0.19361	361	251	333	345	347	3218	327.4	301	77	-0.027		
70	2.1	-0.08569	341	252	327	337	337	3218	318.8	290	77	-0.024		
Avg/Total									87			-0.046		

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Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

## Run 5

## Wood Heater Test Data - EPA Method 5G

**Run:** 5  
**Manufacturer:** FPI  
**Model:** H-200  
**Tracking No.:** 698  
**Project No.:** 219-S-09-3  
**Test Date:** 09-Jun-05  
**Beginning Clock Time:** 10:13  
**Recording Interval:** 10 min.  
**Total Sampling Time:** 130 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.030	0.052	0.055	0.030	0.032	0.055	0.055	0.028
Initial Temp.	107	107	107	107	106	106	106	106

OMNI Equipment Numbers: \_\_\_\_\_

**PM Control Module:** W009  
**Dilution Tunnel MW(dry):** 29.00 lb/lb-mole  
**Dilution Tunnel MW(wet):** 28.56 lb/lb-mole  
**Dilution Tunnel H2O:** 4.00 percent  
**Dilution Tunnel Static:** -0.630 "H2O  
**Pitot Tube Cp:** 0.99  
**Meter Box Y Factor:** 1.001  
**Barometric Pressure:**

Begin	Middle	End	Average
29.96	29.96	29.96	29.96

**Signature/Date:** *B. Q. J.* 6-20-05  
**Tunnel Velocity:** 14.17 ft/sec.  
**Initial Tunnel Flow:** 147.2 scfm  
**Average Tunnel Flow:** 148.5 scfm  
**Tunnel Area:** 0.196 ft<sup>2</sup>  
**Post-Test Leak Check:** .004@8 cfm@"Hg  
**Fuel Moisture (dry basis):** 20.36 %  
**Total Particulate:** 13.0 mg  
**Filter Holder No.:** A

Elapsed Time	Particulate Sampling Data									Fuel Weight, lb		Wood Heater Temperature Data, oF											Stack	
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter oF	Meter Vac. In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10%)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient	Draft In. H2O		
0	0.000		0.05	74	0.057	107	0.042		9.0		444	279	424	380	386	3218	382.6	376	69	70	72	-0.042		
10	5.049	0.50	0.85	75	1.1827	125	0.042	103	7.2	-1.74881	700	285	399	365	363	3218	422.4	650	73	48	73	-0.068		
20	10.063	0.50	0.84	76	1.1827	130	0.042	103	5.2	-1.96622	843	277	403	364	366	3218	450.6	675	76	48	74	-0.069		
30	15.081	0.50	0.86	79	1.2058	130	0.042	102	3.5	-1.76468	892	267	463	375	384	3218	476.2	676	76	48	73	-0.068		
40	20.132	0.51	0.86	80	1.1572	124	0.042	102	2.0	-1.43301	778	260	436	390	404	3218	453.6	620	74	48	75	-0.063		
50	25.195	0.51	0.86	82	1.1839	113	0.042	101	1.4	-0.64588	631	257	413	400	413	3218	422.8	488	75	48	74	-0.052		
60	30.271	0.51	0.86	84	1.1934	106	0.042	100	1.1	-0.292	510	257	370	390	406	3218	386.6	418	77	48	76	-0.044		
70	35.355	0.51	0.85	85	1.1821	103	0.042	100	0.9	-0.17774	420	260	337	370	387	3218	354.8	373	78	48	74	-0.038		
80	40.446	0.51	0.85	85	1.1762	101	0.042	100	0.7	-0.19995	375	261	328	351	366	3218	336.2	355	78	48	75	-0.036		
90	45.547	0.51	0.86	86	1.1715	99	0.042	100	0.6	-0.16028	342	260	322	334	347	3218	321.0	335	79	48	74	-0.033		
100	50.657	0.51	0.86	87	1.1578	98	0.042	100	0.4	-0.15076	318	255	320	318	329	3218	308.0	321	79	47	75	-0.032		
110	55.762	0.51	0.85	87	1.1555	97	0.042	99	0.3	-0.13013	296	248	316	304	313	3218	295.4	307	78	47	75	-0.030		
120	60.872	0.51	0.86	87	1.1578	96	0.042	99	0.2	-0.1095	281	240	305	291	298	3218	283.0	294	78	47	75	-0.029		
130	65.981	0.51	0.85	87	1.1703	96	0.042	99	0.0	-0.20154	269	230	289	278	284	3218	270.0	297	78	47	74	-0.029		
Avg/Total	65.981	0.51	0.80	82.43		108.89	0.042	100.66									113		76.29	49.29		-0.045		

# Wood Heater Test Data - EPA Method 5G Preburn

Run: 5  
 Manufacturer: FPI  
 Model: H-200  
 Tracking No.: 698  
 Project No.: 219-S-09-3  
 Preburn Date: 09-Jun-05

Coal Bed Range: 1.8-2.2  
 Actual Coal Bed: 1.9

Signature/Date: *[Signature]* 7-7-05

Recording Interval: 10 min.

OMNI Equipment Numbers:

Elapsed Time	Fuel Weight, lb		Wood Heater Temperature Data, oF										Stack Draft In. H2O
	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Ambient		
0	11.2		634	211	420	285	292	3218	368.4	641	71	-0.066	
10	9.0	-2.1995	716	217	360	288	298	3218	375.8	731	71	-0.074	
20	6.4	-2.60734	766	225	373	306	319	3218	397.8	720	71	-0.073	
30	4.2	-2.22965	782	236	384	337	352	3218	418.2	717	73	-0.072	
40	2.9	-1.30764	724	250	404	368	383	3218	425.8	592	73	-0.062	
50	2.2	-0.66175	577	265	440	385	394	3218	412.2	462	73	-0.050	
60	1.9	-0.30945	456	278	427	382	388	3218	386.2	388	72	-0.042	
Avg/Total													
									18			-0.063	

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Model: H-200  
Fireplace Products International, Ltd.  
6988 Venture Street  
Delta, BC V4G 1H4  
CANADA

## Run 6



## Wood Heater Test Data - EPA Method 5G

**Run:** 6  
**Manufacturer:** FPI  
**Model:** H-200  
**Tracking No.:** 698  
**Project No.:** 219-S-09-3  
**Test Date:** 09-Jun-05  
**Beginning Clock Time:** 14:14  
**Recording Interval:** 10 min.  
**Total Sampling Time:** 130 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.032	0.058	0.058	0.040	0.035	0.060	0.060	0.025
Initial Temp.	117	117	117	117	116	116	116	116

OMNI Equipment Numbers: \_\_\_\_\_

**PM Control Module:** W009  
**Dilution Tunnel MW(dry):** 29.00 lb/lb-mole  
**Dilution Tunnel MW(wet):** 28.56 lb/lb-mole  
**Dilution Tunnel H2O:** 4.00 percent  
**Dilution Tunnel Static:** -0.680 "H2O  
**Pitot Tube Cp:** 0.99  
**Meter Box Y Factor:** 1.001  
**Barometric Pressure:**

Begin	Middle	End	Average
29.97	29.97	29.97	29.97 "Hg

**Signature/Date:** *B.D. - 7-7-05*  
**Tunnel Velocity:** 14.93 ft/sec.  
**Initial Tunnel Flow:** 152.4 scfm  
**Average Tunnel Flow:** 154.0 scfm  
**Tunnel Area:** 0.196 ft<sup>2</sup>  
**Post-Test Leak Check:** .008@8 cfm@"Hg  
**Fuel Moisture (dry basis):** 22.39 %  
**Total Particulate:** 20.4 mg  
**Filter Holder No.:** A

Elapsed Time	Particulate Sampling Data								Fuel Weight, lb		Wood Heater Temperature Data, oF										Stack	
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter oF	Meter Vac. In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10%)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient	Draft In. H2O
0	0.000		0.04	79	0.0493	117	0.046		9.4		400	294	394	363	377	3218	365.6	357	73	72	75	-0.038
10	5.073	0.51	0.85	79	1.3846	129	0.046	103	7.7	-1.67422	586	297	385	342	355	3218	393.0	644	76	49	75	-0.069
20	10.102	0.50	0.84	80	1.3621	139	0.046	103	5.7	-2.02652	793	282	408	339	354	3218	435.2	689	78	50	78	-0.068
30	15.139	0.50	0.85	83	1.3639	140	0.046	102	3.9	-1.82181	856	268	455	351	370	3218	460.0	674	78	51	79	-0.065
40	20.191	0.51	0.85	85	1.371	137	0.046	102	2.4	-1.52187	790	259	411	373	391	3218	444.8	634	81	51	79	-0.059
50	25.272	0.51	0.86	87	1.3639	125	0.046	101	1.6	-0.80458	648	255	400	392	404	3218	419.8	511	82	51	80	-0.050
60	30.389	0.51	0.86	88	1.3621	118	0.046	101	1.2	-0.37769	524	254	398	391	399	3218	393.2	445	82	52	79	-0.044
70	35.520	0.51	0.86	90	1.3657	112	0.046	100	1.0	-0.22058	431	253	388	375	386	3218	366.6	389	82	52	80	-0.039
80	40.648	0.51	0.86	90	1.3692	110	0.046	100	0.8	-0.16663	380	251	368	355	367	3218	344.2	364	81	52	79	-0.036
90	45.790	0.51	0.86	91	1.3704	107	0.046	100	0.6	-0.18567	347	247	353	337	347	3218	326.2	344	81	52	80	-0.034
100	50.902	0.51	0.86	91	1.3408	105	0.046	99	0.4	-0.16187	324	243	334	321	330	3218	310.4	333	81	52	80	-0.034
110	56.025	0.51	0.85	92	1.3769	104	0.046	99	0.3	-0.16822	311	240	322	307	314	3218	298.8	325	82	52	79	-0.032
120	61.160	0.51	0.86	92	1.3592	103	0.046	99	0.1	-0.13172	294	237	308	295	302	3218	287.2	311	83	52	79	-0.031
130	66.284	0.51	0.85	92	1.3633	103	0.046	99	0.0	-0.17615	280	233	301	285	290	3218	277.8	309	83	52	79	-0.032
Avg/Total	66.284	0.51	0.80	87.07		117.75	0.046	100.66									88		80.21	52.86		-0.045

# Wood Heater Test Data - EPA Method 5G Preburn

**Run:** 6  
**Manufacturer:** FPI  
**Model:** H-200  
**Tracking No.:** 698  
**Project No.:** 219-S-09-3  
**Preburn Date:** 09-Jun-05

**Coal Bed Range:** 1.9-2.3  
**Actual Coal Bed:** 2

**Signature/Date:** ED 7-7-05

**Recording Interval:** 10 min.

**OMNI Equipment Numbers:**

Elapsed Time	Fuel Weight, lb		Wood Heater Temperature Data, of F										Stack Draft In. H <sub>2</sub> O
	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Ambient		
0	13.2		600	215	439	284	294	3218	366.4	377	75	-0.044	
10	11.9	-1.28701	432	229	350	293	304	3218	321.6	597	74	-0.070	
20	9.6	-2.26932	684	232	336	290	302	3218	368.8	754	75	-0.079	
30	7.0	-2.66288	765	235	371	310	320	3218	400.2	735	74	-0.080	
40	4.6	-2.38358	786	243	426	344	352	3218	430.2	752	76	-0.077	
50	3.0	-1.55996	737	253	499	374	382	3218	449.0	591	77	-0.063	
60	2.4	-0.6316	587	268	526	388	396	3218	433.0	477	77	-0.051	
70	2.2	-0.2428	467	283	463	381	394	3218	397.6	401	75	-0.043	
80	2.0	-0.17932	394	293	398	365	379	3218	365.8	355	75	-0.038	
Avg/Total									1			-0.060	

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