

EPA Certification Test Report

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

H300

	<u>Model #</u>
Wood Stoves	H300
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.

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Certification Test Report

Fireplace Products International Ltd.

Freestanding Wood Stove

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

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

Test Period: February 20, 2003 – February 26, 2003

Report Date: March 2003

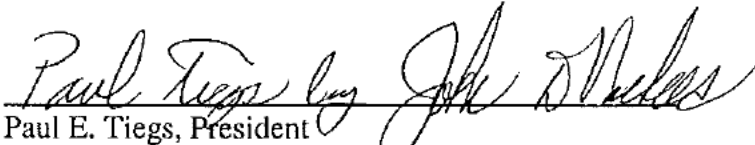
Project Number: 219-S-04-3

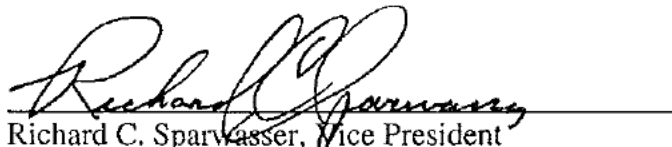
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Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

AUTHORIZED SIGNATORIES

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


Paul E. Tieg, President
OMNI-Test Laboratories, Inc.


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

[REDACTED]

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Fireplace Products International Ltd.

[REDACTED]

Test Dates: February 20, 2003 – February 26, 2003



Fireplace Products International Ltd.
 6988 Venture Street
 Delta, BC
 V4G 1H4

Table 1.1 – Particulate Emissions

Run	Burn Rate (kg/hr dry)	Method 5G Emissions (g/hr)
1	0.88	6.25
2	1.07	5.13
3	2.36	1.91
4	1.43	2.97
Weighted particulate emission average of four test runs: 4.18 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	73	73	29.96	29.96	<50	<50
2	74	75	29.98	29.92	<50	<50
3	66	68	29.90	29.86	<50	<50
4	68	71	29.90	29.81	<50	<50

EPA Weighted Average Emissions EPA Method 28

Client: FPI Regency

Status: Preliminary

Stove Type: Non-Catalytic Stove

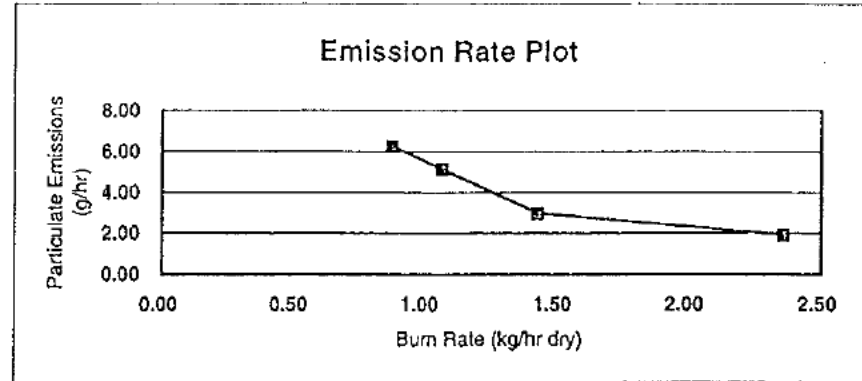
Test Dates: Feb 20 -

Project Number: 219-S-04-3

Tracking Number: 421

Signature/Date: _____

Weighted Average (g/hr) 4.18



Run #	1	
Burn Rate (dry kg/hr)	0.88	
Category	2	
Overall Efficiency (%)	63%	
Emissions (g/hr)	6.25	
Cap (g/hr)	15	
Weighting Factor	0.428	25.63%
Heat Output (BTU/hr)	10633	

Run #	2	
Burn Rate (dry kg/hr)	1.07	
Category	2	
Overall Efficiency (%)	63%	
Emissions (g/hr)	5.13	
Cap (g/hr)	15	
Weighting Factor	0.430	25.72%
Heat Output (BTU/hr)	12929	

Run #	4	
Burn Rate (dry kg/hr)	1.43	
Category	3	
Overall Efficiency (%)	63%	
Emissions (g/hr)	2.97	
Cap (g/hr)	15	
Weighting Factor	0.524	31.36%
Heat Output (BTU/hr)	17279	

Run #	3	
Burn Rate (dry kg/hr)	2.36	
Category	4	
Overall Efficiency (%)	63%	
Emissions (g/hr)	1.91	
Cap (g/hr)	18	
Weighting Factor	0.289	17.29%
Heat Output (BTU/hr)	28517	

H. J. Morgan
4-17-03

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Run 1

Wood Heater Test Data - EPA Method 5G

Run: 1
 Manufacturer: FPI Regency
 Model: Hampton D
 Tracking No.: 421
 Project No.: 219-S-04-J
 Test Date: 20-Feb-03
 Beginning Clock Time: 12:15
 Recording Interval: 10 min
 Total Sampling Time: 310 min

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.028	0.032	0.036	0.036	0.034	0.036	0.034	0.028
Initial Temp.	93	93	93	93	92	92	92	92

OMNI Equipment Numbers: _____

PM Control Module: 20
 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: -0.800 "H2O
 Pitot Tube Cp: 0.99
 Meter Box Y Factor: 0.977
 Barometric Pressure: Begin Middle End Average
 29.96 29.98 29.96 29.97 "Hg

Signature Date: *K.L. Morgan 4-17-03*
 Tunnel Velocity: 12.28 ft/sec.
 Initial Tunnel Flow: 133.4 scfm
 Average Tunnel Flow: 134.4 scfm
 Tunnel Area: 0.196 ft²
 Post-Test Leak Check: 0.062/05 cfm/Hg
 Fuel Moisture (dry basis): 21.3 %
 Total Particulate: 85.7 mg
 Filter Holder No.: _____

Elapsed Time	Particulate Sampling Data										Fuel Weight, lb		Wood Heater Temperature Data, oF										Stack Draft in H2O
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter oF	Meter Vac. In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10 ⁴)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient		
0	123.700		0.00	75	0	93	0.033		12.2		524	160	228	312	260	700	296.8	273	72	71	73	-0.048	
10	129.040	0.53	0.75	78	2.5	92	0.033	103	11.3	-0.9	520	159	264	295	259	704	299.4	299	73	57	72	-0.053	
20	134.365	0.53	0.75	83	2.5	85	0.033	101	10.9	-0.4	416	159	257	277	245	588	270.8	223	73	56	72	-0.045	
30	139.760	0.54	0.75	89	2.5	83	0.033	101	10.3	-0.6	398	159	243	263	231	826	258.8	214	73	55	72	-0.045	
40	145.165	0.54	0.75	94	2.5	85	0.033	101	9.7	-0.6	463	156	194	257	220	753	258.0	252	72	55	72	-0.050	
50	150.600	0.54	0.75	97	2.5	86	0.033	101	8.8	-0.9	546	153	178	257	214	1067	269.6	292	73	55	72	-0.060	
60	156.040	0.54	0.75	100	2.5	91	0.033	101	7.6	-1.2	691	148	194	274	214	1102	304.2	350	72	55	72	-0.063	
70	161.490	0.55	0.75	102	2.5	88	0.033	100	6.9	-0.7	626	145	207	288	219	910	297.0	306	72	55	72	-0.055	
80	166.970	0.55	0.75	103	2.5	88	0.033	101	6.2	-0.7	611	142	209	291	228	922	296.2	296	72	56	72	-0.055	
90	172.450	0.55	0.75	103	2.5	88	0.033	101	5.5	-0.7	583	141	214	290	234	856	292.4	283	72	56	72	-0.052	
100	177.930	0.55	0.75	104	2.5	87	0.033	101	5.0	-0.5	527	142	213	286	240	855	281.6	264	72	56	72	-0.050	
110	183.410	0.55	0.75	105	2.5	86	0.033	100	4.5	-0.5	503	142	209	271	242	865	273.4	252	72	56	72	-0.050	
120	188.900	0.55	0.75	105	2.5	86	0.033	100	4.0	-0.5	498	143	208	277	242	849	273.6	250	72	57	73	-0.048	
130	194.400	0.55	0.75	105	2.5	87	0.033	101	3.6	-0.4	502	143	207	276	244	855	274.4	260	72	57	72	-0.048	
140	199.920	0.55	0.75	105	2.5	87	0.033	101	3.1	-0.5	482	143	210	276	247	871	271.6	254	73	57	73	-0.048	
150	205.425	0.55	0.75	106	2.5	87	0.033	101	2.7	-0.4	446	145	219	283	249	970	268.4	244	72	58	72	-0.045	
160	210.910	0.55	0.75	106	2.5	86	0.033	100	2.3	-0.4	419	147	224	286	250	818	265.2	229	72	58	73	-0.043	
170	216.320	0.54	0.75	106	2.5	86	0.033	99	2.1	-0.2	400	148	221	282	249	738	260.0	218	73	58	73	-0.043	
180	221.750	0.54	0.75	106	2.5	85	0.033	99	1.9	-0.2	379	150	213	274	248	729	252.8	204	73	59	73	-0.038	
190	227.350	0.56	0.75	106	2.5	84	0.033	102	1.7	-0.2	355	152	203	266	245	683	244.2	192	73	60	73	-0.038	
200	232.900	0.56	0.75	106	2.5	83	0.033	101	1.5	-0.2	329	154	191	255	241	643	234.0	179	73	60	73	-0.035	
210	238.385	0.55	0.75	107	2.5	83	0.033	100	1.4	-0.1	323	154	188	252	239	628	231.2	176	73	61	73	-0.035	
220	243.905	0.55	0.75	107	2.5	83	0.033	100	1.2	-0.2	319	155	184	247	237	653	228.4	186	73	61	73	-0.033	
230	249.430	0.55	0.75	107	2.5	83	0.033	100	1.0	-0.2	316	156	183	244	236	626	227.0	189	73	61	73	-0.033	
240	254.950	0.55	0.75	107	2.5	83	0.033	100	0.9	-0.1	309	156	182	238	235	612	224.0	185	73	61	73	-0.033	
250	260.465	0.55	0.75	107	2.5	83	0.033	100	0.7	-0.2	296	157	183	232	233	593	220.2	179	73	61	73	-0.033	
260	265.985	0.55	0.75	107	2.5	82	0.033	100	0.5	-0.2	298	158	187	229	230	653	220.4	181	73	62	73	-0.035	
270	271.510	0.55	0.75	107	2.5	82	0.033	100	0.4	-0.1	301	159	191	228	228	641	221.4	176	73	61	73	-0.033	
280	277.025	0.55	0.75	107	2.5	82	0.033	100	0.3	-0.1	298	161	192	228	227	619	221.2	174	72	61	73	-0.033	
290	282.550	0.55	0.75	107	2.5	82	0.033	100	0.2	-0.1	296	162	194	226	227	620	221.0	174	73	61	73	-0.033	
300	288.055	0.55	0.75	107	2.5	82	0.033	100	0.1	-0.1	293	164	195	224	228	600	220.8	173	72	60	73	-0.033	
310	293.590	0.55	0.75	107	2.5	81	0.033	100	0.0	-0.1	287	165	194	222	229	593	219.4	168	72	60	73	-0.033	
Avg/Total	169.890	0.55	0.73	101.91		85.27	0.033	100.60								77		72.53	58.66			-0.043	

STOVE TEMPERATURE TEST DATA - METHOD 5G

Client/Model: FPI Agency / HAMBLETON D Project #: 217-5-04-3 Tracking #: 421
 Date: 2-20-03 Test Crew: K. Morgan Run #: 1

OMNI Equipment ID #: _____

Preburn Test	Coal Bed:										Actual:		
	Data:										Coal Bed:		
	Fuel Weight	Delta Weight	Stack Draft	Ambient	Top	Bottom	Back	Left	Right	Flue	Catalyst		
0	9.3		-0.095	71	822	116	275	277	235	660	969		
10	8.0	1.3	-0.073	71	737	134	269	285	256	424	1236		
20	6.9	1.1	-0.068	72	714	150	252	304	239	387	1198		
30	5.9	1.0	-0.065	71	656	159	244	325	247	356	1135		
40	5.1	0.8	-0.060	71	608	161	240	334	254	328	1069		
50	4.1	1.0	-0.063	73	700	162	247	341	259	352	1078		
60	3.3	0.8	-0.060	73	652	162	251	339	269	338	987		
70	2.9	0.4	-0.053	73	603	162	247	333	271	292	734		
80	2.6	0.3	-0.050	73	544	161	240	319	269	268	718		
90													
00													
10													
20													
30													
40													
50													
60													
70													
80													
90													
AVG													

Preliminary: 0.88 kg/hr @ 6.80 g/hr

6.46 @ of 2-24-02

6.37 @ of 2-25-02

(6.25)

Technician signature: L. A. Morgan Date: 2-20-03

2-7 of 2-42

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Run 2

Wood Heater Test Data - EPA Method 5G

Run: 2
 Manufacturer: FPI ReGENCY
 Model: Hampton D
 Tracking No.: 421
 Project No.: 219-S-04-3
 Test Date: 21-Feb-03
 Beginning Clock Time: 11:46
 Recording Interval: 10 min.
 Total Sampling Time: 270 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.028	0.034	0.036	0.040	0.038	0.036	0.034	0.028
Initial Temp	101	101	101	101	101	101	101	101

OMNI Equipment Numbers: _____

PM Control Module: 20
 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: -0.800 "H₂O
 Pitot Tube Cp: 0.99
 Meter Box Y Factor: 0.977
 Barometric Pressure: Begin Middle End Average
29.98 29.98 29.92 29.96 Hg

Signature/Date: J. F. M. / 4-17-03
 Tunnel Velocity: 12.59 ft/sec.
 Initial Tunnel Flow: 134.8 scfm
 Average Tunnel Flow: 136.1 scfm
 Tunnel Area: 0.196 ft²
 Post-Test Leak Check: .01 @ 11 cfm @ 7Hg
 Fuel Moisture (dry basis): 20.3 %
 Total Particulate: 58.2 mg
 Filter Holder No.: _____

Elapsed Time	Particulate Sampling Data									Fuel Weight, lb		Wood Heater Temperature Data, °F											Stack Draft in. H ₂ O
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter °F	Meter Vac In. Hg.	Dilution Tunnel Temp.	Dilution Tunnel dP	Pro. Rate (10 ³ s)	Scale Reading	Weight Change	Firebox Top	Firebox Bottom	Firebox Back	Firebox Left	Firebox Right	Firebox Interior	Average Surface	Stack	Filter	Impinger exit	Ambient		
0	294.050		0.00	77	0	101	0.034		12.9		473	184	261	326	278	798	304.4	303	74	71	74	-0.050	
10	299.395	0.53	0.75	80	2.5	100	0.034	103	11.8	-1	547	182	303	322	272	746	325.2	324	77	60	74	-0.058	
20	304.760	0.54	0.75	85	2.5	94	0.034	102	11.1	-0.7	472	182	294	306	256	729	302.0	269	78	60	74	-0.053	
30	310.140	0.54	0.75	92	2.5	99	0.034	101	10.0	-1.1	635	181	288	299	246	964	329.8	370	78	59	76	-0.070	
40	315.545	0.54	0.75	96	2.5	103	0.034	101	8.7	-1.3	708	180	253	308	241	1097	338.0	400	79	59	77	-0.075	
50	321.000	0.55	0.75	101	2.5	101	0.034	101	7.6	-1.1	691	177	258	322	241	1112	337.8	385	80	59	77	-0.068	
60	326.420	0.54	0.75	103	2.5	100	0.034	100	6.6	-1	680	175	271	327	241	1074	338.8	370	80	59	77	-0.068	
70	331.880	0.55	0.75	105	2.5	102	0.034	101	5.7	-0.9	674	172	286	331	247	1157	342.0	368	80	58	77	-0.068	
80	337.350	0.55	0.75	107	2.5	100	0.034	100	4.9	-0.8	637	172	289	337	254	1062	337.8	346	80	58	78	-0.063	
90	342.830	0.55	0.75	108	2.5	98	0.034	100	4.3	-0.6	611	172	288	333	259	1029	332.6	332	80	58	77	-0.063	
100	348.300	0.55	0.75	109	2.5	96	0.034	100	3.7	-0.6	594	172	285	327	263	1000	328.2	322	81	60	77	-0.060	
110	353.800	0.55	0.75	109	2.5	95	0.034	100	3.3	-0.4	571	172	287	323	267	1000	324.0	305	81	60	76	-0.057	
120	359.350	0.56	0.75	109	2.5	94	0.034	101	2.8	-0.5	554	171	291	321	269	975	321.2	297	80	60	77	-0.054	
130	364.870	0.55	0.75	109	2.5	92	0.034	100	2.5	-0.3	499	170	290	314	269	802	308.4	272	80	60	76	-0.050	
140	370.470	0.56	0.75	109	2.5	91	0.034	102	2.2	-0.3	444	170	284	302	270	746	294.0	253	80	61	77	-0.047	
150	375.970	0.55	0.75	110	2.5	89	0.034	99	2.0	-0.2	394	170	269	288	267	767	277.6	230	79	61	76	-0.044	
160	381.550	0.56	0.75	110	2.5	89	0.034	101	1.8	-0.2	378	171	263	283	263	757	271.6	222	79	61	76	-0.042	
170	387.100	0.56	0.75	110	2.5	88	0.034	100	1.6	-0.2	365	172	255	278	259	735	265.8	216	79	61	77	-0.042	
180	392.665	0.56	0.75	110	2.5	87	0.034	100	1.4	-0.2	346	173	246	269	253	702	257.4	205	79	62	77	-0.040	
190	398.220	0.56	0.75	110	2.5	86	0.034	100	1.3	-0.1	333	174	238	262	250	678	251.4	200	79	62	76	-0.038	
200	403.785	0.56	0.75	110	2.5	85	0.034	100	1.1	-0.2	325	174	232	255	246	690	246.4	198	79	62	75	-0.038	
210	409.350	0.56	0.75	110	2.5	85	0.034	100	0.9	-0.2	328	175	229	252	243	730	245.4	199	79	62	76	-0.038	
220	414.920	0.56	0.75	110	2.5	84	0.034	100	0.7	-0.2	327	176	228	250	240	701	244.2	197	78	62	76	-0.038	
230	420.500	0.56	0.75	110	2.5	84	0.034	100	0.6	-0.1	321	178	224	249	237	684	241.8	194	78	62	75	-0.038	
240	426.050	0.56	0.75	110	2.5	83	0.034	100	0.5	-0.1	309	179	219	244	234	644	237.0	190	78	62	75	-0.038	
250	431.600	0.56	0.75	110	2.5	83	0.034	100	0.3	-0.2	303	180	216	238	233	646	234.0	187	78	62	75	-0.035	
260	437.160	0.56	0.75	110	2.5	83	0.034	100	0.1	-0.2	298	180	213	234	231	631	231.2	184	78	62	75	-0.035	
270	442.722	0.56	0.75	110	2.5	83	0.034	100	0.0	-0.1	292	180	207	231	228	607	227.6	182	77	62	75	-0.035	
Avg Total	148.672	0.55	0.72	104.61		91.96	0.034	100.56								77		78.36	60.89			-0.050	

2-12-03

STOVE TEMPERATURE TEST DATA - METHOD 5G

Client/Model: FPI Royce/Hampton D Project #: 219-5-04-3 Tracking #: 421
 Date: 2-21-03 Test Crew: K. Morgan Run #: 2
 OMNI Equipment ID #: _____

Preburn [X]		Coal Bed:						Range: 2.6 - 3.2				Actual:	
Test []		Data:						TEMPERATURES (oF)				Coal Bed: 2.7	
Time	Fuel Weight	Delta Weight	Stack Draft	Ambient	Top	Bottom	Back	Left	Right	Flue	Flue Catalyst	lb. Inlet	
0	7.3		-0.073	72	830	168	291	303	243	612	1551		
10	7.9	1.4	-0.073	72	733	185	281	321	248	428	1026		
20	6.7	1.2	-0.073	73	707	193	265	330	249	413	1256		
30	5.7	1.0	-0.070	73	711	195	263	351	252	408	1340		
40	4.3	1.4	-0.070	74	770	193	283	365	262	420	1192		
50	3.7	0.6	-0.060	74	640	169	298	370	273	350	951		
60	2.9	0.8	-0.063	75	669	186	288	364	281	359	1100		
70	2.7	0.2	-0.050	74	510	184	273	349	282	284	774		
80													
90													
00													
10													
20													
30													
40													
50													
60													
70													
80													
90													
AVG													
							Preliminary:		107 Kg/Hr			5.27 g/Hr	
												5.42 as of 2-24-03	
												5.23 as of 2-25-03	
												5.12	

Technician signature: L. Morgan Date: 2-21-03

2-15-03

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Run 3

Wood Heater Test Data - EPA Method 5G

Run: **3**
 Manufacturer: FPI Regency
 Model: Hampton D
 Tracking No.: 421
 Project No.: 219-S-04-3
 Test Date: 24-Feb-03
 Beginning Clock Time: 11:29
 Recording Interval: 10 min.
 Total Sampling Time: 120 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.030	0.036	0.046	0.048	0.032	0.038	0.042	0.042
Initial Temp	123	124	126	126	128	130	130	132

OMNI Equipment Numbers: _____

PM Control Module: 20
 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: 0.977
 Barometric Pressure:

	Begin	Middle	End	Average
	29.90	29.87	29.86	29.88

Signature/Date: *H. J. Morgan* 3-14-03
 Tunnel Velocity: 13.70 ft/sec.
 Initial Tunnel Flow: 140.7 scfm
 Average Tunnel Flow: 143.3 scfm
 Tunnel Area: 0.196 ft²
 Post-Test Leak Check: 0.06 @ 10.5 cfm @ "Hg
 Fuel Moisture (dry basis): 21.8 %
 Total Particulate: 7.5 mg
 Filter Holder No.: _____

Elapsed Time	Particulate Sampling Data									Fuel Weight, lb		Wood Heater Temperature Data, °F											Stack
	Gas Meter Cubic Feet	Sample Rate, cfm	Orifice dH	Meter °F	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	443.000		0.00	68	0	127	0.039		12.7		693	213	330	430	347	1006	402.6	460	66	60	66	-0.075	
10	448.300	0.53	0.75	70	2.5	122	0.039	104	10.6	-2.1	808	214	306	409	343	1158	416.0	622	64	51	66	-0.093	
20	453.590	0.53	0.75	76	2.5	128	0.039	103	8.1	-2.5	949	209	300	403	335	1337	439.2	665	72	50	67	-0.093	
30	458.925	0.53	0.75	82	2.5	126	0.039	102	6.0	-2.1	1003	203	321	422	336	1347	457.0	648	74	50	68	-0.093	
40	464.280	0.54	0.75	87	2.5	118	0.039	101	4.6	-1.4	891	198	346	443	347	1261	445.0	569	74	49	67	-0.085	
50	469.685	0.54	0.75	91	2.5	111	0.039	101	3.5	-1.1	788	195	348	450	356	1189	427.4	514	74	50	67	-0.080	
60	475.095	0.54	0.75	93	2.5	106	0.039	100	2.6	-0.9	721	195	341	440	362	1128	411.8	481	73	50	67	-0.078	
70	480.560	0.55	0.75	95	2.5	102	0.039	100	1.9	-0.7	668	196	347	420	364	1098	399.0	443	73	50	67	-0.073	
80	485.950	0.54	0.75	96	2.5	100	0.039	98	1.3	-0.6	641	197	355	411	361	1072	393.0	427	72	50	66	-0.070	
90	491.340	0.54	0.75	96	2.5	98	0.039	98	0.9	-0.4	602	201	344	394	358	965	379.8	401	72	51	67	-0.068	
100	496.825	0.55	0.75	97	2.5	95	0.039	100	0.6	-0.3	543	204	319	374	352	932	358.4	369	72	51	67	-0.063	
110	502.275	0.54	0.75	98	2.5	93	0.039	99	0.3	-0.3	504	207	312	360	346	897	345.8	352	72	52	67	-0.060	
120	507.735	0.55	0.75	98	2.5	92	0.039	99	0.0	-0.3	456	210	298	343	336	830	328.6	329	72	52	68	-0.058	
Avg/Total	64.735	0.54	0.69	88.23		109.11	0.039	100.33									74		71.54	51.23		-0.076	

Fireplace Products International Ltd.
6988 Venture Street
Delta, BC
V4G 1H4

Run 4

Wood Heater Test Data - EPA Method 5G

Run: 4
 Manufacturer: FPI Regency
 Model: Hampton D
 Tracking No.: 421
 Project No.: 219-S-04-3
 Test Date: 25-Feb-03
 Beginning Clock Time: 10:26
 Recording Interval: 10 min.
 Total Sampling Time: 190 min.

Velocity Traverse Data								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
Initial dP	0.036	0.042	0.044	0.038	0.040	0.042	0.044	0.034
Initial Temp	101	101	101	101	101	101	101	101

OMNI Equipment Numbers: _____

PM Control Module: 20
 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: -0.650 "H2O
 Pitot Tube Cp: 0.99
 Meter Box Y Factor: 0.977
 Barometric Pressure:

Begin	Middle	End	Average
29.90	29.88	29.81	29.86

 "Hg

Signature/Date: K. J. Magn 3-14-03
 Tunnel Velocity: 13.67 ft/sec.
 Initial Tunnel Flow: 145.6 scfm
 Average Tunnel Flow: 146.4 scfm
 Tunnel Area: 0.196 ft²
 Post-Test Leak Check: 0.00464 cfm@ "Hg
 Fuel Moisture (dry basi): 20.6 %
 Total Particulate: 19.7 mg
 Filter Holder No.: _____

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	508.200		0.00	71	0	101	0.040		12.0		528	192	309	387	338	829	350.8	331	66	62	68	-0.058	
10	513.520	0.53	0.75	74	2.5	100	0.040	103	10.9	-1.1	579	197	270	352	321	695	343.8	370	67	53	69	-0.065	
20	518.850	0.53	0.75	80	2.5	105	0.040	102	9.2	-1.7	741	198	242	328	303	1192	362.4	478	68	53	69	-0.080	
30	524.190	0.53	0.75	86	2.5	109	0.040	102	7.5	-1.7	863	195	252	331	291	1289	386.4	533	78	53	70	-0.083	
40	529.550	0.54	0.75	90	2.5	108	0.040	101	6.1	-1.4	821	191	276	355	294	1256	387.4	501	74	53	70	-0.080	
50	534.940	0.54	0.75	93	2.5	106	0.040	101	4.9	-1.2	795	189	291	367	301	1383	388.6	488	74	53	70	-0.078	
60	540.400	0.55	0.75	96	2.5	104	0.040	102	3.7	-1.2	769	186	315	384	310	1234	392.8	468	75	53	70	-0.075	
70	545.770	0.54	0.75	97	2.5	101	0.040	100	3.0	-0.7	690	186	323	387	318	1149	380.8	414	74	53	70	-0.068	
80	551.200	0.54	0.75	98	2.5	97	0.040	100	2.5	-0.5	606	187	309	379	321	1028	360.4	372	74	53	71	-0.065	
90	556.650	0.54	0.75	99	2.5	96	0.040	100	2.0	-0.5	604	188	301	368	319	1040	356.0	369	74	54	70	-0.065	
100	562.160	0.55	0.75	100	2.5	95	0.040	101	1.5	-0.5	578	189	293	359	320	959	347.8	351	74	54	70	-0.063	
110	567.580	0.54	0.75	100	2.5	92	0.040	99	1.3	-0.2	496	191	282	348	318	878	327.0	311	75	55	72	-0.055	
120	573.040	0.55	0.75	101	2.5	90	0.040	99	1.0	-0.3	447	193	268	332	311	827	310.2	290	75	55	72	-0.052	
130	578.540	0.55	0.75	101	2.5	89	0.040	100	0.8	-0.2	425	195	283	323	305	812	306.2	280	74	55	72	-0.052	
140	584.030	0.55	0.75	101	2.5	88	0.040	100	0.7	-0.1	392	196	244	312	295	757	287.8	265	74	55	72	-0.050	
150	589.530	0.55	0.75	101	2.5	87	0.040	100	0.5	-0.2	369	196	230	301	285	722	276.2	251	74	55	71	-0.048	
160	595.030	0.55	0.75	101	2.5	86	0.040	100	0.4	-0.1	351	195	222	291	275	710	266.8	243	73	55	71	-0.045	
170	600.530	0.55	0.75	101	2.5	85	0.040	100	0.2	-0.2	334	193	217	279	266	657	257.8	233	73	55	71	-0.045	
180	606.050	0.55	0.75	101	2.5	84	0.040	100	0.1	-0.1	315	190	210	269	257	616	248.2	223	73	55	71	-0.042	
190	611.575	0.55	0.75	102	2.5	84	0.040	100	0.0	-0.1	295	189	206	255	249	576	238.8	211	72	55	71	-0.040	
Avg/Total	103.375	0.54	0.71	94.65		95.35	0.040	100.52								112		73.05	54.45			-0.060	

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