

# **TEST REPORT**

**SCOPE:** EMISSIONS, EFFICIENCY AND OUTPUT

**FUEL:** EPA TEST FUEL (CRIBS)

**TEST STANDARD: EPA** 

**MODEL: ELDORADO WOOD STOVE** 

Notice to reader: Our Eldorado wood stove was tested as part of our 1.6 Series (XTD 1.1) firebox. Therefore, the 1.6 Series (XTD 1.1) is referenced throughout the attached test report.





REPORT NUMBER: 100527551PRT-001 REPORT DATE: February 28, 2012

#### **EVALUATION CENTER**

Intertek Testing Services NA Inc. 22887 NE Townsend Way Fairview, OR 97024

#### RENDERED TO

Stove Builder International, Inc 250, rue de Copenhague Saint-Augustin-de-Desmaures Québec (Canada), G3A 2H3

PRODUCT EVALUATED: Series 1.6 SOLID FUEL ROOM HEATERS

Report of Testing Model XTD 1.1 which represents the 1.6 Series Wood Fuel Room Heater for compliance as an "Affected Facility" with the applicable requirements of the following criteria: EPA Method 28 "Certification and Auditing of Wood Heaters" and EPA Method 5G "Determination of Particulate Matter Emissions from Wood Heaters".

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#### I. INTRODUCTION

Intertek Testing Services NA (Intertek) has conducted testing for Stove Builder's International (SBI) on model line Series 1.6 with the model XTD 1.1 Solid Fuel Room Heater, to evaluate all applicable performance requirements included in EPA Method 28 "Certification and auditing of wood heaters" and Method 5G "Determination of particulate matter emissions from wood heaters."

#### I.A PURPOSE OF TEST

The testing was conducted to determine if the unit is in accordance with U.S EPA requirements under 40 CGR 60 SUBPART AAA, NSPS for Residential Wood Heaters. This evaluation was conducted from October 17-24, 2011.

#### I.B LABORATORY

The testing on the XTD 1.1 Solid Fuel Room Heater was conducted at the client's facility located in St-Augustine-de-Desmaures, Quebec under Intertek's mobile-testing accreditation by the U.S. EPA, Certificate Number 8. The elevation of SBI's laboratory is 190 feet above sea level. The testing was conducted by Intertek engineers Ken Morgan and Florin Anghel.

#### I.C DESCRIPTION OF UNIT

The model XTD 1.1 Solid Fuel Room Heater is constructed of carbon steel. The outer dimensions are 22.25 -inches deep, 27.50 -inches high and 23.50 -inches wide. The unit has a door located on the front with a viewing glass for loading the fuel. The XTD 1.1 represents the basic design features found in all of the 1.6 Series Wood Stoves.

(See product drawings.)

Proprietary drawings and manufacturing methods are on file at Intertek's Portland Oregon facility.

#### I.D REPORT ORGANIZATION

This report includes summaries of all data necessary to determine compliance with the regulations. Raw data, calibration records, intermediate calculations, drawings, specifications and other supporting information are contained in appendices to this report.



#### II. SUMMARIZATION

#### II.A PRETEST INFORMATION

A sample was submitted to Intertek directly from the client. The sample was not independently selected for testing. The unit was inspected on October 17, 2011 immediately prior to the commencement of testing and found to be in good condition. The unit was set up by the manufacturer.

The unit was placed on the test stand and instrumented with thermocouples in the specified locations. Prior to beginning the emissions tests the unit was operated for a minimum of 10 hours at high-to-medium burn rates to break in the stove. The unit was found to be operating satisfactory during this break-in. The 10 plus hours of pre-burning were conducted on 25 consecutive R&D runs performed by the manufacturer immediately preceding the dates of the testing reflected in this report. The fuel used for the break-in process was dimensional Douglas fir lumber.

Following the pre-burn break-in process, the unit's chimney system and laboratory dilution tunnels were cleaned using standard wire brush chimney cleaning equipment. Cleaning of the dilution tunnel and chimney were conducted by the manufacture on October 13, 2011 and documented with photographs. Visual inspection was performed by Intertek staff on October 17, 2011.

#### II.B INFORMATION LOG

#### TEST STANDARD

From October 17, 2011 to October 24, 2011, the unit was tested for EPA emissions.

#### Deviation from Standard Method

No deviations from the standards were performed, however, only the applicable sections from each standard were used during all testing.



#### II.C SUMMARY OF TEST RESULTS

RUN #1 October 18, 2011. Air control set at full closed position (fixed 0.469 in. diameter hole in shutter), burn time was 280 minutes with a category 2 burn rate of 0.90 kg/hr. The door open for 90 seconds, and then closed. The air control was open for 5 minutes, and then fully closed. The fan was off for the first 30 minutes, and then turned on low for the duration thereafter.

RUN #2 October 19, 2011. Air control set at 3/16" from full closed position. Burn time was 210 minutes with a category 2 burn rate of 1.19 kg/hr. The door open for 90 seconds, and then closed. The air control was open for 5 minutes, and then set with a 3/16 drill gauge from fully closed. The fan was off for the first 30 minutes, and then turned on low for the duration thereafter.

RUN #3 October 20, 2011. Air control set at 3/4" from full closed position. Burn time was 160 minutes with a category 3 burn rate of 1.56 kg/hr. The door open for 75 seconds, and then closed. The air control was open for 5 minutes, and then set with a 3/4" drill gauge from fully closed. The fan was off for the first 30 minutes, and then turned on low for the duration thereafter.

RUN #4 October 21, 2011. Air control set to fully open position. Burn time was 130 minutes with a category 4 burn rate of 1.93 kg/hr. The door open for 90 seconds, and then closed. The air control was fully open for the duration of the test. The fan was off for the first 30 minutes, and then turned on low for the duration thereafter.

RUN #5 October 24, 2011. Air control set at full closed position (fixed 0.469 in. diameter hole in shutter), burn time was 260 minutes with a category 2 burn rate of 0.95 kg/hr. The door open for 90 seconds, and then closed. The air control was open for 5 minutes, and then fully closed. The fan was off for the duration of the test (fan confirmation test).

## II.D SUMMARY OF OTHER DATA

#### EMISSIONS

Run Number	Test Date	Burn Rate (kg/hr)	Emission Rate (g/hr)	Adjusted Emission Rate (g/hr	Heating Efficiency (% HHV)	Heating Efficiency (% LHV)
1	10-18-11	0.90	3.37	4.99	**	**
2	10-19-11	1.19	2.91	4.42	67.2	72.7
3	10-20-11	1.56	1.00	1.82	66.4	71.7
4	10-21-11	1.93	2.88	4.38	69.7	75.3
*5	10-24-11	0.95	3.73	5.42	63.9	69.0

<sup>\*</sup> Run 5 was conducted as a fan-confirmation test and is therefore not included in the weighted average.

## WEIGHTED AVERAGE CALCULATION

Test No.	Burn Rate	(E) Average Emission Rate g/hr	Heat Output (Btu/hr)	Probability	(K) Weighting Factor	(KxE)
1	0.90	4.99	10852.38	0.3000	0.5380	2.6846
2	1.19	4.42	14349.26	0.5380	0.4832	2.1357
3	1.56	1.82	18810.79	0.7832	0.3636	0.6618
4	1.93	4.38	23272.33	0.9016	0.2168	0.9496
				Totals:	1.6016	6.4317
			Weighted	average emi	ission rate:	4.0158

#### TEST FACILITY CONDITIONS

Run	Room Temp. °F before	Room Temp °F after	Baro. Pres. In. Hg before	Baro. Pres. In. Hg after	R.H. % before	R.H. % after	Air Vel. Ft/min before	Air Vel. Ft/min after
1	79	82	29.69	29.74	49.0	49.0	<50	<50
2	80	78	30.11	30.07	33.7	32.0	<50	<50
3	83	85	29.72	29.60	49.0	49.0	<50	<50
4	83	85	29.65	26.67	38.0	39.0	<50	<50
5	85	84	30.08	29.92	30.0	34.0	<50	<50



<sup>\*\*</sup> Flue gas concentrations were not recorded for Run 1

# DILUTION TUNNEL FLOW RATE MEASUREMENTS AND SAMPLING DATA (5G-3)

Run No.	Burn Time	Velocity	Volumetric Flow Rate	Total Temp.	(35.2.2.000)	ume nple		culate (mg)
INO.	(min)	(ft/sec)	(dscf/min)	(°R)	1	2	1	2
1	280	7.36437	141.77	547.453	29.965	30.036	11.6	12.2
2	210	7.96986	153.24	555.060	22.456	23.326	7.2	7.3
3	160	7.32338	133.39	577.548	17.019	17.489	2.2	2.1
4	130	8.16901	142.39	603.529	13.238	13.447	4.6	4.4
5	260	7.43603	142.53	555.106	26.638	26.386	11.6	11.5

#### DILUTION TUNNEL DUAL TRAIN PRECISION

	Sample	Sample Ratios		Total Emissions (g)		% Deviation	
Run No.	Train 1	Train 2	Train 1	Train 2	% Deviation	of 7.5% of 7.5 grams*	
1	1324.8	1321.6	15.37	16.12	1.99	2.65	
2	1433.0	1379.6	10.32	10.07	1.00	1.18	
3	1254.0	1220.4	2.76	2.56	3.06	1.48	
4	1398.3	1376.5	6.43	6.06	2.49	2.91	
5	1391.2	1404.5	16.14	16.15	0.03	0.05	

<sup>\*=</sup> As described in Method 5G-3 section 16.2.5

#### **GENERAL SUMMARY OF RESULTS**

Run No.	Burn Rate (kg/hr)	Change In Surface Temp (°F)	Initial Draft (in/H <sub>2</sub> O)	Run Time (min)	Average Draft (in/H <sub>2</sub> O)
1	0.90	-86.32	035	280	041
2	1.19	-42.44	045	210	048
3	1.56	-53.36	035	160	064
4	1.93	-79.50	035	130	068
5	0.95	-93.68	055	260	051

#### III. PROCESS DESCRIPTION

### III.A TEST SET-UP DESCRIPTON

A standard 6" diameter single wall pipe and insulated chimney system was installed to 15' above floor level. The unit controls were set to the lowest setting during the test.



#### III.B AIR SUPPLY SYSTEM

Combustion air enters at front of the firebox through an opening at the bottom of the firebox. This air is controlled by a sliding damper, which covers the inlet hole. The lever is located under the ash lip. All gases exit through the 6" flue

#### IV. SAMPLING SYSTEMS

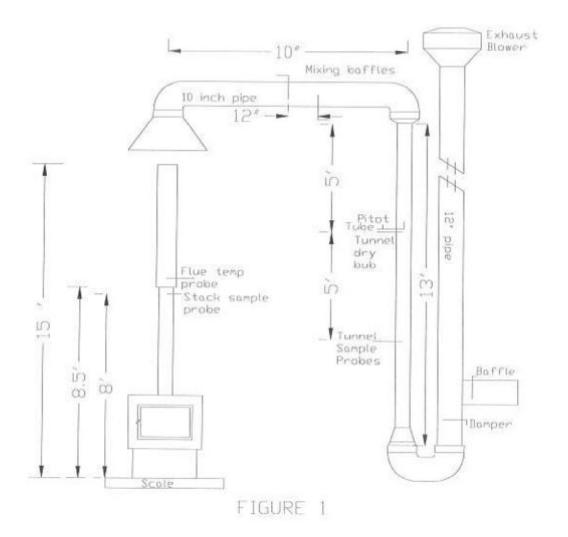
### IV.A. SAMPLING LOCATIONS

Particulate samples are collected from the dilution tunnel at a point 20 feet from the tunnel entrance. The tunnel has two elbows and two mixing baffles in the system ahead of the sampling section. (See Figure 3.) The sampling section is a continuous 13 foot section of 6 inch diameter pipe straight over its entire length. Tunnel velocity pressure is determined by a standard Pitot tube located 60 inches from the beginning of the sampling section. The dry bulb thermocouple is located six inches downstream from the Pitot tube. Tunnel samplers are located 60 inches downstream of the Pitot tube and 36 inches upstream from the end of this section. (See Figure 1.)

Stack gas samples are collected from the steel chimney section 8 feet  $\pm$  6 inches above the scale platform. (See Figure 2.)

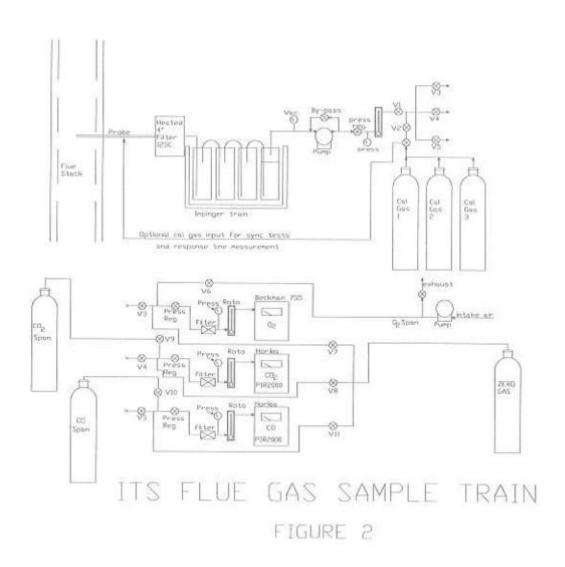


## IV.A.(1) DILUTION TUNNEL



#### IV.B.OPERATIONAL DRAWINGS

## IV.B.(1) STACK GAS SAMPLE TRAIN



## IV.B.(2). DILUTION TUNNEL SAMPLE SYSTEMS

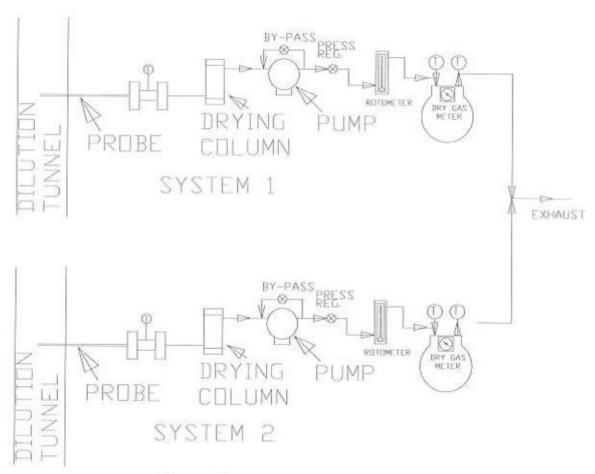


Figure 3

#### V. SAMPLING METHODS

#### V.A. PARTICULATE SAMPLING

Particulates were sampled in strict accordance with EPA Method 5G-3. This method uses two identical sampling systems with binder free 47-mm diameter glass filters. The dryers used in the sample systems are filled with "Drierite" before each test run.

#### VI. QUALITY ASSURANCE

#### VI.A. INSTRUMENT CALIBRATION

### VI.A. (1). DRY GAS METERS

At the conclusion of each test program the dry gas meters are checked against a standard dry gas meter. Three runs are made on each dry gas meter used during the test program. The average calibration factors obtained are then compared with the six-month calibration factor and, if within 5%, the six-month factor is used to calculate standard volumes. Results of this calibration are contained in Appendix D.

An integral part of the post test calibration procedure is a leak check of the pressure side by plugging the system exhaust and pressurizing the system to 10" W.C. The system is judged to be leak free if it retains the pressure for at least 10 minutes.

The standard dry gas meter is calibrated every 6 months by a third-party accredited calibration laboratory. The process involves sampling the train operation for 1 cubic foot of volume. With readings made to .001 ft<sup>3</sup>, the resolution is .1%, giving accuracy higher than the ±2% required by the standard.

## VI.A.(2). STACK SAMPLE ROTAMETER

The stack sample rotometer is checked by running three tests at each flow rate used during the test program. The flow rate is checked by running the rotometer in series with one of the dry gas meters for 10 minutes with the rotometer at a constant setting. The dry gas meter volume measured is then corrected to standard temperature and pressure conditions. Rotometers were used to monitor the flow-rates during the tests in order to ensure proportionality, but the inline dry gas meters were used to determine the actual sampled volumes.



### VI.A.(3). GAS ANALYZERS

The continuous analyzers are zeroed and spanned before each test with appropriate gases. A mid-scale multi-component calibration gas is then analyzed (values are recorded). At the conclusion of a test, the instruments are checked again with zero, span and calibration gases (values are recorded only). The drift in each meter is then calculated and must not exceed 5% of the scale used for the test.

At the conclusion of each unit test program, a five-point calibration check is made. This calibration check must meet accuracy requirements of the applicable standards. Consistent deviations between analyzer readings and calibration gas concentrations are used to correct data before computer processing. Data is also corrected for interferences as prescribed by the instrument manufacturer's instructions.

#### VI.B. TEST METHOD PROCEDURES

### VI.B.(1). LEAK CHECK PROCEDURES

Before and after each test, each sample train is tested for leaks. Leakage rates are measured and must not exceed 0.02 CFM or 4% of the sampling rate. Leak checks are performed checking the entire sampling train, not just the dry gas meters. Pre-test and post-test leak checks are conducted with a vacuum of 10 inches of mercury. Vacuum is monitored during each test and the highest vacuum reached is then used for the post test vacuum value. If leakage limits are not met, the test run is rejected. During, these tests the vacuum was typically less than 2 inches of mercury. Thus, leakage rates reported are expected to be much higher than actual leakage during the tests.

## VI.B.(2). TUNNEL VELOCITY/FLOW MEASUREMENT

The tunnel velocity is calculated from a center point Pitot tube signal multiplied by an adjustment factor. This factor is determined by a traverse of the tunnel as prescribed in EPA Method 1. Final tunnel velocities and flow rates are calculated from EPA Method 2, Equation 6.9 and 6.10. (Tunnel cross sectional area is the average from both lines of traverse.)

Pitot tubes are cleaned before each test and leak checks are conducted after each test.

## VI.B.(3). PM SAMPLING PROPORTIONALITY (5G-3)

Proportionality was calculated in accordance with EPA Method 5G-3. The data and results are included in Appendix C.



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#### VII. CONCLUSION

These tests demonstrate that this unit is an affected facility under the definition given in the regulation. The weighted average emission rate of 4.02 g/hr meets the current Federal requirements..

### VII.A RESULTS AND OBSERVATIONS

The Model XTD 1.1 Solid Fuel Room Heater has been found to be in compliance with the applicable performance and construction requirements of the following criteria: EPA Method 28 "Certification and auditing of wood heaters" and Method 5G Determination of particulate matter emissions from wood heaters."

#### INTERTEK TESTING SERVICES NA

Reported by:

**Test Engineer** 

Reviewed by: Band

Reviewer



Appendix C
Sample Analysis



CLIENT: SBI	MODEL: XTD 1.1	PROJECT #: G100527551
DATE: 10/26/2011	RUN #:1	
SAMPLE ID #:	PRT1110121353-001	
NTERTEK EQUIPMENT #'s:	SBI-206, SBI-12	21, 180-195, 180-110

Sample Train A	1					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)	
FRONT FILTER CATCH	FILTER	33	247.3	118.9	10.3	
REAR FILTER CATCH	FILTER	35	241.3	118.1	10.5	
PROBE & FILTER HOLDER	PROBE	30	135904.2	135902.9	1.3	
			Total Pa	rticulate, mg	11.6	

Sample Train A					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	31	249.7	119.0	10.9
REAR FILTER CATCH	FILTER	32		119.8	
PROBE & FILTER HOLDER	PROBE	32	136020.6	136019.3	1.3
			Total Pa	rticulate, mg	12.2



CLIENT: SBI	MODEL: XTD 1.1	PROJECT #: G100527551
DATE: 10/26/2011	RUN #:2	
SAMPLE ID #:	PRT1110121353-001	
NTERTEK EQUIPMENT #'s:	SBI-206, SBI-1:	21, 180-195, 180-110

Sample Train A	1					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)	
FRONT FILTER CATCH	FILTER	36	244.0	118.4	12/12	
REAR FILTER CATCH	FILTER	37	244.6	119.7	6.5	
PROBE & FILTER HOLDER	PROBE	33	135995.4	135994.7	0.7	
			Total Pa	rticulate, mg	7.2	

Sample Train A					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	38	0.45.0	118.5	
REAR FILTER CATCH	FILTER	39	245.8	120.1	7.2
PROBE & FILTER HOLDER	PROBE	34	108411.6	108411.5	0.1
			Total Pa	rticulate, mg	7.3



CLIENT: SBI	MODEL: XTD 1.1	PROJECT #: G100527551
DATE: 10/26/2011	RUN #:3	
SAMPLE ID #:	PRT1110121353-001	
NTERTEK EQUIPMENT #'s:	SBI-206 SBI-12	1 180 195 190 110

Sample Train A					X11
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	40	240.4	119.4	
REAR FILTER CATCH	FILTER	41	240.1	118.8	1.9
PROBE & FILTER HOLDER	PROBE	35	107838.3	107838.0	0.3
			Total Pa	rticulate, mg	2.2

Sample Train A					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	42	0.40.0	121.0	
REAR FILTER CATCH	FILTER	43	242.8	119.8	2.0
PROBE & FILTER HOLDER	PROBE	36	108503.3	108503.2	0.1
			Total Pa	rticulate, mg	2.1



CLIENT: SBI	MODEL: XTD 1.1	PROJECT #: G100527551
DATE: 10/26/2011	RUN #:4	
SAMPLE ID #:	PRT1110121353-001	
NTERTEK EQUIPMENT #'s:	SBI-206 SBI-12	1 180 105 180 110

Sample Train A	1				
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	44	242.4	118.8	
REAR FILTER CATCH	FILTER	45	243.1	120.5	3.8
PROBE & FILTER HOLDER	PROBE	37	108384.5	108383.7	0.8
			Total Pa	rticulate, mg	4.6

Sample Train A					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	46		118.6	
REAR FILTER CATCH	FILTER	47	241.4	119.3	3.5
PROBE & FILTER HOLDER	PROBE	22	139580.3	139579.4	0.9
			Total Pa	rticulate, mg	4.4

ENGINEER: 16 1. Morga DATE: 11-21-11



CLIENT: SBI	MODEL: XTD 1.1	PROJECT #: G100527551
DATE: 10/26/2011	RUN #:5	
SAMPLE ID #:	PRT1110121353-001	
NTERTEK EQUIPMENT #'s:	SBI-206 SBI-	121 180-195 180-110

Sample Train A	1						
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)		
FRONT FILTER CATCH	FILTER	1	054.4	122.5	**		
REAR FILTER CATCH	FILTER	2	254.4	122.4	9.5		
PROBE & FILTER HOLDER	PROBE	17	139749.7	139747.6	2.1		
			Total Pa	rticulate, mg	11.6		

Sample Train A					
SAMPLE COMPONENT	REAGENT	FILTER # OR PROBE #	FINAL WEIGHTS (Filters Combined)	TARE, mg	PARTICULATE, mg (Final Weight - Tare)
FRONT FILTER CATCH	FILTER	3	2547	122.8	
REAR FILTER CATCH	FILTER	4	254.7	122.0	9.9
PROBE & FILTER HOLDER	PROBE	18	147892.0	147890.4	1.6
			Total Pa	rticulate, mg	11.5

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V. Pelletler AUDIT 0.2=0.200g.

Audit 200mg = 0.1919

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XTD 1.9 V.Pelletier → P.

Projet: Date: Tech: Standard:

	2011-08-23	201-08-25	2011-08-26 2011-08-26 2011-08-26 2011-03-42 2011-0343 2011-10-07 2011-10-12 2011-10-17	2011-08-26	2011-08-26	201-03-12	5 PCO 1100	0-01-1000	1-01-110× 1	-01-1102 7
ld. Filtres	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
	1 0.1336	0.1336								
	12									
	30.1330	0.1330								
	40,1231									
	50.1287	0.1289								
	60.1229	0.1229								
	7 0.1302	40.1304								
	80.1228	0.1228								
	6	0.1248		0.1247						
-	10	0.1222		0 (724						
	11	0.12.38		0.1234日						
	12	0.1233		0.1233						
-	13	0.1311			0.1308	0.1306				
-	14	0.4232			0.1231	0.1231				
7	15	0.1325			0.1322	0.1322				
-	16	0.4236			0.1237	0.1237 0.1238				
1	17 0.1225		0.1230	0,1245		0.1247		0,12.46	0,1244	0.1246
-	18 0.1224		01223	0.1227		O.1225A	_	0.1224	0.1224	01226
-	19 0. (223		0.1222	0.1239		0.1240		0,12.39	01238	0.1240
2	FP11.002		Stw.0	0.1173		0.1175	1135	0,1175	0,1174	0.1175
14	21 0.1224									
2	22 0.1228									
2	23 0.11 85									
2	24 0.1230									

XTD 1.9 Projet:

Date:

V, Pelletier 7 /. Standard Tech:

Date 71-11-11-11-1 18:30 P 136,2245 136,2028 Date 2011-10-13 1362233 8:04 36,902 Date 2011-10-07 13:48 135,2240 136,2233 Date 2011-03-25 2011-08-26 2011-03-26 2011-01-26 2011-05-12 133,8298 (39,8293 17:00 136,8336 Date 12 R: 15 13 R:00 136,8340 Date 136,3023 39,2494 136,1830 39,0690 136,0412 140,1231 136,3020 136,2238 Date 136,8335 136,0420 21 (39,2493 (39,2495 18430 136, 1891 123,0688 133,0681 05 Date 2011-08-25 18 4年8517 17 139,7496 22 (39,5395 25 136,8331 26 133, 8289 19/140,1233 27 136,3017 28 136,2235 Date 24 30 31 32 ld. Probes

Projet: Date: Tech: Standard:

V. Pelletier

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R	200	00
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Id. Filtres   Date	Standard:				200mg=0.20008	0.2000%	1.00	1000 002= 0.1359 of 200.0	\$ 1555 5	K.i.			
2011-10-12 2011-10-13 2011-10-17 201188 0,1187 0.1187 - RJUJ 1A 201186 0,1187 0.1187 - RJUJ 1A 201189 0,1189 0.1185 - RJUJ 1A 201189 0,1189 0.1189 0.1189 - RUJ 1A 201188 0,1189 0.1189 0.1189 0.1188 0.1189 0.1189 0.1188 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1188 0.188 0.1188 0	ld. Filtres			Date //:	3 Date 11:00	Date	Date	Date	Date	Date	Date	Date	Г
01188 0,1187 0.1187 0.1187 0.1187 0.1187 0.1187 0.1186 0.1186 0.1189 0.1186 0.1187 0.1188 0.1189 0.1185 0.1185 0.1185 0.1185 0.1185 0.1185 0.1185 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1188 0.1			2011-10-12		2011		2011-10-18						
01196 0,1194 0,1196 - RUDIA 01180 0,1189 0,1185 - RUDIA 01184 0,1185 0,1185 - RUDIA 01204 0,1203 - SCRAP 01209 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1189 0,1185 - RUDIA 01189 0,1189 0,1189 0,1185 - RUDIA 01189 0,1189 0,1185 0,1188 - 0,1189 0,1188 0 01201 0,1201 0,120 - RUDIA 01189 0,1189 0,1188 - 0,1189 0,1189 0,1188 0 01201 0,1206 0,1205 - 0,189 0,11		25	0.1188	0.1187	0.1187	RUW! A							
0 1180 0 1180 0 M82 Run 16 0 1204 0 1203 0 Sept 80.1202 0 1204 0 1203 0 M203 Sept 80.1202 0 1209 0 1203 0 M203 Sept 80.1202 0 1189 0 1189 0 M84 Sun 1 A 0 1189 0 1189 0 M84 Sun 28 0 1189 0 1189 0 M85 V Run 28 0 1189 0 1185 0 M85 V Run 28 0 1189 0 1189 0 M85 V Run 28 0 1189 0 1189 0 M85 V Run 28 0 1189 0 1189 0 M85 V Run 28		26			O. M96 V	RUULA							
0 1184 0 1185 0.1185 " Row 1 b  0 1204 0 1203 0.1203 " SCRAP  0 1201 0 1203 0.1203 " SCRAP  0 1184 0 1198 0.1189 " Row 1 A  0 1189 0 1189 0.1184 0.1184 " Row 2A  0 1189 0 1189 0.1184 0.1184 " Row 2A  0 1189 0 1189 0.1185 " Row 2A  0 1189 0 1189 0.1188 " Row 2B  0 1187 0 1187 0.1188 " Row 2B  0 1187 0 1185 0.1188 " Row 2B  0 1187 0 1185 0.1188 " Row 2B  0 1187 0 1187 0.1188 " Row 2B  0 1187 0 1185 0.1188 " Row 2B  0 1187 0 1185 0.1188 " Row 2B  0 1187 0 1185 0.1188 " Row 2B  0 1187 0 1187 0.1188 " Row 2B  0 1187 0 1188 0.1188 " Row 2B  0 1188 0 0.1186 0.1188 " Row 2B		27	0.1180	0.1180	O. M82-	13 1 to							
0 1204 0 1203 0.1203 5 5 CRAP 0.1202 0 1201 0 1301 0 1300 2 KRAP 0 1201 0.1300 2 KRAP 0 1199 0.1199 0.1198 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1189 0.1188 0.188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.118 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.1188 0.		28	0.1184	0,1185	385 -	Row 1 b							
0 1301 0 1201 0.1200 Sepp 0 1184 0 1191 0.1130 Rull b 0 1188 0 1189 0.1183 Rull A 0 1181 0.1181 0.1184 Rull A 0 1184 0.1181 0.1184 Rull 2A 0 1184 0.1187 0.1184 V.U. 2A 0 1185 0.1185 0.1185 V.U. 2B 0 1185 0.1185 0.1188 V.U. 2B 0 1189 0.1185 0.1188 V.U. 2B 0 1187 0.1188 0.1188 V.U. 2B 0 12610 0.1201 0.1205 V.U. 2B 0 1187 0.1188 0.1188 V.U. 2B 0 1187 0.1188 0.1188 V.U. 2B 0 1187 0.1185 0.1188 V.U. 2B 0 1196 0.1196 0.1188 V.U. 2B 0 1197 0.1196 0.1188 V.U. 2B 0 1198 0.1196 0.1198 V.U. 2B 0 1196 0.1196 0.1198 V.U. 2B 0 1196 0.1196 0.1198 V.U. 2B 0 1196 0.1196 0.1198 V.U. 2B 0 1197 0.1196 0.1196 0.1198 V.U. 2B 0 1197 0.1197 0.1197 0.1197 V.U. 2B 0 1197 0.1197 0.1197 V.U. 2B		29	0,1204	0.1203	0.12031	SCRAP							
0,1184 0,1191 O.M.SOV RUN 1 b 0,1198 0,1189 O.M.SS ~ RUN 1 b 0,1181 0,1181 O.M.SA ~ RUN 1 A 0,1181 0,1181 O.M.SA ~ RUN 2 A 0,1184 0,1187 O.M.ST ~ RUN 2 B 0,1185 0,1185 O.M.SS ~ RUN 2 B 0,1188 0,1188 O.M.SS ~ RUN 2 B 0,1188 0,1188 O.M.SS ~ RUN 2 B 0,1188 0,1188 O.M.SS ~ RUN 2 B 0,1188 0,1185 O.M.SS ~ RUN 2 B 0,1187 0,1187 O.M.SS ~ RUN 2 B 0,1187 0,1185 O.M.SS ~ RUN 2 B 0,1196 0,1196 O.M.SS ~ RUN 2 B 0,1197 0,1198 O.M.SS ~ RUN 2 B 0,1198 0,1198 O.M.SS ~ RUN 2 B 0		30	01201	0 1201	0.12000	SCRAP							
0,1199 0,1199 0,1198 7 Rul 16 0,1199 0,1189 0,1189 8un 1 A 0,1189 0,1181 0,1181 0,1181 0,1181 0,1181 0,1181 0,1181 0,1181 0,1181 0,1181 0,1182 0,1185 0,1185 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1188 0,1187 0,1185 0,1188 0,18		31	0.1184	0.1191	O.M.30v	RUN 1 15		0,1232					
0,1198 0,1189 0.4189 'Rue 1 A 0,1191 0,1191 SCRAP 0,1181 0,1181 0.4184 Rue 2A 0,1184 0,1184 0.4187 CANST PROAZA 0,1185 0,1185 O.4185 PROAZA 0,1184 0,1189 0.4188 POUNSS PO		32	0,1199	0.1198	38	RUN 16		D.120G					
0   191   0   191   SCRAF 0   184   0   181   0.4184 - ROW 1.4 0   184   0   184   0.4184 - ROW 24 0   198   0   197   0.4204 - ROW 25 0   194   0   185   0.4204 - ROW 25 0   194   0   188   0.4188 - ROW 25 0   198   0   188   0.4188 - ROW 25 0   198   0   188   0.4188 - ROW 20 0   187   0   187   0.4188 - ROW 20 0   187   0   187   0.4188 - ROW 20 0   198   0   185   0.4188 - ROW 20 0   198   0   198		33	11	0,1189	1681	Run 1 A		D.1287					
0 1181 0 1181 0 .AABA - ROM 1.A 0 1184 0 1184 0 .ABA - ROM 2.A 0 1185 0 1185 0.ABS - ROW 2.B 0 1201 0 .A20A - ROW 2.B 0 1189 0 .ABB - ROW 2.B 0 1188 0 .ABB - CANSE - CAN		34	0.1191	0.1191	SCRAF								
0 1184 0 1184 0.M84 V 0.M84 V 0 1198 0 1185 0.M85 V 0 1185 0.M85 V 0 1184 0.188 0.M88 V 0 1188 0.M88 V 0 1188 0.M88 V 0 1187 0		35	0 1181	0.1181	0.44810	RUM 1 A		F841.0					
0 1198 0 1197 0.M37 v 20185 v 20185 v 20185 v 20194 0 1188 0.M88 v 20198 0.M88 v 20198 0.M88 v 20187 0.M88 v 20187 0.M88 v 20187 0.M88 v 20193 0.M88 v 20193 0.M88 v 20193 0.M88 v 20193 0.M86 v 20193		36	0.1184	0.1184	D.M.84 V	Run 2A							
0,1185 0,1185 0,485 V 0,1301 0,1301 0,4204 V 0,1188 0,1188 0,428 V 0,1187 0,1187 0,428 V 0,1187 0,1187 0,428 V 0,1187 0,1187 0,4205 V 0,1187 0,1185 0,4205 V 0,1187 0,1185 0,4205 V		37	0, 1198	0.1197	D.M37 V	RUN ZA							
0 1201 0 1201 0.0201 0.0201 0.0194 0.0193 0.0188 0.0088 0.008		38	0,1185	0,1185	O.4185 V	RUNZ FR							
0 1194 0 1193 0 1188 0 1188 0 1198 0 1198 0 1187 0 1187 0 1187 0 1185 0 1193 0 1195		39	0,1201		0.4201~	Row 25							
0,188 0,188 0.12 0,198 0,198 0.12 0,1187 0,1187 0.12 0,187 0,1187 0.12 0,187 0,1185 0.12 0,1193 0,1193 0.11		40	0 1194	0,1193	0.11940								
0 12410 0 1210 0.12 0 1197 0 1198 0.1N 0 1206 0 1206 0.12 0 1187 0 1185 0.10 0 1193 0 1193 0.10		41	0. 1/88	0.1188	0.1188 -								
0, 1198 0, 1198 0.M 0, 1206 0, 1206 0.12 0, 1187 0, 1185 0.M 0, 1193 0, 1193 0.M		42	0 12610	01210	0.1240 -								
0, 1187 0, 1187 0.V 0, 1306 0, 1306 0.V2 0, 1187 0, 1185 0.M 0, 1196 0, 1196 0.V		43	0,1198	0,1198	O. M938 ~								
0,1206 0,1206 0.12 0,1187 0,1185 0.M 0,1193 0,1192 0.M		44	0,1187	0,1187	-								
0,1187 0,1185 O.N 0,1193 0,1193 O.N 0,1196 0,1196 O.V		45	0.1206	120	0.1205 1								
0,1193 0,1192 0.M		46	0.1187	0,1185	O.M86 V								
0,1196 0,1196 0.11		47		119	0.M33~								
		48	0,1196	0.1196	-								

Projet:

Date:

V. Pelletier Tech:

Standard:

2003=200.001 20091.=200.001341. 2013-10-12 201-10-13 2011-10-17 581-206 FIRST

108,5026 108 5027	d. Probes Date Date Date Date Date Date Date Date	Nate of the state	Date	Date	Acil 10- 26	11 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7			135, 1834 (35, 2035) (35, 2000) (35, 2000) (35, 2000)	1831 9027 0995 0188 9974 4111	135, 135, 135, 108, 108, 108, 108, 108, 108, 108, 108	
Construction of the Constr	1828 35 1831 135,1834 Run 1 RB 135, 3023 Ruh 1 A 135, 9027 135, 1000 Ru 1 BB 135, 0188 11 11 11 11 11 11 11 11 11 11 11 11				RUN 4.A 108,3837	PUNTA	(08,3839			108,3933	108	37
	135, 1828   35, 1831   135, 1834   8001   183, 1828   135, 9026   135, 9027   135, 9023   125, 9023   125, 0003				108.3837	PUN 4A	108.2839			202	100 303	37
	135, 1828   35, 1831   135, 1834   2011-10-18   135, 1828   135, 9027   125, 9	-					107,8380	RUHJA		837	107	3
107, 8376 107, 8376 RUHJA	135, 1828   35, 1831   135, 1834   8001   10018   135, 9027   135, 9027   135, 9020   137,0992   137,0992   136,0189   136,0189   136,0189   136,0189   136,0189   135,9944   135,9944   135,9950   135,9944   135,9944   135,9950   135,9944   13	+				Run 2 B	108,4413				108,4	37
108,4110 108,4111 108,4115 107,8376 107,8376 RUHJA 107,8380	135, 1828   35, 1831   844   844   135, 0189   135, 0189   136, 0188   136, 0189   136, 01					RUN ZA	4455,251		135,9950	4444	135	m
135, 9941 135, 9944 135, 3950 (135, 3947) 108, 4110 108, 4111 108, 4115	135, 1828   35, 1831   135, 1834   Run 1 Ra   135, 3023   Run 1 A   137, 0992, 137, 0000, Run 1 Run					RUHA E	136,0133		136,0136	8810	136,	3.
136,0189 136,0188 126,0136 136,0133 135,9941 135,9944 135,9950 135,3947 108,4110 108,4111 108,4115 107,8376 107,8376 RUH3A 107,8380	135, 1828 135, 1834 RUNI RO 135, 4026 135, 9027 135, 3033 RUHIN	-					_	RU/01 (80)	137,1000	0995	137	3.
137,0992 137,0995 132,1000 Rull 186,0432 136,0189 136,0188 136,0436 135,9947 135,9941 135,9949 135,9350 108,4445 108,4110 108,4111 RUHJA 107,8380	135, 1828 135, 1834 Run 1 RM					RUTIS			155,3033	9027	135,	30
135, 4026 135, 9027 125, 3033 137,0992 137,0995 137,1000 Rull 186,0135 136,0189 136,0188 126,0136 135,9941 135,9950 135,9941 135,9949 135,3950 108,4115 108,4110 108,4111 107,8380	81-01-1102									35,1831	135	25
135, 1828   35, 1831   135, 1834   841   868   135, 3023   135, 4026   135, 9027   1455, 3035   135, 0045   135, 0445   137, 0445   136, 0188   136, 0188   136, 0188   136, 0188   135, 9944   135, 9944   135, 9950   108, 4110   108, 4111   107, 8376   8376   80434   407, 8380	81-01-1102										3	28
135, 1828   35, 1831   135, 1834   Rum   Ra 135, 4026   135, 4027   135, 3023   137, 3023   137, 0995   134, 1000   Rum   Rab 137, 0992   137, 0995   134, 1000   Rum   Rab 136, 0189   136, 0188   136, 0136   136, 0135   108, 4115   108, 4115   108, 4115   107, 8380   107, 8370	2011-10-18										7	2.
135, 1828   35, 1831   135, 1834   2001   183, 3023   135, 9027   135, 3033   137, 0995   137, 0900   137, 0900   137, 0900   137, 0995   137, 0900   137, 0995   137, 0900   137, 0996   136, 0188   136, 0189   135, 9944   135, 9950   135, 9941   135, 9944   135, 9950   108, 4445   107, 8376   107, 8376   107, 8380	201-10-18										10	28
135, 1828   35, 1831   135, 1834   Run   RB 135, 1926   135, 9027   135, 3023   135, 3023   137, 0995   137, 1000   Run   RB 136, 0189   136, 0188   136, 0136   135, 0135   135, 9944   135, 9950   135, 9944   135, 9950   108, 4110   108, 4111   108, 4115   107, 8380   107, 8370   107, 8380   107, 8370   1	81-01-102										5	2.5
135, 1828   35, 1831   135, 1834   Rum   RM   135, 9025   135, 9027   135, 3033   135, 3023   137,0992   137,0992   137,0992   137,0992   137,0992   137,0992   135, 0188   136,0196   135, 9944   135,9950   135,9941   135,9944   135,9950   108,4415   108,4415   107,8376   Ruh 3A   107,8380	2011-10-18										1	2.
135, 1828 135, 1831 135, 1834 Run 1 RB 135, 9026 135, 9027 125, 3033 137, 0992 137, 0995 137, 1000 Rull 180 136, 0189 136, 0188 136, 0196 135, 9941 135, 9949 135, 3950 108, 4110 108, 4111 107, 8376 107, 8376 RUH 3A 107, 8380	201-10-18										200	2
135, 1828   35, 1831   125, 1834   Run   Ra 135, 1828   135, 9027   125, 1834   Run   Ra 135, 0992   135, 9027   125, 3023   Run   Ra 136, 0189   136, 0189   126, 0136   Run   Ra 135, 9941   135, 9944   135, 3950   Run 3A   108, 41157   108, 41157   107, 8380	81-01-102										2	2.
135, 1828   135, 1831   135, 1834   Rum 1 RB   135, 9027   135, 9037   135, 9037   135, 9037   135, 9038   136, 0188   136, 0188   136, 0189   136, 0189   135, 9944   135, 9950   135, 9941   135, 9944   135, 9950   108, 4445   107, 8376   Ruh 3A   108, 4445	2011-10-18										1	2
135, 1828 135, 1831 135, 1834 844 135, 3023 135, 9026 135, 9027 135, 3033 137, 0995 134, 1000 134, 1000 135, 9947 135, 9949 135, 9950 135, 9949 135, 9950 108, 4445	201-10-18										0	21
135, 1828 135, 1831 125, 1834 Run 1 Ra 135, 1828 135, 9027 125, 1834 Run 1 Ra 135, 0992 137, 0995 137, 1000 Rull 180 136, 0189 136, 0196 137, 1000 Rull 135, 9944 135, 9950 125, 108, 4445	201-10-18										6	1.
135, 1838 135, 1831 135, 1834 Run 1 RB 135, 1838 135, 9027 125, 1834 Run 1 RB 135, 9027 125, 1000 Run 1 RB 135, 0995 137, 1000 Run 1 RB 135, 9999 135, 9950 125, 9950 125, 9969 135, 9999 135, 9950 1008, 4110 1008, 4111 1008, 4111 1009, 4111 1009, 4111 1009, 4111 1009, 4111 1009, 4111 1009, 4111 1009, 4111 1009, 4111 1007, 8380	2011-10-18										80	H
135, 1828   135, 1831   135, 1834   135, 9025   135, 9027   135, 9037   135, 9036   135, 9037   135, 9036   135, 9045   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   107, 8376   107, 8376   107, 8376   107, 8380											7	1
135, 1828   35, 1831   135, 1834   800   135, 9025   135, 9027   135, 9027   135, 9025   135, 9027   135, 9045   135, 9045   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   135, 9047   108, 4445   107, 8380   1					2011-10-20		2011-10-18					



Client: S.B.I Model: XTD 1.1

Project#: G100527551 Sample ID#: PRTILIOI 2/353-00/

Date: 18-11 Engineer: K. Morgan / F. Anghel

Run #: \_ \dagger Sample Train #: \_ \dagger \_

Balance Equipment #: SB1-206Thermo/Hygro meter Equipment #: SB1-212

Audit weight Equipment #: 150-110 (Balance audit mfr. std: 500 ± 0.72 mg) 0.1189 Front Filter# 33 Tare: Preliminary Wt: 0.1288 0.1184 35 Rear Filter # Tare: Preliminary Wt: F811.0 Seal Set# N/A Tare: N/A Preliminary Wt: N/A

Date/Time in de	ssicator:	OCT.	18,	2011/16:20	Preliminary \	/Vt:	
Date	Time	R/	Н%	Temp. (F)	Weight (grams)	Audit (grams	Initials
2011-10-20	5:20	2	9	74	0.2474	0,200	
2011-10-21	2:10	2	8	74	0.2473	0.200	and the same of th
						0,200	
Probe #:	30		Tare:	1249028	Preliminary \	Nt: 13	× 2036

Date/Time in des	sicator.	00.18,2	011/16:20			
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-20	9:20	29	74	135,9040	200 =	<del>A</del>
2011-10-21	9:00	28	74	135,9042	200 =	AF
					2000ds	

Date: OCTOBER	25, 2011	
Engineer signature: _	HayRl	



Client: S.B.I Model: XTD 1.1

Project #: G100527551 Sample ID #: PRT III 01 2 13 53 - 00 /

Date: 10-18-11 Engineer: K. Morgan / F. Anghel Run #: \_ A Sample Train #: \_ 2

Balance Equipment #: \$81-212 Thermo/Hygro meter Equipment #: \$81-212

Audit weight Equipment #: 180-	110	(Balance audit mfr.	std:	500 ± 0.72 mg)	
	-	American and desire titlers		000 = 0.1 = 1119)	

The second section of the second section is a second section of the second section of the second section is a second section of the section of the second section of the section of the second section of the section of th			it mfr. std: 500 ± 0			10-0-0-0
Front Filter #	31	Tare:	0.1120	Preliminary	Wt: o	.1293
Rear Filter#	32	Tare:	0.1138	Preliminary	Wt: O	1206
Seal Set #	N/A	Tare:	N/A	Preliminary	Wt: N//	4
Date/Time in de	essicator:	007. 18	, 20 AA /AG: 2	Preliminary '	Wt:	
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-20	9:20	29	74	0.2498	0.200	- TA
2011-10-21	al:6	4%	74	8.2457	0.200 =	+
Probe #:	32	Tare:	136,0193	Preliminary 1	Wt: 12	6,0139
Date/Time in de			2011/16:20		12	6,013
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-20	9:20	29	74	136,0203	200 =	A
2011-10-21	9:00	4%	74	136,0206	200.007	A I

Date: OCTOBER	25, 2011	
Engineer signature: _	TANK	



Client: S.B.I Model: XTD 1.1

Project #: G100527551 Sample ID #: PRT1110121353-001

Date: 10-19-11 Engineer: K. Morgan / F. Anghel

Run #: Z Sample Train #: A

Balance Equipment #: 581-206 Thermo/Hygro meter Equipment #: SB1-212

Audit weight Equipment #: 180-119 (Balance audit mfr. std: 500 + 0.72 mg)

Front Filter#	36	Tare:	0.1184	Preliminary \	Nt:	0,1246
Rear Filter#	37	Tare:	0,1197	Preliminary \	Nt: 0	.1203
Seal Set#	N/A	Tare:	N/A	Preliminary \	Nt: N/A	4
Date/Time in de	ssicator.	10-19-14	15:46	Preliminary \	Nt:	,2449
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-21	5:00	4%	74	0.2448	0.2002	
2041-10-25	8:20	4%	74	02446	0.2 =	TA
Probe #:	3.3	Tare:	135,9947	Preliminary V	Vt: /	35.9946
Date/Time in de		10-19-11	15:40			.,,,,
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-21	9.00	4	74	135,9959	200 =	and the same of th
2011-10-25	8:50	4	73	135,7954	200 = 200,0018	<del>**</del>

Date: OCTOBER	25,2011	
Engineer signature:	- Daniel	



1. 1. 1. 1.

#### **DILUTION TUNNEL WORKSHEET - METHOD 5G3**

Client: S.B.I Model: XTD 1.1

Project #: G100527551 Sample ID #: PRTINO12/353-001

Date: 10-19-4 Engineer: K. Morgan / F. Anghel

Run #: 2 Sample Train #: B

Balance Equipment #: 581-20 Thermo/Hygro meter Equipment #: 581-212

Audit weight Equipment #: 180-195 (Balance audit mfr. std: 500 ± 0.72 mg)

Front Filter#	38	Tare:	0.1185	Preliminary \	Wt: 0	1252
Rear Filter #	39	Tare:	0,1201	Preliminary \	Wt: 0,	1207
Seal Set #	N/A	Tare:	N/A	Preliminary \	Wt: N/A	
Date/Time in de	essicator.	10-19-11	15'140	Preliminary \	Wt;	2459
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
12-01-1105	2:00	4%	74	0.2460	0.1999	TA
2011-10-25	8:20	4%	7-3	0.2458	0.2=	+
Probe #:	34	Tare:		Preliminary \	Nr. 100	1,4110
Date/Time in de		10-19-11	108,4115	r realitiliary	708	, 4110
Date/Time in de	SSICALUI.	10-17-11	15140	NA/	T A dis	Г
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials
2011-10-21	2:00	4	74	108,4120	20000	TA
2011-10.25	8:20	4	73	108,4416	200 =	A
		-	1			

Date:	OCTOBER	25, 2011	
Engine	eer signature:	Thypel	



7.000

## **DILUTION TUNNEL WORKSHEET - METHOD 5G3**

Front Filter#	40	Tare:	t mfr. std: 500 ±	Preliminary \	Vt: <	0.1212
Rear Filter#	41	Tare:	.1188	Preliminary \	νt: ,	10110
Seal Set#	Set# N/A		N/A	Preliminary \	Nt: N/	A
Date/Time in de	essicator:	20/20/11	13:20	Preliminary \	∕Vt:	
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	
2011-10-24	5:00	4	72	0,2403	0,2000	TA
2011-10-24	17:00	4	92	0.2401	0.25	
Probe #:	35	Tare:	107.8380	Preliminary \	Nt: No	07,8383
Date/Time in de	ssicator:	10/20/11	13:20			
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	) Initials
201-10-24	8:20	4	72	107,8380	107,8380 200,0018	
2011-10-24	17:00	4	72	107,8383	200,001	-
			-	-		-



Balance Equipme	nt #: SB1-206	rgan / F. Anghel Thermo/Hygro m o (Balance audit	eter Equipment #	tun#: <u>3</u> #: <b>SEI-212</b> 0.72 mg)		Traili#:	
Front Filter #	42	TOWNS COUNTY OF THE PARTY OF	./210	Preliminary	Wt: <	0.1226	
Rear Filter#	ear Filter# 43		,1198	Preliminary 1	Wt:	0. 1201	
Seal Set #	N/A	Tare:	N/A	Preliminary Wt: N/			
Date/Time in de	essicator:	20/10/11:	13:20	Preliminary 1	Wt:		
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audi (gram	Initials	
2011-10-24	3:00	3.5	69.8	0. 2.428	0.2	= -	
2011-10-24 17:00		3.5	63.8	0.2428	0.2:		
Probe #:	36	Tare:	108 5032	Preliminary \	Nt: A	08,2038	
Date/Time in de	ssicator:	20/10/11;	13:20				
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	in initiale	
2011-10-26	8:20	4	69.8	108.5032	200,001	1 1	
2011-10-24	17:00	4	70	108 2033	200.00	7.8	

Date: Octobac 2	1,21	
Engineer signature:	Think	
	, () -	



Model: XTD 1.1 Client: S.B.I

Project #: G100527551 Sample ID #: TRT 1110121353-001

Date: Oct. 21, 24 Engineer: K. Morgan / F. Anghel Run #: 4 Sample Train #: A

Balance Equipment #: \$81-206 Thermo/Hygro meter Equipment #: \$81-212

Front Filter#	44	Tare:	. 1205 - 1205	Preliminary \	Wt; O	1223	
Rear Filter#	45	Tare:	.1205	Preliminary \	Nt: E	0.1210	
Seal Set#	N/A	Tare:	N/A	Preliminary \	Nt: N/	N/A	
Date/Time in de	essicator:	12:30	12:30		Nt:		
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	Initials	
2011-10-24	3:00	4.1	71.5	0.2433	0.2 =	TA	
2011-10-24	17:00	4.2	72	0.2431	0.2 =	TA	
Probe #:	37	Tare:	108,3837	Preliminary V	Nt: 105	8,38+2	
Date/Time in de	ssicator:	10-21-11	/12:30				
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials	
2011-10-24	8:50	4.1	71.5	108,3844	200 = 200,00A	8 TA	
2011-10-24	17:00	4.2	72	108,3845	200 = 200,001	- A-(A-	

Date: _	10-52-11	Α.	
Enginee	r signature:	TAMPEL	



Client: S.B.I Model: XTD 1.1

Project #: G100527551 Sample ID #: PRT 1/1/01/21353-001

Date: 10-21-11 Engineer: K. Morgan / F. Anghel Run #: 4 Sample Train #: B

Balance Equipment #: 581-206 Thermo/Hygro meter Equipment #: 581-212

46	Tare:	. 1186	Preliminary	Wt:	٨	218	
	Tare:						
N/A	10000	Chies					
ssicator:		1 1		SOUTH THE			
Time	R/H %	Temp. (F)	Weight	Aud	100 CO 10	Initials	
5:00	4.1	65.8	0.2414	0,2	=	TA	
2011-10-24 17:00		72	0.2414	0.2=		TA	
22	Tare:	139,5794	Preliminary \	Wt: 13	39,	5803	
	1		Preliminary \	Wt:  {3	39,	5803	
sicator:	10-21-1	1/12:30					
Time	R/H %	Temp. (F)	Weight (grams)	100 DOMESTIC ST		Initials	
8:20	4.1	69.8	3082,081	200=		TA	
17:00	4.2	72	133,5803			A	
					+		
					+		
	Sicator: Time  9:00  17:00  22  Sicator: Time  8:50	N/A Tare: sicator: 10-21-11 Time R/H % 9:00 4:1 17:00 4:2  Tare: sicator: 10-21-11 Time R/H % 8:50 4:1	N/A  Tare: N/A  Sicator: 10-21-11/12:30  Time R/H % Temp. (F)  9:00 4:1 69.8  14:00 4:2 72  Tare: 139,5794  Sicator: 10-21-11/12:30  Time R/H % Temp. (F)  8:50 4:1 69.8	N/A         Tare:         N/A         Preliminary           sicator:         10-21-11/12:30         Preliminary           Time         R/H %         Temp. (F)         Weight (grams)           3:00         4:1         63.8         0.2414           14:00         4:2         72         0.2414           14:00         4:2         72         0.2414           10-21-11/12:30         Preliminary         Weight (grams)           10-21-11/12:30         Weight (grams)         Weight (grams)           8:50         4:1         63.8         139,5806	N/A         Tare:         N/A         Preliminary Wt:           sicator:         10-21-11/(2:30)         Preliminary Wt:           Time         R/H %         Temp. (F)         Weight (grams)           9:00         4:1         69.8         0.2414         0.20           14:00         4:2         72         0.2414         0.20           14:00         4:2         72         0.2414         0.20           15:00         4:2         72         0.2414         0.20           16:00         4:2         72         0.2414         0.20           17:00         4:2         72         0.2414         0.20           16:00         16:00         16:00         16:00         16:00           17:00         16:00         16:00         16:00         16:00         16:00           18:00         16:00 <td>N/A         Tare:         N/A         Preliminary Wt:         N/A           sicator:         10-21-11/12:30         Preliminary Wt:         Audit (grams)           Time         R/H %         Temp. (F)         Weight (grams)         Audit (grams)           9:00         4:1         63.8         0.2+14         0.2000           14:00         4:2         72         0.2+14         0.2000           14:00         4:2         72         0.2+14         0.2000           15:00         4:2         72         0.2+14         0.2000           16:00         4:00         0.2000         0.2000         0.2000           16:00         4:00         0.2000         0.2000         0.2000           16:00         10-21-11/12:30         0.2000         0.2000         0.2000           16:00         10-21-11/12:30         0.2000         0.2000         0.2000         0.2000           17:00         10-21-11/12:30         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000</td>	N/A         Tare:         N/A         Preliminary Wt:         N/A           sicator:         10-21-11/12:30         Preliminary Wt:         Audit (grams)           Time         R/H %         Temp. (F)         Weight (grams)         Audit (grams)           9:00         4:1         63.8         0.2+14         0.2000           14:00         4:2         72         0.2+14         0.2000           14:00         4:2         72         0.2+14         0.2000           15:00         4:2         72         0.2+14         0.2000           16:00         4:00         0.2000         0.2000         0.2000           16:00         4:00         0.2000         0.2000         0.2000           16:00         10-21-11/12:30         0.2000         0.2000         0.2000           16:00         10-21-11/12:30         0.2000         0.2000         0.2000         0.2000           17:00         10-21-11/12:30         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000         0.2000	

Date: 10-25-11	Date:	10-	-2.5	-14
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Engineer signature:



Client: S.B.I Model: XTD 1.1

Project #: G100527551 Sample ID #: PRT M10121353-001

Date: 10-24-11 Engineer: K. Morgan / F. Anghel

Run #: 5 Sample Train #: A

Date: 10-20-11 Engineer: K. Morgan / F. Anghel Run #: 5 San

Balance Equipment #: 58 - 212

Audit weight Equipment #: 89-190 (Balance audit mfr. std: 500 + 0.72 mg)

Front Filter #	1	Tare:	0.1225	Preliminary	VVt:	0.1315
Rear Filter #	2	Tare:	0.1224	Preliminary	Wt:	0.1234
Seal Set#	N/A	Tare:	N/A	Preliminary	Wt: N/	/A
Date/Time in d	me in dessicator: 08.24,2011/16:0		011/16:00	Preliminary	Wt:	
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	Initiale
10-25-11	16:15	4%	63.9	0.255	0.2=	-14
10-27-11	11:00	4%	70.0	0.2543	0.2000	TA
10-85-01	11:00	4%	70.0	0.2544	0,200	
10-31-11	13:30	4%	700	0.2542	O. 2000	<del>**</del>
Probe #:	17	Tare:	132,7476	Preliminary \	Nt: الم	52,7487
Date/Time in de	essicator:	OCT. 24,2	011/16:00			
Date	Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams	Initials
11-25-01	16:15	4%	63.9	139.7497	200,00	-1 1
M-42-0	M:00	4%	70.0	1397497	200,002	1 2
0-28-11	W:00	4%	F0.0	1397504	200,002	A
0-31-11	13:30	4%	70.0	1397507	200.002	AF .

Date:	OCHOBER	317	2011
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Engineer signature:



### **DILUTION TUNNEL WORKSHEET - METHOD 5G3**

Model: XTD 1.1 Client: S.B.I

Project #: G100527551 Sample ID #: PRT ALLO 12 1353-004

Date: 10/25/1 Engineer: K. Morgan / F. Anghel Run #: 5 Sample Train #: Balance Equipment #: 581-20 hermo/Hygro meter Equipment #: 581-212

3	Tare:	0.1228	Preliminary	Wt: O	1322	
4	Tare:	0.1220	Preliminary			
N/A	Tare:	N/A	Preliminary			
essicator:	OCT. 25,20	011/16:00	Preliminary	Wt:		$\exists$
Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials	
16:15	4%	69.9	1324	0.2=	TA	
11:00	4%	70.0	0.2547	0.2=	TA	THA
11:00	4%	70.0	0.2545			
12:30	4%	70.0	0.2546	0.2=	+	
18	Tare:	147,8904	Preliminary 1	Wt: \u	N. 89.11	-
essicator.	001.24,2	611/16:00				
Time	R/H %	Temp. (F)	Weight (grams)	Audit (grams)	Initials	7
16:15	4%	69.9	14789Rg	200,002	AF .	
11:00	4%	70.0		2000 =	TA	TIMA SWEIG
11:00	4%	70.0	1478928	200 =	TA	
13:30	4%	70.0	1478923	200 =	AF.	
	4 N/A essicator:  Time 16: 15 11:00 13:30  18 essicator.  Time 16:15 11:00 11:00	4 Tare:  N/A Tare:  N/A Tare:  essicator:  0 0 2. 24 32  Time R/H %  16: 15 4%  11: 00 4%  Tare:  18 Tare:  19 Tare:  10 1 4 %  11 1 0 0 4 %  11 1 0 0 4 %	4 Tare: 0.1220  N/A Tare: N/A  essicator: 0 \( \alpha \).	4 Tare: 0.1220 Preliminary  N/A Tare: N/A Preliminary  essicator: 0 4.201 / 16:00 Preliminary  Time R/H% Temp. (F) Weight (grams)  16:15 4% 69.9 0.25 + 9  11:00 4% 70.0 0.25 + 5  12:30 4% 70.0 0.25 + 6  18 Tare: 147,8904 Preliminary  essicator: 0 5.24,2011 / 16:00  Time R/H% Temp. (F) Weight (grams)  16:15 4% 69.9 1478920  11:00 4% 70.0 1478928	4 Tare: 0.1220 Preliminary Wt: 0  N/A Tare: N/A Preliminary Wt: N/A  essicator: 0 CT. 24,2011/16:00 Preliminary Wt:  Time R/H % Temp. (F) Weight (grams)  16:15 4% 69.9 0.2549 0.200  11:00 4% 70.0 0.2545 0.2000  13:30 4% 70.0 0.2546 0.2000  13:30 4% 70.0 0.2546 0.2000  14	4       Tare:       0.1220       Preliminary Wt:       0.1229         N/A       Tare:       N/A       Preliminary Wt:       N/A         essicator:       0 □ 4/3 ≥ 01 / 16:00       Preliminary Wt:       N/A         Time       R/H %       Temp. (F)       Weight (grams) (grams)       Initials (grams)         16:15       4%       69.9       0.25 + 9       0.2000       14         11:22 0.25 + 9       0.2000       14       0.2000       14         11:00       4%       70.0       0.25 + 5       0.2000       14         12:30       4%       70.0       0.25 + 5       0.2000       14         13:30       4%       70.0       0.25 + 6       0.2000       14         13:30       4%       70.0       0.25 + 6       0.2000       14         14:30       4%       70.0       0.25 + 6       0.2000       14         15:30       4%       70.0       0.25 + 6       0.2000       14         16:15       4%       70.0       147 + 8920       200.002       14         11:00       4%       70.0       147 + 8920       200.002       14         11:00       4%       70.0

Date: OCTOBER 31, 2011

Engineer signature:

Appendix D

Calibrations

Intertek Page 1 of 1

### Thermal Metering System Calibration Y factor for Method 5G sampling

 Manufacturer:
 American Meter Company

 Model:
 DTM-200A

 Serial Number:
 90R054300

Average Gas Meter y Factor 1,006

Calibration Date: 09-29-11 Calibrated by: Claude Paré Calibration Frequency: 6-month Next Calibration Due: 03-29-12 Instrument Range: 1,000 cfm Standard Temp.: 77,4 oF Standard Press.: 29,92 "Hg Barometric Press.: 29,63 "Hg Signature/Date: 2011-09-29

P	revious Calibra	tion Comparision	1
Date	2011-03-01	Acceptable Deviation (5%)	Deviation
y Factor	1,003	0,05015	0,003
Acceptance	Acco	eptable	

# Acceptable y Deviation 0,020 Maximum y Deviation 0,001 Acceptance Acceptable

	Reference	e Standard *	
Standard	Model	Standard Test	Meter
Calibrator	S/N 07J264834		
	Calib. Date	21-mars-11	
	Calib. Value	0,9992	y factor (ref

Calibration Parameters	Run I	Run 2	Run 3
Vacuum ("Hg)	0,00	0,00	0,00
dH ("H2O)	0,00	0,00	0,00
Initial Reference Meter	760,2	765,5	771,1
Final Reference Meter	765,2	770,6	776,9
Initial DGM	698,092	703,412	709,07
Final DGM	703,059	708,484	714,848
Temp. Ref. Meter (°F), Tr	76,9	77,2	77,2
Temperature DGM (°F), Td	77,5	78,2	78,6
Time (Minutes)	77,0	28,0	17,0
Net Volume Ref. Meter, Vr	5,000	5,100	5,800
Net Volume DGM, Vd	4,967	5,072	5,778
Gas Meter y Factor =	1,007	1,007	1,006
Gas Meter y Factor Deviation (from avg.)	0,001	0,000	100,0
Orifice dH@	0,00	0,00	0,00
Orifice dH@ Deviation (from avg.)	0,000	0,000	0,000

where:

0,064506494

- 1. Deviation = [Average value for all runs current run value]
- $2. \ \ y = \left[ Vr \ x \ (y \ factor \ (ref)) \ x \ (Pb) \ x \ (Td + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ [Vd \ x \ (Pb + (dH \ / \ 13.6)) \ x \ (Tr + 460) \ / \ ]$
- 3.  $dH@=0.0317 \times dH / (Pb (Td + 460)) \times [(Tr + 460) \times time) / Vr]^2$

Reference calibration is traceable to NIST through NIST Test # 40674, Kimble ASTM E1272

Signature/Date:

### Thermal Metering System Calibration Y factor for Method 5G sampling

 Manufacturer;
 American Meter Company

 Model:
 DTM-200A

 Serial Number;
 98Z332226

Average Gas Meter y Factor 1,003

2011-09-29

Calibration Date: 09-29-11 Calibrated by: Claude Paré Calibration Frequency: 6-month Next Calibration Due: 03-29-12 Instrument Range: 1,000 cfm 78,3 oF Standard Temp.: Standard Press.: 29,92 "Hg Barometric Press.; 29,59 "Hg

**Previous Calibration Comparision** 

Date	2011-03-01	Acceptable	
		Deviation (5%)	Deviation
y Factor	0,996	0,0498	0,007
Acceptance	Acco	eptable	

Current Calibration

Acceptable y Deviation		0,020
Maximum y Devia	ition	0,001
Acceptance	Acce	eptable

	Reference	Standard *	
Standard	Model	Standard Test	Meter
Calibrator	S/N 07J264834		
	Calib. Date	21-mars-11	
	Calib. Value	0,9992	y factor (ref)

Calibration Parameters	Run 1	Run 2	Run 3
Vacuum ("Hg)	0,00	0,00	0,00
dH ("H2O)	0,00	0,00	0,00
Initial Reference Meter	777,8	783,1	789,7
Final Reference Meter	782,8	789,2	799,6
Initial DGM	515,021	520,372	527,019
Final DGM	520,014	526,465	536,898
Temp. Ref. Meter (°F), Tr	77,6	78,0	78,1
Temperature DGM (°F), Td	78,6	79,1	79,5
Time (Minutes)	60,0	30,0	32,0
Net Volume Ref. Meter, Vr	5,000	6,100	9,900
Net Volume DGM, Vd	4,993	6,093	9,879
Gas Meter y Factor =	1,002	1,002	1,004
Gas Meter y Factor Deviation (from avg.)	0,000	0,001	0,001
Orifice dH@	0,00	0,00	0,00
Orifice dH@ Deviation (from avg.)	0,000	0,000	0,000

where:

0,083216667

- 1. Deviation = [Average value for all runs current run value]
- 2. y = [Vr x (y factor (ref)) x (Pb) x (Td + 460) / [Vd x (Pb + (dH / 13.6)) x (Tr + 460]]
- 3. dH@ = 0.0317 x dH / (Pb (Td + 460)) x [ (Tr + 460) x time) / Vr ]^2

Reference calibration is traceable to NIST through NIST Test # 40674, Kimble ASTM E1272

### CERTIFICATE OF NIST TRACEABLE CALIBRATION

Calibration Certificate No: 24648

### Customer Information

Customer: SBI St-Augustin

Address: 250, De Copenhague

Doors 11-12 Customer PO #: 23966

St-Augustin-de-Desmaures



ISO 17025-2005 ACCREDITED

### Calibration Procedure Information

Procedure ID: GTP FLOW INDI Revision #: 3 Revision Date: 7/21/2008

### Calibration Standards Information

Graftel ID	Manufacturer	Model#	Description	CAL Duc
10159	HOBO	U12-011	Environment Monitor System	6/22/2011
60030	Paroscientific	760-100A	Pressure, 100 psia	8/24/2011
10128	Furness	FCO352	Diff Pressure	8/24/2011
10062	Graftel	9202	5-Channel Temperature Sensor	8/28/2012
10075	Meriam	50MJ10-9	Laminar Flowmeter	6/23/2011
51202	Paroscientific	760-100A	Pressure, 100 Psia	2/24/2012

### Sensor Information

Manufacturer: American Meter Description: Gas Meter Method Used: Laminar

Model #: DTM-200A Rated Accuracy: ± 1 % of Reading Accuracy Specified By: American Met.

Instrument ID#: SBI-103 Range: 0 to 250 scfh Condition: Functional

Serial #: 07J264834

Comments: Calibration Date: 03-21-2011

The instruments(s) listed on this certificate have been calibrated egainst standards traceable to the National Institute of Standards and Technology (NIST) or compared to nationally or internationally recognized consensus standards. The reported calibration uncertainty has a confidence level of 95% (K=2). A calibration uncertainty ratio of 4.1 was maintained unless required uncertainty support by analysis. Graftel, Inc. Quality Assurance System complies with applicable requirements of ISO/IEC-17025-2005, ANSI/NCSL Z540-I-1994 and ISO 9002, 1994(E). All results contained within this certification relate only to item(s) calibrated. This certificate shall not be reproduced except in full and with the written consent of Graftet. Inc.

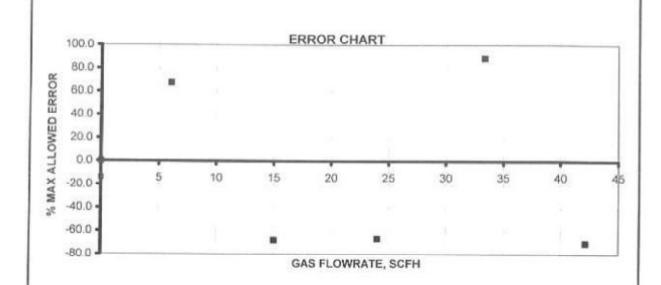
Performed By:

M. Rodriguez √ Calibration Technician Date: 3/21/11

### ATTACHMENT TO CALIBRATION CERTIFICATE 24648 AS FOUND DATA

Page 2 of 2

Air Flow Rate From Standard, scfh	Air Vol From Standard, scf	Air Vol From Meter, cf	Air vol From Meter, scf	Diff Air Vol STD - METER scf	% Proof	Measurement Uncertainty, scf	STATUS
6.069	0.2962	0.300	0.294	0.00	100.679	0.002	Pass
15.044	0.9576	1.000	0.964	-0.01	99.327	0.005	Pass
24.043	0.9605	1.000	0.967	-0.01	99.338	0.005	Pass
33.346	1.9576	2.000	1.940	0.02	100.896	0.010	Pass
42.149	1.935	2.000	1.949	-0.01	99.301	0.010	Pass



Test Gas	Air		
Standard Pressure, Meter	14.73	psia	
Standard Temperature, Meter	60	F	
Rated Accuracy	1	% Rding	
Full Scale Flow Rate	250	sofh Natural Gas @ 1/2 inch WC	
	LAB	ORATORY AMBIENT CONDITIONS	Market Street
Pressure	14.40	psia	
Humidity	30.8	% RH	
Temperature	69.6	F	



Flow - Humidity - Temperature - Pressure - Design - Consulting - Engineering

NIST Traceable Calibration Data Sheet

Graftel, LLC. 870 Cambridge Drive, Ets Grave Village, 11.50007 P. 847-354-2500 # 847-354-2850

www.graftet.com

Intertek

# Portland, Oregon

	Date: 10/25/2011 Tech: F. Anghel	M#3; 0.9992	6 6 7
Calibration Data	Equipment No. SBI-046 Date	1 Std.Meter DGI	
Dry Gas Meter Post Series Calibration Data	Model: DTM-200A	DGM#1:	
	Manufacturer: Amer.Meter Co.	Barometric Press: 30.06	

0.0449 %

Max Deviation

Intertek

# Portland, Oregon

Post Series Dry Gas Meter Calibration Data

ate: 10/25/2011 Tech: F Anghel	OGM#3: 0.9992	40. SBI-103
Equipment No. SBI-047	Calibration Factors Std.Meter [	Std Meter P
Model: DTM-200A	DGM#1:	
Manufacturer: Amer. Meter Co.	Barometric Press: 30.06	

DEV	100		.004 0.000	0000 8	Г
	Cal Factor	1.00	1.00	1.003	4 002
	Std Ft.3	4.971	4,968	4.968	. overee.
	Temp PF 8	72.000	72.500	72,300	,
	Change Ft.3 7	4.985	4.987	4.985	
	Final Ft.3 (		874.933		
System # 1	-		869.946		
	Std. Ft3	4.986	4.986	4.984	
0.00		71,500	71.500	71,800	
	Change FTemp °F	5.000	5.000	5.000	
	Final Ft3	830.900	836.400	841.500	
0 180 mg	Initial Ft.3	825.900	831,400	836.500	
Std Meter # 3	Press Drop	0	0	0	
	Trial No.		2	3	

Max Deviation





NVLAP LAB CODE 200886-0

### CERTIFICATE OF CALIBRATION

Customer: INTERTEK

22887 NE TOWNSEND WAY

FAIRVIEW, OR 97024

Customer Nbr: 1-556813-000

PO Nbr: USA20-0000208799 Date Received: September 19, 2011

Cert/SO Nbr: 2-BK1C7-424-1

Manufacturer: Delmhorst Instrument Co.

Model Nbr: MCS-1

Date Completed: September 23, 2011

Due Date: September 23, 2012

Description: Moisture Content Standard

Serial Nbr: None ID Nbr: 19701

Unit Barcode: 900B0011669

Calibrated To: Manufacturer Specification

Calibration Prec: 1-AC32637-0 Item Received: In Tolerance Item Returned: In Tolerance

For calibration data, see Supplemental Report for SO Nbr 2-BK1C7-424-1

Trancat Calibration Laboratories have been sudited and found in compliance with ISCEC 17025:2005. Accredited calibrations performed within the Labs Scope of Accreditation are indicated by the presence of the Accrediting Bodys Logo and Certificate Number on this Certificate of Calibration. Any measurements on an accredited calibration one concred by that Labs Scope are listed in the notes section of the certificate This report must not be used to claim product certification, approval, or endorsement by NYLAP, NIST, or any agency of the Federal Government.

Transcet calibrations, as applicable, are performed in compliance with the sequirements of ISO7001:2008, ISO T\$16949, ANSWNCSL Z540-1994, and ISO 10012-1992. When specified contractually the requirements of 100FR21, 100FR30 App. 18 and NQA-1 are also covered.

Traceability includes no less than An unbroken chain of comparison realization of SI units measurement uncertainty, documentation, competence, periodic recalibration, and measurement assurance. Transcat documents the traceability of measurements to the SI units through the National Residues of Standards and Technology(NIST) or the National Research Council of Canada(NISC), or other recognized national measurement institutes (NMI's) or international standard bodies, or to measurable conditions created in our laboratory, or accepted fundamental undor natural physical constants ratio type of calibration, or by comparison to consensus standards. The specific path of traceability for the reported measurement results is maintained at the Transcat ficility and is available there for review.

Complete records of work performed are maintained by Transcet and are available for inspection Laboratory standards used in the performance of this calibration are shown on the Supplemental Report.

The sensits in this report relate only to the item calibrated or tested and the determination of in or out of tolerance is specific to the modaliserial no, referenced above based on the tolerances shown on the supplemental report; these tolerances are either the original equipment manufactureh (OEM's) warranted specifications or the client's requested specifications.

The applied uncertainty is the uncertainty of the calibration process The Test Uncertainty Ratio (TUR) is calculated as per NCSL International RP9, section 8.2. All calibrations have been performed using processes havings TUR of 4:1 or better, unless otherwise noted on the Supplemental Report. Uncertainties have been estimated at a 95 percent confidence level(k-2). Calibration at 4:1 TUR (or greater) provides reasonable confidence that the instrument is within the stated tolerances. For measuring instrument, in order to consider the contribution to the uncertainty from reproducibility of the unit under test(UUT), add 0.6 of the URIT's least significant digit to the reported uncertainty For mass calibrations Conventional mass referenced to 3.0 g/cm<sup>2</sup>.

Any number of factors can cause a unit to drift out of tolerance at any time following its calibration. Initiations on the uses of this instrument are detailed in the OEM's operating instructions.

Notes:

14058 SW Milton Ct Portland, OR 97224 By: David Cordell

Digitally Signed On September 23, 2011

Facility Responsible; 14058 SW Milton Ct Portland, OR 97224 503-598-8700

Digitally Signed By Mare Jaso for Date: September 23, 2011

> Tony Kutch Lab Manager



# SUPPLEMENTAL REPORT FOR BK1C7-424-1

# CALIBRATION LAB DATA AS FOUND / AS LEFT

Service Order Nbr. BK1C7-424-1

Description: Moisture Content Standard

None Serial: INTERTEK Customer:

9/23/2011 Calibrated:

9/23/2012

Date Due:

Service Type:

Mfg: Delmhorst Instrument Co. Model: MCS-1

PO Nbr: USA20-0000208799

ID Nbr: 19701

Calibration Proc: 1-AC32637-0

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	Low Limit High Limit As Found / As Left   Q Uncertainty (k=2; ±)	TUR
Resistance 4 Wire Comp	Source						
Resistance Source	1.100MOhm	±(10% Rdg)	0.990	1.210	1.095 MOhm		
	120.0MOhm	±(10% Rdg)	0.801	132.0	120.7 MOhm		

As Found and As Left Data recorded on 9/23/2011

Relative Humidity: 51% Temperature 69.7°F/20.9°C

Manufacturer

出

368W Asset

Temp/RH Asset 1012W

Description

3458A Opt 002

Digital Multimeter, 8.5 Digit

1/31/2012 1/31/2011

S-BA380-2-1

Traceability Numbers

Due Date

Cal Date

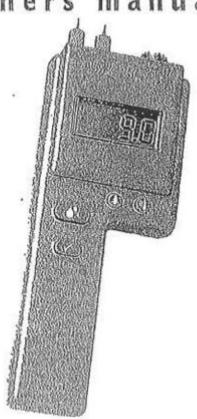
The reported uncertainty is the uncertainty of the calibration process Terr measuring instrument, and 0.6 of the least significant digit to the reported uncertainty is the uncertainty of the unit under nex as the specific

Reported resolution of the UUT does not represent aulibration uncertainty or accuracy of the UUT. Calibration Lab Data Report - Page 1 of 1

Field not applicable.

Service Order Nbr. BK1C7-424-1

# J-2000 owners manual

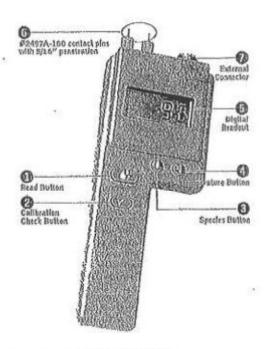




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- 8 To Check Accumulated Readings
- 8 To Reset Meter
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### DELMHORST J-2000



### J-2000 FEATURES

- Resistance technology recognized worldwide as the most accurate method for measuring moisture
- ▶ 6% to 40% moisture range
- ► Digital readout
- Merages up to 100 accumulated readings
- ► Built-in correction for 48 different species
- ➤ Bullt-In temperature compensation both Fahrenheit and Celsius
- Proven intercontroller circuit for increased reliability and accuracy
- Easy one-hand operation
- ► Includes (1) 9-Volt Battery
- Includes sturdy carrying case
- ►One-year warranty
- Der fifty years of proven quality, accuracy and service

### BEFORE YOU BEGIN

### **Button Functions**

- READ BUTTON Reads the Percent Moisture Content value (%MC), corrected for temperature and species.
- CALIBRATION CHECK BUTTON Checks meter calibration. It also displays the average of up to 100 accumulated readings; displays the maximum stored reading; erases the readings.
- SPECIES BUTTON Sets the species code for the wood you are using. Species are numbered from 1 to 48 and are listed on the Species Gode Chart. This button also acts as a scroll key, depending on the function.
- TEMPERATURE BUTTON Sets the wood temperature and changes the temperature mode (Fahrenhelt or Celsius). This button also acts as a scroll key, depending on the function.

### CHECK CALIBRATION 🗭

Préss the calibration check button 2 and read button 6 simultaneously, Meter is in calibration if it displays 12% (+ or - .2).

If you check the calibration and the motor does not display 12% it is likely an indication of a low battery. If this occurs, change the battery immediately. Continued use with a low battery may cause the meter to go out of calibration. If you have a fresh battery and the instrument still does not indicate a proper calibration, return it to DELMHORST for service.

See Service for your Meter section.

When the battery is removed and then reconnected, the meter displays its software version for one second and then turns itself off. After replacing the battery, you must reset the meter as described in Resetting the Meter section.

Species Code Chart

CODE	/SPECIES	CODE	/ SPECIES
1	Fir, Douglas	25	Magnolfa
2	Pino, Southern	26	Mahogany, African (also Khaya)
3	\$PF .	27	Mahogany, Honduras
4	Alder	28	Mohogany, Philippins
5	Apitong	2.9	Maple, Hard/Soft
6	Aspea	30	Meranti, Dark Red
7	Ash, White	31	Onk, Red
8	Basswood	32	Oak, White
9	Birch	33	Pecan
10	Cedar, Eastern Red	34	Pins, Longleaf
11	Cedar, Incenso	35	Pine, Pondarosa
12	Chorry	36	Pine, Shortleaf
13	Cottonwood	37	Pine, Sugar
14	Суруось	38	Pina, White
3.5	Elm, American	39.	Poplar, Yelfow
16	Fir, Rod	40	Remin
17	I'lr, White	41	Radiata Pine
18	Gum, Black	42	Redwood
19	Gum, Red	43	Spruce, Sitka
20	Hemlock, Western	44	SPF, COFI*
21	Hackberry	45	Teak
22	Hickory	16	Virola
23	Kerulng	47	Walnut, Black
24	Larch	48	Western Hemlock - COFI*

<sup>\*</sup>Species and temperature correction data for both Western Hemlock-COFI (code #48) and SPF-COFI (code #44) were developed by COFI. When comparing readings between the model RDM-2/COFI or the RDM-2S/COFI, used with type 26-E electrode with insulated plas, and the J-2000, he sure both maters are set to 2-pla electrode (insulated plas).

### SET PIN CALIBRATION (6)

The basic factory calibration of the J-2000 is for use with uninsulated pins — either the integral pins 6 or with an optional external electrode, such as the #4-E. The difference in readings between insulated and uninsulated pins is small below 10% moisture content. The difference increases as moisture content increases above 10%. When using an electrode with insulated pins, such as the 26-ES, you can change the calibration to compensate for this difference.

- ➤ To change the pln setting, press and release the species button ②, then press the calibration check button ② within one second.
- The meter will display the current pin calibration as either 222 for insulated or 444 for uninsulated pins.
- ▶ If you continue to hold the calibration check button ②, the meter will change pin calibration. The new calibration will remain in "memory" until you change it again, or you remove the battery.

### TAKING A READING

The contact pins provided are best for stock up to 6/4. On stock over 6/4 or for hardwoods over 4/4 we recommend using a remote probe such as the 26-ES ram-type electrode, Mount the 26-ES directly to the external connector . See additional information under the Pin Talk section.

- Fremove the protective cover to expose the pins. Check that the centact pins (6) are firmly hand tightened.
- ➤ To take a reading, nifgn the contact pins parallel to the grain and push fliem to their full penetration into the wood, if possible. Insulated pins read only at the tip and can be driven to the desired depth.
- Press the read button and read the moisture content on the meter scale. The meter displays the %MC for two seconds.
- ► To add a reading to the sum of all the previously stored readings, release the read fautton within 2 seconds.

## INFORMATION ABOUT YOUR READINGS

Readings below 6% will be displayed as a numeric value, (-##.#), and will not be added to accumulation. A reading below 6% which is due to temperature and species adjustments will be shown as a numeric value with no minus sign and this reading will be added to the accumulation.

Readings above 40% are always displayed as 999 and are not added to the accumulation.

The motor will accumulate up to 100 readings. After all 100 readings are stored it will not add new readings until the memory has been cleared. It will also continue to display the average of all 100 readings as a reminder that the memory is full.

When taking and storing readings for a specific wood species, be sure to "clear" the meter before moving on to the next species if you do not want to group all of the readings together.

### TO CHECK ACCUMULATED READINGS

This feature allows you to view the total number of all accumulated readings, the average of those readings, and the highest stored reading.

- ➤ To view the readings press and release the calibration check button ②. First the meter displays the number of accumulated readings for one second, then the average of those readings for two seconds. Then it displays the highest stored reading for two seconds. The total "cyclo" time is five seconds.
- To erase readings hold the calibration check button town for 5 seconds. All accumulated readings will be erased and the meter will display "o".

### TO RESET METER

- > Press and release the calibration check button .
- ► Within one second press the species button ③.
- The meter will reset itself and display "170" to indicated Species #1 (Douglas Fir) at 70°F. All of the readings in memory will be cleared.

1

### PIN TALK

There are two types of contact plus - uninsulated, which were provided with your meter, and insulated. When using uninsulated plus, push them in to the wood to their full length, if possible, This will give you the highest measured reading. Insulated plus read only at the tip and can be driven to a desired depth to gather shell and core (gradient) information. Additional types and lengths of both the insulated and uninsulated plus are available for specific applications.

### CARE OF YOUR METER

To keep your meter in good working order:

- Store your meter in a clean, dry place. The protective carrying case provided is an ideal storage place when the meter is not in use.
- Change the 9-Volt battery as needed. Continued use with a low battery may cause the meter to go out of calibration.
- Change contact plns as needed. Keep contact plns hand tightened.
- Clean the meter and contact pins with any blodegradable cleaner. Use the cleaner sparingly and on external parts only. Keep cleaner out of the external connector .
- Remove the hattery if the meter will not be used for one month or longer.

### SERVICE FOR YOUR METER

- Before sending in your meter we recommend you give one of our trained technicians a call. Many times troubleshooting can be taken eare of over the phone. Call us at 1-877-DELMHORST.
- Pack your meter securely. Enclose a purchase order or letter with a brief description of the problem.
- There is no need to call us for a return authorization number
  if you are within the U.S. Customers outside the U.S. must
  contact us for more specific instructions prior to returning
  a meter.
- Include your name, address, daytime phone and fax numbers or e-mail address. If you believe the meter is under warranty, please provide the original sales slip or involce.
- Ship via UPS, Express Mail, Priority Mail, or any overnight courier who provides prempt service. Do not use slandard parcel post.
- ► Insure your instrument for its full value and ship prepaid. We are not responsible for damage in transit.
- We do not accept COD slipments or cover any incoming freight or duty charges on returned merchandise
- ► Turnaround time on repairs is approximately two weeks.
- We will call you with an estimate if you specifically request one, or if we determine that the meter may be too costly to repair.
- Non-warranty repairs will be returned via UPS/COD unless you have already established other payment terms. There is no COD service outside the U.S. To pay by credit card, include the card number and expiration date with your repair. We accept Visu/MasterCard and American Express.
- Warranty repairs will be returned at no charge if shipped within the U.S. via UPS Ground Service. Freight charges for expedited services (i.e., Faderal Express, UPS/2 Day, UPS/1 Day, etc.) are the customer's responsibility and will be charged as per the above terms.

### WARRANTY

3

Delmhorst Instrument Co., referred to hereafter as Delmhorst, guarantees its J-2000 meter for one year from date of purchase and any optional electrodes against defects in material or workmanship for 90 days. If, within the warranty period, you find any defect in material or workmanship return the meter following the instructions in the Service for Your Moter section. This limited warranty does not cover abuse, alteration, misuse, damage during shipment, improper service, unauthorized or unreasonable use of the meter or electrodes. This warranty does not cover batteries or contact pins. If the meter or any optional electrodes have been tampered with, the warranty shall be vold. At our option we may replace or repair the meter.

Deliminate shall not be liable for incidental or consequential damages for the breach of any express or implied warranty with respect to this product or its calibration. With preper care and maintenance the meter should stay in calibration; follow the instruction; in the Care of Your Meter section.

Under no circumstances shall Delmhorst be liable for any incidental, Indirect, special, or consequential damages of any type whatseever, including, but not limited to, lost profits or dewntime arising out of or related in any respect to its meters or electrodes and no other warranty, written, oral or implied applies. Delmhorst shall in no event be liable for any breach of warranty or defect in this product that exceeds the amount of purchase of this product.

The express warranty set forth above constitutes the entire warranty with respect to Delmhorst meters and electrodes and no other warranty, written, oral, or implied applies. This warranty is personal to the customer purchasing the product and is not transferable.

For more detailed information about using a wood moisture meter, call us toll-free at 1-877-DELMHORST. Ask for your free copy of "Measuring Wood Moisture Content: Straight Talk from Delphhofst".

Or find it on our web site at www.delmhorst.com.

For over 60 years, Delmhorst has been the léading manufacturer of high-quality moisture meters and thermo-hygrameters. Today we offer the impositive KIL-MO-TROL® in kiln monitoring system.

We also offer a wide range of meters for a variety of applications including woodworking/iumber, agriculture, construction, paper, restoration, IAQ and flooring.

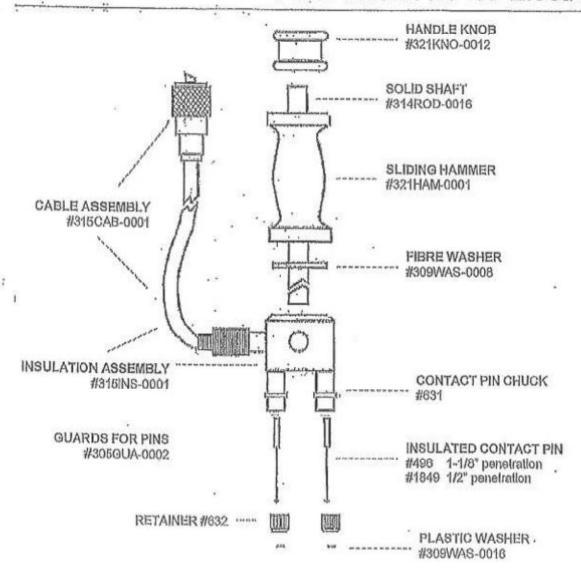


(877)-DELMHORST www.deImhorst.com e-mall - Info@delmhorst.com

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### WHEN ACCURACY IS THE POINTS Parts List for 26-ES Electrode



Note: Type 26-ED electrode is fitted with hollow shaft assembly (with depth gauge) #315SHA-0002



4850, bd Gouin est Montréal-Nord, Qu Canada HIG 1A2 Tél. (514) 328-2550 1 800 522-1226 Fax (514) 327-0604

www.chevrierinstraments.com into@chevrierinstruments.com l'astruments de mesure et de régulation pour les procédés industriels et laboratoire d'étalennage

### Certificat d'étalonnage

Numéro du certificat: CE1638

Étalonnage effectué par :

LA CIE J. CHEVRIER INSTRUMENTS INC.

4850 GOUIN EST

MONTREAL, QC, CANADA H1G 1A2

Informations sur l'instrument

Description:

MANOMETRE DIFFERENTIEL ANALOGIQUE

Manufacturier:

DWYER 2000-00N

Modèle: Plage:

0/0.20 POH2O

Précision.

±4%P.E.

Numéro de série :

I.D.

SBI-025

Etat de l'instrument: BON

nouse niferations

Commentaire:

Pour:

3424

SBLINC

250, RUE DE COPENHAGUE

ST-AUGUSTIN-DE-DESMAURES, QC G3A 2H3

Date d'étalonnage: 2011-02-10

Échéance :

2012-02-10

Résultat de l'étalonnage: Conforme

Conditions ambiantes 20.9 °C / 29.9%HR

Technicien:

Pierre Junior Berlus

	Valeur Appliquée	Tolérance -	Lectures	Tolérance +	Verdict
Ascendant	0.0000 poH2O	-0.0100	0	0.0100	OK
Ascendant	0.0500 poH2O	0.0400	0.045	0.0600	OK
Ascendant	0.1000 poH2O	0.0900	0.095	0.1100	OK
Ascendant	0.1500 poH2O	0.1400	0.1425	0.1600	OK
Ascendant	0.2000 poH2O	0.1900	0.1925	0.2100	OK
THE STATE OF THE S	Valeur Appliquée	Tolérance -	Lectures	Tolérance +	Verdict
Descendant	0.2000 poH2O	0.1900	0.1925	0.2100	OK
Descendant	0.1500 poH2O	0.1400	0.1425	0.1600	OK
Descendant	0.1000 poH2O	0.0900	0.095	0.1100	OK
Descendant	0.0500 poH2O	0.0400	0.045	0.0600	OK
Descendant	0 0000 poH2O	-0.0100	0	0.0100	OK

### Étalons utilisés traçable au C.N.R,C / N.I.S.T

I.D.	Certificat No	Description	Étalonné le	Échéance
CHEV175	12688334994	CALIBRATEUR DE PRESSION DH PPC4	2010-03-17	2011-03-17

### Certificat d'étalonnage

Numéro du certificat: CE1638

Procédures utilisées pour effectuer cet étalonnage

Procedure Description

3PR500-01-CHE

ÉTALONNAGE DE MANOMÈTRE



4850, bd Gouin est Montréal-Nord, Qu Canada HIG 1A2

www.chevrierinstruments.com

Tel. (514) 328-2550 1 800 522-1226 Fax (514) 327-0604

info@chevnerinstraments.com

tastraments de mesure el de régulation pour les procédés indestriets el laboratoire d'étalennage

### Certificat d'étalonnage

Numéro du certificat: CE1640

Étalonnage effectué par :

LA CIE J. CHEVRIER INSTRUMENTS INC.

4850 GOUIN EST

MONTREAL, QC, CANADA H1G 1A2

Informations sur l'instrument

Description: MANOMETRE DIFFERENTIEL ANALOGIQUE

Manufacturier.

DWYER 2000-00

Modèle: Plage

0/0.25 POH2O

Précision:

±4%P.E.

Numero de série

SBI-101

Etat de l'instrument. BON

Commentaire:

Pour:

3424

SBIINC

250, RUE DE COPENHAGUE

ST-AUGUSTIN-DE-DESMAURES, QC G3A 2H3

Date d'étalonnage : 2011-02-10

Echéance :

2012-02-10

Résultat de l'étalonnage: Conforme

Conditions ambiantes 20.9 °C / 29.9%HR

Technicien:

Pierre Junior Berlus

INAGE				
Valeur Appliquée	Tolérance -	Lectures	Tolérance +	Verdict
0.0000 poH2O	-0.0100	0	0.0100	ОК
0.0500 poH2O	0.0400	0.045	0.0600	OK
0 1000 poH2O	0.0900	0.10		OK
0.1500 poH2O	0.1400	0.15	0.1600	ОК
0.2000 poH2O	0.1900	0.20	0.2100	OK
0.2500 poH2O	0.2400	0.25	0.2600	OK
Valeur Appliquée	Tolérance -	Lectures	Tolérance +	Verdict
0.2500 poH2O	0.2400	0.25	0.2600	OK
0.2000 poH2O	0.1900	0.20		OK
0.1500 poH2O	0.1400	0.15		OK
0.1000 poH2O	0.0900	0.10		OK
0.0500 paH2O	0.0400	0.045		OK
0.0000 poH2O	-0.0100	0	0.0100	OK
	Valeur Appliquée  0.0000 poH2O  0.0500 poH2O  0.1000 poH2O  0.1500 poH2O  0.2500 poH2O  Valeur Appliquée  0.2500 poH2O  0.2500 poH2O  0.2500 poH2O  0.1500 poH2O  0.1500 poH2O  0.1500 poH2O  0.1000 poH2O  0.0500 poH2O	Valeur Appliquée         Toléranco -           0.0000 poH2O         -0.0100           0.0500 poH2O         0.0400           0.1000 poH2O         0.0900           0.1500 poH2O         0.1400           0.2000 poH2O         0.1900           0.2500 poH2O         0.2400           Valeur Appliquée         Tolérance -           0.2500 poH2O         0.2400           0.2000 poH2O         0.1900           0.1500 poH2O         0.1400           0.1000 poH2O         0.0900           0.0500 poH2O         0.0400	Valeur Appliquée         Toléranco -         Lectures           0.0000 poH2O         -0.0100         0           0.0500 poH2O         0.0400         0.045           0.1000 poH2O         0.0900         0.10           0.1500 poH2O         0.1400         0.15           0.2000 poH2O         0.1900         0.20           0.2500 poH2O         0.2400         0.25           Valeur Appliquée         Tolérance -         Lectures           0.2500 poH2O         0.2400         0.25           0.2000 poH2O         0.1900         0.20           0.1500 poH2O         0.1400         0.15           0.1000 poH2O         0.0900         0.10           0.0500 poH2O         0.0400         0.045	Valeur Appliquée         Tolérance -         Loctures         Tolérance +           0.0000 poH2O         -0.0100         0         0.0100           0.0500 poH2O         0.0400         0.045         0.0800           0.1000 poH2O         0.0900         0.10         0.1100           0.1500 poH2O         0.1400         0.15         0.1600           0.2000 poH2O         0.1900         0.20         0.2100           0.2500 poH2O         0.2400         0.25         0.2600           Valeur Appliquée         Tolérance -         Lectures         Tolérance +           0.2500 poH2O         0.2400         0.25         0.2600           0.2500 poH2O         0.1900         0.20         0.2100           0.1500 poH2O         0.1900         0.20         0.2100           0.1500 poH2O         0.1400         0.15         0.1600           0.1000 poH2O         0.0900         0.10         0.1100           0.0500 poH2O         0.0400         0.045         0.0600

### Certificat d'étalonnage

Numéro du certificat: CE1640

### Étalons utilisés traçable au C.N.R.C / N.I.S.T

I.D.	Certificat No	Description	Étalonné le	Échéance
CHEV175	12668334994	CALIBRATEUR DE PRESSION DH PPC4	2010-03-17	2011-03-17

Procédures utilisées pour effectuer cet étalonnage

Procedure Description

3PR500-01-CHE ÉTALONNAGE DE MANOMÈTRE





NVLAP LAB CODE 200886-0

### CERTIFICATE OF CALIBRATION

Customer: INTERTEK

22887 NE TOWNSEND WAY FAIRVIEW, OR 97024 Customer Nbr: 1-556813-000

PO Nbr: USA20-0000202108

Date Received: April 13, 2011

Cert/SO Nbr: 2-BD86Q-61-1

Manufacturer: Sportline

Model Nbr: 226

Date Completed: April 20, 2011

Due Date: April 20, 2012

Description: Stopwatch

Serial Nbr: NONE

ID Nbr: 19702

Unit Barcode: 900B0006050

Calibration Proc: 1-AC32646-1 Item Received: In Tolerance Item Returned: In Tolerance

### For calibration data, see Supplemental Report for SO Nbr 2-BD86Q-61-1

Transcat Calibration Leboratories have been sudited and found in compliance with ISGEC 17025;2003. Accredited calibrations performed within the Labs Scope of Accreditation are indicated by the presence of the Accrediting Budy's Logo and Certificate Number on this Certificate of Calibration. Any measurements on an accredited calibration use covered by that Labs Scope are listed in the notes section of the certificate Tabs report must not be used to claim product certification, approval, or endocrement by NYLAP, NIST, or any agency of the Federal Government.

Transcut calibrations as applicable, are performed in compliance with the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992. When specified contractually the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992. When specified contractually the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992. When specified contractually the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992. When specified contractually the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992. When specified contractually the requirements of ISONO1 2008, ISO TS16949, ANSENCSL 2540-1995, and ISO 10012-1992.

Transcability includes no less than An unbroken chain of comparison realization of SI units, measurement uncertainty, documentation, competence, periodic recalibration, and measurement assurance. Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology(NIST) or the National Research Council of Canada (NRC), or other recognized national measurement institutes (NMI's) or international standard hodies, or to measurable conditions created in our faboratory, or accepted fundamental and/or natural physical constants, ratio type of calibration, or by comparison to consensus standards. The specific path of traceability for the reported measurement results is maintained at the Transcat facility and it available there for review

Complete records of work performed are maintained by Transcat and are available for inspection Laboratory standards used in the performance of this calibration are shown on the Supplemental Report

The results in this report relate only to the item calibrated or tested and the determination of in or out of tolerance is specific to the modelserial no referenced above based on the tolerances shown on the supplemental report, these tolerances are either the original equipment manufacturels (OEM's) warranted specifications or the cilent's requested specifications.

The applied uncertainty is the uncertainty of the calibration process The Test Uncertainty Ratio (TUR) is calculated as per NCSL International RP9, section 8.2. All calibrations have been performed using processes having a test uncertainty that is four or more times greater than the solerance of the unit ealibrated onless otherwise noted on the Supplemental Report. Uncertainties have been estimated at a 95 percent confidence level (x-2). Calibration at a 4.1 TUR (or greated) provides reasonable confidence that the instrument is within the stated tolerances. For measuring instruments in order to consider the contribution to the uncertainty from reproducibility of the unit under test (ULIT), add 0.6 of the UUT's least significant digit to the exported uncertainty. For mass calibrations Conventional mass referenced to 8.0 feet.

Any number of factors can cause a unit to drift out of tolerance at any time following its calibration. Institutions on the uses of this insumment are detailed in the OEM's operating instructions.

Notes:

Calibrated At:
14058 SW Milton Ct
Portland, OR 97224
By: David Cordell
Digitally Signed On 4/20/2011

Entility Responsibles, 14058 SW Milton Ct Portland, OR 97224 503-598-8700 Digitally Signed By Mare Jaso for Date: 4/21/2011

> Tony Kutch Lab Manager

# SUPPLEMENTAL REPORT FOR BD86Q-61-1

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# CALIBRATION LAB DATA AS FOUND / AS LEFT

Service Order Nbr. BD86Q-61-1 Description: Stopwatch

Serial: NONE

Customer, INTERTEK

Calibrated: 4/20/2011

Date Due: 4/20/2012 Service Type: R6

PO Nbr. USA20-0000202108

Mfg: Sportline

Model: 226

ID Nbr. 19702

Calibration Proc: 1-AC32646-1

Description	Setpoints	Contract &	I Aw I imit	High I imit	Ac Ennd / Ac Laft	I Am I smit High I imit he Found / he I oft N	d'TT
Time Measurement Error		Accuracy.	100	Augu Admin	The state of the s	Y cuccinants (N-2, =)	WO.
Seconds/day	0.00sec/day	±(1 sec/day)	-1.00	1.00	0.58 sec/day		SECTION AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF T
All Function Test							
All Function Test			s.	g,	£4		

As Found and As Left Data recorded on 4/20/2011

Temperature 71.8°F / 22.1°C Relative Humidity: 42% TempRH Asset 1012W

Manufacture Hewlett Packard

486W

Model 53131A

Description UNIVERSAL COUNTER

6/2/2010 6/30/20

6/30/2011 2-&1016W-10-1

Due Date

Cal Date

The reported uncertainty is the uncertainty of the calibration process For measuring instruments add 0.6 of the last significant digit to the reported uncertainty to the assaurement uncertainty of the unit under test at the spelle nest point. Reported resolution of the UUT does not represent exilitration uncortainty or accumary of the UUT



Certificate of Compliance

It is hereby certified that this article has been tested for functionality. If the article has no testable function it has been inspected and is certified to be the article as described.

Customer: INTERTEK

2595 SOUTHWEST 153RD DRIVE

BEAVERTON, OR 97006

Customer Nbr: 1-556813-000

PO Nbr: USA20-0000202108

Date Received: December 13, 2010

Cert/SO Nbr: 2-A94VT-88-1

Manufacturer: Troemner

Model Nbr: UNKNOWN (PM0104)

Date Completed: February 03, 2011

Due Date: January 21, 2012

Part Nbr: Unknown (PM0104)

Description: 10 Lb Weight, Single

Serial Nbr: NONE

ID Nbr: (NONE)

Unit Barcode: 901B0008371

Transcat Calibration Laboratories have been audited and found in congliance with ISCEC 17025-7005. Accredited calibrations performed within the Labs Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number on this Certificate of Calibration. Any measurements on an accredited calibration not covered by that Labs Scope are noted below. This report must not be used to claim product certification, approval, or endottement by NVLAP, AZLA, NIST, or any agency of the Federal Government

Transcat calibrations, at applicable are performed in compliance with the requirements of ISO0091,2000, ISO TS16949, ANSENCSL 2540-1993, QS-9000 and ISO 10012-1992. When specified consecutably the requirements of 10CFR21, 10CFR50 App, B and NQA-1 are also covered.

Transcat will maintain and document the traceability of all its standards to the National Institute of Standards and Technolog(NISE) or the National Research Council of Canada(NRC), or to other recognized national or international standard bodies(NMIs), or to measurable conditions created in our laboratory, or accepted fundamental and/or natural physical constants, ratio type of calibration, or by comparison to consensus standards The specific path of traveability for the reported measurement results is maintained at the Transcat facility and is available there for review

Complete records of work performed are maintained by Transcat and are available for inspection Laboratory standards used in the performance of this calibration are shown below

The results in this report relate only to the item calibrated or tested and the determination of in or out of tolerance is specific to the models risk models risk not provided by the manufacturer's published specifications.

All calibrations have been performed using processes having a test uncertainty satio of four or more times greater than the unit calibratedmiess otherwise noted on the Supplemental Report. Uncertainties have been estimated at a 95 percent confidence level(t=2). Calibration at a 4-1 TUR provides seasonable confidence that the instrument is visitin the manufacture's published specifications. Limitations on the uses of this instrument are detailed in the manufacture's operating instructions. Any number of factors can cause a unit to drift out of tolerance at eny time following its calibration process. For measuring instrument, add 0.6 of the least significant digit to the reported uncertainty to obtain the measurement uncertainty of the unit under test at the pecific point. For mass calibrations Conventional mass referenced to 8.0 g/cm3. For single aided tolerances no TUR will be provided

This device was certified by Transcat policy P0902R2

Checked for compliance at: 14058 SW Milton Ct Portland, OR 97224 By: Greg Guile Digitally Signed On 2/3/2011

Facility Responsible: 14058 SW Milton Ct Portland, OR 97224 503-598-8700

Digitally Signed By Drake Dunning for Date: 2/3/2011

> Tony Kutch Lab Manager

Reprinted on 02/08/2011



# SUPPLEMENTAL REPORT FOR A94VT-88-1

# CALIBRATION LAB DATA AS FOUND / AS LEFT

Service Order Nbr. A94VT-88-1

Description: 10 Lb Weight, Single

Serial: NONE

NTERTEK Customer:

Calibrated: 2/3/2011

Date Due: 1/21/2012

Service Type:

Model: UNKNOWN (PM0104) Mfg: Troemner

PO Nbr. USA20-0000202108

ID Nbr. NONE

Calibration Proc. 1-AC10001-1

Description	Setpoints	Accuracy	Low Limit	High Limit A	Low Limit High Limit As Found / As Left Q	Uncertainty (k=2; ±)	TUR
Function Check							
Documentation Verification			Ь	۵.	Ь		

As Found and As Left Data recorded on 2/3/2011

Relative Humidity, 42% Temperature: 67.5°F / 19.7°C

Manufacturer

None - Only for Lab Use

None-02

NONE

Only for lab use

Description

Temp/RH Asset 1013W

1/23/2009

NA 1/23/2099

Traceability Numbers

Due Date

Cal Date

Remarks

This device was certified by Transcat policy P0902R2

ment uncertainty of the unit under test at the spelfic test point The reported uncertainty is the uncertainty of the calibration process fror measuring inconsents add 0.6 of the loast significant digit to the reported uncertainty to obtain the measure

Reported resolution of the UUT does not represent calibration uncertainty or accessey of the UUT Calibration Lab Data Report - Page 1 of 1

Field not applicable.

Service Order Nbr. A94VT-88-1





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Page 1 of 7 Pages Weight

Certificate Number 591491B-1 Date of Calibration 21-JAN-2011

SECTION 1: NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025 Client Transcat (Rochester) 35 Vantage Point Drive Rochester NY 14624

SECTION 2: APPROVED SIGNATORY

Joseph Moran, Metrology Manager

SECTION 3: PERSON PERFORMING WORK

Daniel Foglio

SECTION 4: CERTIFICATE INFORMATION

Description of Masses: Cast Iron

Accuracy Class : NIST 105-1 Class F

Order Number 304744 : Two Piece Construction

Material : Cast Iron Date Received

: 11-JAN-2011 Date of Calibration : 21-JAN-2011 : 21-JAN-2011

Date of Issue Weight Range

: 10 lb

SECTION 5: ENVIRONMENTAL CONDITIONS DURING TEST

Temperature: 21.73°C

Pressure: 752.79 mm Hg

Relative Humidity: 45%

SECTION 6: PERTINENT INFORMATION

The Weights listed on this calibration report have been compared to reference mass standards that are directly traceable to the National Institute of Standards and Technology under Test No. 822/272103-05.

Reference standards and balances used to perform the calibration are listed in Section 10.

The weights calibrated for this report have been calibrated in accordance with Troemner's calibration process. The calibration performed meets Level III criteria as described in the NIST/NVLAP Technical Guide 150-2.

This calibration also meets specifications as outlined in ISO 9001, ISO/IEC 17025, ANSI/NCSL Z540-1-1994, NRC Document 10CFR50 Appendix B, and applicable documents.





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Page 2 of 7 Pages Weight

Certificate Number 591491B-1 Date of Calibration 21-JAN-2011

NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025 Client Transcat (Rochester) 35 Vantage Point Drive Rochester NY 14624

SECTION 7: TRUE MASS (MASS IN VACUUM) CALIBRATION DATA

Density 1 Nominal Serial True Mass Uncertainty Mass Value Number As Left of Weight (+or-) As Found

10 lb

4536.2786 g 4536.2786 g 7.2000 g/cm<sup>3</sup>

50.0 mg





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Page 3 of 7 Pages Weight

Certificate Number 591491B-1 Date of Calibration 21-JAN-2011

NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025 Client
Transcat (Rochester)
35 Vantage Point Drive
Rochester NY 14624

SECTION 8: MASS IN AIR CALIBRATION VALUE VS. REFERENCE DENSITY 8000 kg m<sup>-3</sup>

Nominal Serial Mass Value Number ---- Conventional Mass Value ---As Found As Left

Uncertainty (+ or -)

Tolerance (+ or -)

10 lb

4536.2030 g

4536.2030 g

50.0 mg

450.0000 mg





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Page 4 of 7 Pages Weight

Certificate Number 591491B-1 Date of Calibration 21-JAN-2011

NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025

Client Transcat (Rochester) 35 Vantage Point Drive Rochester NY 14624

SECTION 9: MASS IN AIR CALIBRATION DATA VS, REFERENCE DENSITY 8000 kg m<sup>-3</sup>

Nominal Mass Value

Serial Number -- Conventional Mass Correction --As Found

As Left

Uncertainty (+ or -)

Tolerance (+or-)

10 lb

279.3 mg

279.3 mg

50.0 mg

450.0000 mg





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Page 6 of 7 Pages
Weight
Certificate Number 591491B-1
Date Of Calibration 21-JAN-2011

### NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025

Client Transcat (Rochester) 35 Vantage Point Drive Rochester NY 14624

### SECTION 11: GENERAL INFORMATION

This calibration was performed in Troemner's High Precision Level I Mass Metrology Laboratory at 201 Wolf Drive, Thorofare, New Jersey 08086 unless otherwise noted on page one. The internal procedures used are CAL-CLASSI, CAL-MMAP, and NIST HB145.

### SECTION 12: DEFINITIONS AND TERMS

MASS IN A VACUUM - The mass of a weight as if it were measured in a vacuum. Also known as True Mass.

MASS IN AIR - The conventional value of the result of weighing in air, in accordance to International Recommendation OIML D 28. For a weight taken at 20° C, the conventional mass is the mass of a reference weight of a density of 8000 kg·m·3 which it balances in air of a density of 1.2 kg·m·3.

AS FOUND MASS IN A VACUUM - The measured value of the mass(es) as they were received by Troemner.

AS LEFT MASS IN A VACUUM - The measured value of the mass(es) after they were adjusted, repaired or replaced when necessary. The As Found Mass in a Vacuum will equal the As Left Mass in a Vacuum if the mass(es) did not require adjustment, repair or replacement.

NOMINAL MASS - The mass value as marked on the weight.

CORRECTION - The difference between the mass value of a weight and its nominal value. A positive correction indicates that the mass value is greater than the nominal value by the amount of the correction.

AS FOUND CONVENTIONAL MASS CORRECTION - The conventional correction of the result, as it was received by Troemner, of weighing in air in accordance to International Recommendation D 28. For a weight taken at 20° C, the conventional mass is the mass of a reference weight of density 8000 kg·m<sup>-3</sup> which it balances in air density of 1.2 kg·m<sup>-3</sup>. If the customer requires cleaning prior to calibration, the after cleaning correction would be reported.

AS LEFT CONVENTIONAL MASS CORRECTION - The conventional correction of the result, after adjust-, ment repair, or replacement of weighing in air in accordance to International Recommendation D 28. For a weight taken at 20° C, the conventional mass is the mass of a reference weight of density 8000 kg·m<sup>-3</sup> which it balances in air density of 1.2 kg·m<sup>-3</sup>. The As Found will equal the As Left Conventional Mass Correction if the mass(es) did not require adjustment, repair or replacement.

(continued on next page)





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Page 7 of 7 Pages
Weight
Certificate Number 591491B-1
Date of Calibration 21-JAN-2011

NAME AND ADDRESS OF CUSTOMER

End user Transcat Inc 14058 SW Milton Ct Portland OR 97224-8025

Client Transcat (Rochester) 35 Vantage Point Drive Rochester NY 14624

### SECTION 12: DEFINITIONS AND TERMS (continued)

UNCERTAINTY - The standard deviation associated with the result of the measurement that characterizes the dispersion of the values that could reasonably be attributed to the measurand. The uncertainty is calculated in accordance with NIST TechNote 1297 / UKAS M3003 using a coverage factor of k=2 (k=2 defines an interval having a level of confidence of approximately 95 percent). The uncertainty does not include possible effects of magnetism,

TOLERANCE - Defines the limits in which the correction value and the uncertainty must fall to meet the tolerance specification for the given Class.

AS FOUND CONVENTIONAL MASS VALUE - The measured value of the mass(es) as they were received by Troemner, of weighing in air in accordance to International Recommendation OIML D 28. For a weight taken at 20° C, the conventional mass is the mass of a reference weight of density 8000 kg·m·³ which it balances in air density of 1.2 kg·m·³. If the customer requires cleaning prior to calibration, the after cleaning value would be reported. F denotes Out of Tolerance Weight.

AS LEFT CONVENTIONAL MASS VALUE - The measured value of the mass(es) after they were adjusted, repaired or replaced when necessary, of weighing in air in accordance to International Recommendation OIML D 28. For a weight taken at 20° C, the Conventional Mass is the mass of a reference weight of density 8000 kg·m<sup>-3</sup> which it balances in air density of 1.2 kg·m<sup>-3</sup>. The As Found will equal the As Left Conventional Mass Value if the mass(es) did not require adjustment, repair or replacement.

ASTM E617-97 - Weights meet the tolerance specification for ASTM E617-97. Weights 2kg - 1g screened for magnetism using a Gaussmeter.

SECTION 13: ADDENDUM

Weight(s) Pass Visual Inspection

#### CERTIFICAT D'ÉTALONNAGE N° W-007466-6373

pour

Services d'essais Intertek Ltée 1829, 32e avenue Lachine , (Québec) H8T 3J1

pour

JEU DE POIDS MÉTRIQUES No.180-110

Le Service d'évaluation des faboratoires d'étalonnage (CLAS) du Conseil national de recherches du Canada (CNRC) a évalué et certifié la capacité d'étalonnage du laboratoire et la traçabilité au Système international d'unités (SI) ou à des étalons acceptables selon le CLAS. Le présent certificat d'étalonnage est délivré conformément aux conditions de certification du CLAS et aux conditions ISO/IEC 17025 d'accréditation du Conseil canadien des normes (CCN). Le CLAS et le CCN ne garantissent pas l'exactitude des étalonnages individuels effectués par les laboratoires accrédités.

Numéro de Laboratoire Accrédité : 279

Certificat CLAS/NRC: 98-01

VERIFIÉ PAR:

Adrian Rosu, Technologue en Étalonnage

Droit d'auteur; Ce certificat peut être reproduit en entier sans consentement. Il ne peut être reproduit en partie sans permission écrite de Thermo Fisher Scientifique.

Page 1 de 3

No. de certificat; W-007466-6373 Date reçue: November 17, 2006

Date étalonnée: November 20, 2006

Date de réetalonnage: November 20, 2007

Client: Services d'essais Intertek Ltée

Contact: Eric Lafontaine

Client P.O. No.: SC-633594-MTL

Page 2 de 3

Le ou les poids indiqués en rubrique et ci-dessous ont été étalonnés selon les étalons de masse de Laboratoire de métrologie, qui assurent le rattachement aux étalons nationaux de mesure du Canada, au moyen d'une suite ininterrompue de comparaisons ayant toutes des limites d'incertitude spécifiées. Les étalons nationaux de mesure du Canada sont conservés par le Conseil national de recherches du Canada (CNRC). Les limites d'incertitude peuvent être considerées comme des écarts-types statistiquement indépendants. Les incertitudes sont élargies au moyen d'un coefficient de couverture k=2 afin d'obtenir un niveau de confiance d'environ 95 %, en supposant une distribution normale. Les valeurs qui suivent représentent la masse apparente correspondant à une densité de 8000 kg/m3, à une température de 20° C, et à une densité de l'air de 1,2kg/m3 (masse conventionnelle). Les résultats de l'étalonnage s'apptiquent uniquement aux poids indiqués au moment de l'étalonnage.

Identification du poids	Correction * "é la réception en (mg)" **	Correction * "au retour en (mg)"	Limites d'incertitude "en (±mg)"	Tolérances *** [ANSI/ASTM 4] "en (mg)"
500 g		+4.32	0.75	10
200 g	H1 1 1 1 1 1 1 1 -	+2.73	0.25	4.0
200 g		+1.42	0.25	4.0
100 g		+1.46	0.20	2.0
		100		

Une correction positive signifie que le poids est plus élevé que la quantité indiquée.
Une correction négative signifie que le poids est moins élevé que la quantité indiquée.



- \*\* Lorsque aucune valeur n'apparait dans cette colonne, les chiffres des colonnes «à la reception» et «au retour» sont identiques.
- \*\*\* Pour déterminer si un poids respecte sa tolérance requise. Les valeurs combinées des colonnes << Correction au retour >> et << Limites d'incertitude >> doivent être inférieur ou égal à la valeur de tolérance.



No. de certificat: W-007466-6373 Date reçue: November 17, 2006

Date étalonnée: November 20, 2006

Date de réetalonnage: November 20, 2007

Client: Services d'essais Intertek Ltée

Contact: Eric Lafontaine

Client P.O. No.: SC-633594-MTL

Page 3 de 3

Fourchette d'utilisation: 500g - 100g

État à la réception: Bon

#### **DESCRIPTION DES POIDS**

Valeur nominale	Matériel	Manufacturier	Forme	Type	Classe
500g - 100g	Acier inoxydable	Ohaus Scale Corp.	Cyl. rainure/cavitée	11	ANSI/ASTM 4

#### MÉTHODE D'ÉTALONNAGE

Méthode Employée	No. du Formulaire	
Substitution double	F43	Manuel 145, manuel de NIST/NBS pour la garantie de la qualité des mesures métrologiques, Novembre 1986

#### DÉROGATION À LA PROCÉDURE: Aucun

#### BALANCE(S) UTILISÉE(S)

Les balances sont étalonées avant leurs utilisation initiale. Un rapport d'entretien et d'inspection (M&I) est effectué annuellement pour chaque balance. Si une déviation se produit, la balance est réétalonnée.

Balances	No. de certificat.	Numéo M & I	Date inspectée	
AT1005 Mettler No. 1115341792	8-10248	MIR801	September 13, 2006	
AX106 Mettler No. 1122403024	B-1043-1	MIR828	November 02, 2006	

#### RATTACHEMENT / ÉTALON(S) UTILISÉ(S): NRC

L'étalon de référence de Fisher Scientifique est comparé à des intervalles prédéterminés à des étalons nationaux. Les étalons de Fisher Scientifique utilisés pour l'obtention des résultats sont comparés à intervalles prédéterminés à l'étalon de référence de Fisher Scientifique.

Étalons	No. de certificat.	Étalonné par:	Date étalonnée:	
SS-P-2	MS-2005-0001	NRC	January 25, 2005	
95-4	W-007371-5962	FSML	August 23, 2006	
M2US	W-006938-5962	FSML	August 23, 2006	

#### CONDITIONS ENVIRONNEMENTALES

Température 19.2°C

Date étalonnée: 11/20/2006

Humidité: 40%

Pression Barométrique: 1011mBar Étalonné par: Aérian Rosu

FISHER SCIENTIFIC

# **TECHN**ISOL

325, rue de l'Espinay Québec (Québec) G1L 2J2

Tél. : (418) 647-1402 Télec. : (418) 648-9288

## CERTIFICAT D'ÉTALONNAGE



Client:	Services d'essais Intertek AN Itée	Nº du certificat :	1775
Adresse:	1829, 32 <sup>e</sup> Avenue	Nº projet client :	IN061551-1061
	Lachine (Québec) H8T 3J1	Accréditation CCN n°:	24
		Certification CLAS no:	2000-01
		Classe d'exactitude :	ASTM E-617, classe 1
Masse:	500 mg à 10 mg	Date d'étalonnage :	1 <sup>er</sup> décembre 2006
Fabricant:	Rice Lake	Date du prochain étalonnage :	Décembre 2011
Condition d	'essai: Temp. °C: 20,4	Pression kPa: 101,8 H	umidité % : 36

Valeur nominale	N° de série	N° d'inventaire	Masse conventionnelle telle que reçue Correction (mg)	Masse     conventionnelle     correction après     étalonnage (mg)	Tolérance (+ ou -) (mg)	Incertitudes (+ ou -) (mg)
<b>≠</b> 500 mg	5864	180-195	0,0156	0,0026	0,0100	0,0033
≠200 mg	5864	180-195	0,0145	- 0,0003	0,0100	0,0033
<b>≠</b> 200 mg ●	5864	180-195	0,0191	0,0006	0,0100	0,0033
50 mg	5864	180-195	0,0048		0,0100	0,0033
20 mg	5864	180-195	0,0063		0,0100	0,0033
20 mg •	5864	180-195	0,0059		0,0100	0,0033
10 mg	5864	180-195	0,0054		0,0100	0,0033
					-	

₱ S'applique seule	ment pour les masses	qui ont été ajustées	* Ajusté	** Ho	rs toléranc	e pour la c	lasse spécifiée
« Détermination de	s incertitudes » IES	utilisons la procédu 5 903. Nos étalons de permission écrite de l	e référence so	ont étalonne	duelle » i is chaque	IES 902 ( année po	et la procédu ar le CNRC. (
Remarques :							
			Salan	ne	)		
Effectué par :	J. Adey	Approuvé par :	S. Hamel, 1	esp. SMM	Date :	19 décen	mbre 2006
compared to redefend and a local decided							

F-903 - Révision 03

No du rapport d'étalonnag CA0003-088-032111 Mettler Toledo Service Business Unit Industrial 1900 Polaris Parkway Columbus, Ohio 43240

# **METTLER TOLEDO**

ISO 9001 Registered ANSI/NCSL Z540 Accrédité



1-800-METTLER

Accrédité par l'American Association of Laboratory Accreditation (A2LA) (ACCALDIVED) CERT.CALIBRATION #1902.02

## Certificat d'étalonnage

Client					
Société :	SBI Fabricant de poêles	International inc.			
Adresse:	250, rue Copenhague				
Ville ;	St-Augustin	État/Pro	ovince :	Québec	
Code postal:	G3A 2V1	Astea C	Customer ID:	C03758	9001001
Instrument					
Constructeur:	Rice Lake	Modèle	de terminal :	IND560	
Modèle :	Roughdeck	No do s	ărie du termin	0092739	06KL
No de série :	B00927396KL	No. Són	io Impr.	N/A	
Capacité :	625 kg	Service	Pièce:	Lab	
Résolution :	0.02 kg	Nbre de	Divisions	31250	
Classe:	III	Procéde	re utilisée :	Canadie	n
Numéro/ID d'actif du clie	SBI-013				
Procédure:	Le présent certificat est é l'A2LA, en vertu de la nor laboratoire et la traçabilité	me (SO/IEC 17025, A2	LA a évalué la	certification capacité d	accordées par e mesure du
Date de calibrage :	21-mars-2011	Le proci	hain Cal Date	31-mars	-2012
Signataire autorisé (A2LA) :	Dany Careau	Signatu	re:	ELECTR	ONIC SIGNATURE
Signature du client :	*/				
Étalons de travai	l				
Traçabilité	Les poids de test utilisés	se référent au National	Institute of Sta	ndards and	f Technology.
Jeu de polds no :	Traçabilité NIST No.:	Classe ASTM/OIML	Date d'étal	onnage :	Date proch. étalonnage
42268	M10-0278	M1	5-août-	2010	5-août-2011
MTP1	MT0015626	F1	17-sept	-2010	17-sept2011
KitS	1356103	M1	5-oct2	2010	5-oct-2011

Version Logiciel:

4.3.0.7

Page 1 sur 3

#### Résultats de mesure

La température :

70 °F

Les conditions ambiantes ont été vérifiées afin d'assurer l'exactitude de l'étalonnage.

#### Test de variation

o,	20
n4	3 🗆

		Avant Réglage
Les poids Appliqués	Position	Valeur lue
1: 125 kg	Position 1	125.02 kg
2: 125 kg	Position 2	125.16 kg
3: 125 kg	Position 3	125.16 kg
4: 125 kg	Position 4	125.26 kg
Erreur maximum :		0.28 kg
Max Erreur Admissible :		0.10 kg

1	lprés Ré	glage
	Valeur	lue
	124.98	kg
	125.02	kg
	125.02	kg
	125.00	kg
	0.04 k	g
	0.1 kg	1

#### Linéarité

		Avant réglage						
	Les poids Appliqués	Valeur lue	Erreur		Erreur edmissible	Dans la Tolérance		
Zero 1	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	oui		
2	20.00 kg	20.02 kg	0.02 kg	1 d	2 d	OUI		
3	40.00 kg	40.04 kg	0.04 kg	2 d	2 d	OUI		
4	100.00 kg	100.12 kg	0.12 kg	6 d	5 d	NON		
Мах б	200.00 kg	200.24 kg	0.24 kg	12 d	5 d	NON		
6	100.00 kg	100.12 kg	0.12 kg	6 d	5 d	NON		
7	40.00 kg	40.04 kg	0.04 kg	2 d	2 d	OUI		
8	20.00 kg	20.02 kg	0.02 kg	1 d	2 d	OUI		
Zero 9	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	OUI		

Méthode de substitution utilisée

No du rapport d'étalonnag CA0003-088-032111

## **METTLER TOLEDO**

	Après réglage						
	Los polds Appliqués Veleur lue Errour		ur	Erreur admissible	Dans la Tolérance		
Zero 1	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	OUI	
2	20.00 kg	20.00 kg	0.00 kg	0 d	2 d	oui	
3	40.00 kg	40.00 kg	0.00 kg	0 d	2 d	oui	
4	100.00 kg	100.02 kg	0.02 kg	1 d	5 d	oui	
Max 5	200.00 kg	200.02 kg	0.02 kg	1 d	5 d	OUI	
6	100.00 kg	100.02 kg	0.02 kg	1 d	5 d	OUI	
7	40.00 kg	40.00 kg	0.00 kg	0 d	2 d	OUI	
8	20.00 kg	20.00 kg	0.00 kg	0 d	2 d	oui	
Zero 9	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	OUI	

-	3 40.001	g 40.00 kg				
- }	4 100.00	kg 100.02 kg	0.02 kg	1 d	5 d	oui
M	ax 5 200.00	kg 200.02 kg	0.02 kg	1 d	5 d	OUI
3	6 100,00	kg 100.02 kg	0.02 kg	1 d	5 d	OUI
	7 40.00)	g 40.00 kg	0.00 kg	0 d	* 2 d	OUI
	8 20.001	g 20.00 kg	0.00 kg	0 d	2 d	OUI
Ze	ero 9 0.00 k	g 0.00 kg	0.00 kg	0 d	1 d	OUI
		41001				
épé	☑ oui étabilité	□ NON				
	eppliqués: 100.00	) kg	1	1		
ids	étabilité		Différence		r k = 114	
nids	eppliqués: 100.00	) kg	Différence 100 kg			
oids	etabilité eppliqués: 100.00	) kg Vide	100000000000000000000000000000000000000		v k ' → 114	
oids 1	etabilité appliqués : 100.00 Chargé 100.00 kg	Vide 0.00 kg	100 kg			
olds 1 2	etabilité eppliqués: 100.00 Chargé 100.00 kg	Vide 0.00 kg 0.00 kg	100 kg 100.02 kg		74 <sup>1</sup> - 114	
olds 1 2 3	######################################	Vide 0.00 kg 0.00 kg 0.00 kg	100 kg 100.02 kg 100.02 kg			
1 2 3	etabilité eppliqués : 100.00 Chargé 100.00 kg 100.02 kg 100.02 kg Erreur maximale :	0 kg Vide 0.00 kg 0.00 kg 0.00 kg 0.02 kg	100 kg 100.02 kg 100.02 kg 1.0 d			

niveau de confiance approximatif de 95 %. Des dispositions deivent être prises en matière d'environnement au lieu d'étalonnage, d'incertitude induite par l'article en étalonnage et d'effets indéstrables causés par le transport du matériel d'étalonnage. Ces facteurs pourraient entraîner une incertitude plus grande que le BMC,

Remarques	
	2.100100
Aucune.	

Ver	nois	Long	Inlat	+

No du rapport d'étalonnag CA0003-086-032111 Mettler Toledo Service Business Unit Industrial 1900 Polaris Parkway Columbus, Ohio 43240 1-800-METTLER

# **METTLER TOLEDO**

ISO 9001 Registered ANSI/NCSL Z540 Accrédité



Accrédité par l'American Association of Laboratory Accreditation (A2LA) (ASSAUDITED) CERT.CALIBRATION #1902.02

#### Certificat d'étalonnage

Client						
Société :	SBI Fabricant de poêles	International Inc.				
Adresse:	250, rue Copenhague					
Ville:	St-Augustin	État/Pro	vince :	Québec		
Code postal:	G3A 2V1	Astea C	Customer ID:	C03758	9001001	
Instrument						
Constructeur:	Weightronix	Modéle	de terminal :	IND560	}	
Modèle :	DSL-6060	No de s	érie du termin	0092738	16KL	
No de série :	B00927386KL	No. Săr	ie Impr.	N/A		
Capacité :	500 kg	Service	/Pièce :	LAB		
Résolution :	0.02 kg	Nbra de	Nore de Divisions	25000		
Classe:	III	Procédi	re utilisée :	Canadle	n	
Numéro/ID d'actif du clie	SBI-014					
Procédure:	Le présent certificat est é l'A2LA, en vertu de la nor faboratoire et la traçabilité	me ISO/IEC 17025, A2	LA a évalué la			
Date de calibrage ;	21-mars-2011	Le proc	hain Cal Date	31-mars	-2012	
Signalaire autorisé (A2LA) ;	Dany Careau	Signatu	Signature:		ELECTRONIC SIGNATURE	
Signature du client :						
Étalons de travail	ř					
Traçabilité	Les polds de test utilisés	se réfèrent au National	Institute of Sta	ndards and	Technology.	
Jeu de poids no :	Traçabilité NIST No.:	Classe ASTM/OIML	Date d'étal	onnage :	Data proch. étalonnaga	
42268	M10-0278	M1	5-8001-2	2010	5-août-2011	
MTP1	MT0015626	F1	17-sept.	-2010	17-sept2011	
KIt S	1356103	M1	5-oct2	2010	5-oct2011	

Version Logiciei:

4.3.0.7

Page 1 sur 3

#### Résultats de mesure

La température :

70 °F

Les conditions ambiantes ont été vérifiées afin d'assurer l'exactitude de l'étalonnage.

#### Test de variation

01	20
ω <sup>4</sup>	3

		Avant Régiage
Les poids Appliqués	Position	Valeur lue
1: 125,00 kg	Position 1	125.00 kg
2: 125.00 kg	Position 2	125.04 kg
3: 125.00 kg	Position 3	125.00 kg
4: 125.00 kg	Position 4	124.98 kg
Errour maxlmum :		0.08 kg
Max Erreur Admissible :		0.10 kg

Après	Réglag
Vale	aurlue
125	.00 kg
0.0	00 kg
0.	1 kg

#### Linéarité

	Avant réglage							
Zero 1	Les poids Appliqués	Valeur lue	Erreur		Erreur		Erreur admissible	Dans la Tolérance OUI
	0.00 kg	0.00 kg	0.00 kg	0 d	1 d			
2	20.00 kg	20.00 kg	0.00 kg	0 đ	2 d	OUI		
3	40.00 kg	40.00 kg	0.00 kg	0 d	2 d	OUI		
4	100.00 kg	100.02 kg	0.02 kg	1 d	5 d	OUI		
Max 5	200.00 kg	200.04 kg	0.04 kg	2 d	5 d	OUI		
6	100.00 kg	100.02 kg	0.02 kg	1 d	5 d	OUI		
7	40.00 kg	40,00 kg	0.00 kg	0 d	2 d	OUI		
8	20.00 kg	20.00 kg	0.00 kg	0 d	2 d	OUI		
Zero 9	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	OUI		

Méthode de substitution utilisée

## **METTLER TOLEDO**

		Land Control				
Zero 1	Les polds Appliqués	Valour luo Erreur		ur	Erreur edmissible	Dans la Tolérance
	0.00 kg	0.00 kg	0.00 kg	0.0	1 d	OUI
2	20.00 kg	20.00 kg	0.00 kg	0 d	2 d	OUI
3	40.00 kg	40.00 kg	0.00 kg	0 d	2 d	OUI
4	100.00 kg	100.00 kg	0.00 kg	0 d	5 d	OUI
Max 5	200.00 kg	200,00 kg	0.00 kg	0 d	5 d	oui
6	100.00 kg	100.00 kg	0.00 kg	0 d	5 d	oui
7	40.00 kg	40.00 kg	0.00 kg	0 d	2 d	OUI
8	20.00 kg	20,00 kg	0.00 kg	0 d	2 d	OUI
Zero 9	0.00 kg	0.00 kg	0.00 kg	0 d	1 d	OUI

	3 40.001	g 40.00 kg	0.00 kg	0 d	2 d	OUI
	4 100.00	kg 100.00 kg	0.00 kg	0 d	5 d	OUI
A	fax 5 200.00	kg 200,00 kg	0.00 kg	0 d	5 d	oui
	6 100.00	kg 100.00 kg	0.00 kg	0 d	5 d	oui
	7 40.001	g 40.00 kg	0.00 kg	0 d	2 d	oui
	8 20.00	g 20,00 kg	0.00 kg	0 d	2 d	OUI
Z	ero 9 0.00 k	g 0.00 kg	0.00 kg	0 d	1 d	OUI
Rép	☑ oui étabilité	à l'état du système avant	in Magranou de agraice	основропоен	ar dat do	
Pold	s appliqués : 100.00	) kg	į.	4		
	Chargé	Vide	Différence			
1	100.00 kg	0.00 kg	100 kg			
2	100.02 kg	0.00 kg	100.02 kg			
3	100.00 kg	0.00 kg	100 kg			
9	Erreur maximala :	0.02 kg	1.0 d			
	Tolérance :	0.10 kg	5 d			
nce	rtitude					

	Automobile of	 	1	100
1112	ce	 	rei	0
	G. C.	 u	EU	œ

niveau de confiance approximatif de 95 %. Des dispositions doivent être prises en matière d'environnement au lieu d'étalonnage, d'incertitude Induite par l'article en étalonnage et d'effets indéstrables causés par le transport du matériel d'étalonnage. Ces facteurs pourraient entraîner une incertitude plus grande que le BMC.

Remarques	
Aucune	

Version Logiciel:

4.3.0.7

Page 3 sur 3



Ulrich Métrologie inc. Ulrich Metrology Inc. 9912, Côte-de-Liesse Montréal (Québec) H8T 1A1 Tel. (514) 631-6653 Fax (514) 631-6122 info@utrich ca www.ulrich.ca

#### CALIBRATION CERTIFICATE

Certificate no.: 228051 Identification: SBI-096

Description: CALIBRATOR, OMEGA CL23A

Size: TC K/J/T Manufacturer: **OMEGA** Model no.: CL23A

Serial no.: T-256137 Calibration date

August 09, 2010

Certificate issued August 09, 2010

Interval: 12 months Due date: August 9, 2011

Procedure no.: MET/CAL

CLAS Type 2 Laboratory Environment:

Temperature: 23 ± 2°C Humidity: 35 - 55% RH

Metrologist: NFS

Property of:

SBI

250 RUE DE COPENHAGUE

ST-AUGUSTIN-DE-DESMAURES, QC G3A 2H3

Approved by:

This enthourism certificate is issued to accordance with the applicable requirement of ISO/IEE 17023 and QM-09. Measurement receible provided are traceable to either the National Research Council Countil (INC), the National Institute of Standards and Technology (NIST), a national Internations of another conserv segmentry to the CPM Mutual Recognition Assumption (MRA), or a calibration below the an according body with which Canada has an equivalence agreement.

#### CALIBRATION STANDARDS

See notes below.

#### MEASUREMENT UNCERTAINTY

The above listed instrument meets or exceeds all specifications as stated in the reference procedure, unless noted otherwise. For measurement results associated with the conformance to a tolerance, the uncertainty in the measurement system did not exceed 25% (4.1 test uncertainty ratio) of the acceptable tolerance for each characteristic calibrated, unless otherwise noted in the report

#### CALIBRATION DATA

See next page for measurement results.

#### Notes:

9V battery replaced.



#### Ulrich Métrologie inc. · Ulrich Metrology Inc.

9912. Côte-de-Liesse Lachine, QC HBT1A1 www.ulrich.ca

Tel. I514] 631-6653 Fax (514) 631-6122 info@ulrich.ca

#### CALIBRATION DATA

Certificate No.228051

Instrument ID:

SBI-096

Type:

CALIBRATOR THERMOMETER

Serial no.:

T-256137

Procedure:

Omega CL23A: 5520A-M

Result:

PASS

Condition: FOUND-LEFT

CALIBRA	TION	STA	NDAF	RDS
---------	------	-----	------	-----

Standard ID Type Manufacturer Model no. Cal. Date Due Date 7870009 CALIBRATOR FLUKE 5520A 2010/04/23 2011/04/23

Single Letter Telephone (April 1997)	TRUE	TEST	ACCEPTANCE	LIMITS	PASS/	
PARAMETER	VALUE	RESULT	LOW	HIGH	FAIL	TUR
DISPLAY CALIBRATION						
Did all negments of the displ	av (11)minator					
Result of Operator Evaluation					PASS	
THERMOMETER CALIBRATION						
K Type Thermocouple						
-200.0degF		-200.8	-201.0	-199.0	400000	
-60.0degF		-60.6	-61.0		PASS	1.7
40.0degF		-40.5		-59.0	PASS	3.1
32.0degF		31.6	-40.5	-39.5	PASS	1.5
1240.0degF		1239.6	31.5	32.5	PASS	1.7
1260.0degF			1239.5	1240.5	PASS	1.1
2500.0degF		1259.6	1259.5	1260.5	PASS	1.1
Type Thermocouple		2499.5	2499.0	2501.0	PASS	1.4
200.0degF		-200.6	000	10000		
60.0degP		-60.4	-201.0	-199.0	PASS	2.1
40.0degF			61.0	-59.0	PASS	3.5
32.0degF		-40.4 31.6	-40.5	-39,5	PASS	1.7
1240.0degF			31.5	32.5	PASS	2.0
1260.0degF		1239.5	1239.5	1240.5	PASS	1.6
1400.DdegF		1259.5	1259.5	1260.5	PASS	1.6
Type Thermocouple		1399.5	1399,4	1400.6	PASS	1.8
200.0degF		nee a	***			
60.0degF		-200.3	-201.0	-199.0	PASS	2.3
40.0degF		-60.0	-61.0	-59.0	PASS	2.3
32.0degP		-40.1	-40.5	-39,5	PASS	1.2
750,8degF		31.6	31.5	32.5	PASS	1,7
		749.8	749.5	750.5	PASS	2,0
ALIBRATOR CALIBRATION						
Type Thermocouple						
200.0degF		-199.3	-201.0	-199.0	ELGE	
60.0degP		-59.7	-61.0	- 59.0	PASS	1.7
40.0degF		.39.7	-40.5	-39.5	PASS	3.1
32.0degF		32.2	31.5	32.5	PASS	1.5

Calibration Data for Certificate No 228051

Riviot

Fage 1 at 2



#### Ulrich Métrologie inc. « Ulrich Metrology Inc.

9912, Cota-de-Liesse Lachine, QC H6T1A1 www.ulrich.ca Tel (514) 631-6653 Fax (514) 631-6122 info@ulrich.ca

	TRUE	TEST	ACCEPTANCE	LIMITS	PASS/	
PARAMETER	VALUE	RESULT	LOW	итси	FAIL	TUR
1240.0degF		1239.6	1239.5	1240.5	PASS	1.1
1260.0degF		1259.6	1259.5	1260.5	PASS	1.1
2500.0degF		2499.3	2499.0	2501.0	PASS	1.4
Type Thermocouple						200
-200.0degF		-199.9	-201.0	-199.0	PASS	2.1
-60.0degF		-60.1	-61.0	-59.0	PASS	3.5
-40.0degP		-39.9	-40.5	-39.5	PASS	1.7
32.0degF		31.9	31.5	32.5	PASS	2.0
1240.0degF		1239.5	1239.5	1240.5	PASS	1.6
1260.0degF		1259.6	1259.5	1260.5	PASS	1.6
1400.0degF		1399.3	1399.4	1400.6	FAIL	1.8
1400.0degF		1399.5	1399.4	1400.6	PASS	1.8
Type Thermocouple				200000000000000000000000000000000000000		2.00
200.0degF		-199.8	-201.0	-199.0	PASS	2,3
60.0degP		-60.0	-61.0	-59.0	PASS	2.3
40.0degF		-39.8	-40.5	-39.5	PASS	1.2
32.0degF		31.9	31.5	32.5	PASS	1.7
750.0degF		749.6	749.5	750.5	PASS	2.0

End of Test Data

12/8/2010

Equipment: SBI-135 (T1) Accuracy: 0.1 Reference: SBI-096

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₹ 69 F	41%
Temperature:	R.H.:

S.	C.	O.M.		Stan			
			38		I		
%	%	%	1,24	A.D.	1.29	1.29	1.14
0.02	0.14	2.49	Ave A.D.	Reading	1.69	1.69	69.2

Standard

S.D. R.M.U. O.M.U

70.07

S.D.	0.01	%	
R.M.U.	50'0	%	
0.M.U	0.81	%	
	Ave A.D.	0.40	26
Standard	Reading	A.D.	
200.0	199.2	0,40	
200.0	199.2	0.40	
200.0	199.2	0.40	

0.12

599.3 599.3

600.0 600.0 600.0

% % % II.

0.00 0.02 0.22 Ave A.D. Reading

S.D. R.M.U.

A.D.

Standard

S.D.	0000	%	
R.M.U.	10.0	88	
0.M.U	60.0	*	
	Ave A.D.	0.05	36
Standard	Reading	A.D.	
1400.0	1399.3	0.05	
1400.0	1399.4	0.04	
1400.0	1399.4	0.04	

S.D.	00'0	3º	
R.M.U.	0.01	%	
O.M.U	0.02	%	
	Ave A.D.	00.00	×
Standard	Reading	A.D.	
1000.0	6666	0.01	
1000.0	1000.0	00'0	
1000.0	1000.0	00:00	

Technician: Claude Paré

12/8/2010

Equipment: S8I-135 (T2) Accuracy: 0.1 Reference: S8I-096

Jr.	
É	
ed.	4.0
E.	H

69 F	41%
Temperature:	R.H.:

e: \$81-096	0.02 %	0,14 %	2.21 %	Ave A.D. 1.10 %	Reading A.D.	69.2 1.14	69.2 1.14	
Reference:	S.D.	R.M.U.	D.M.O		Standard	70.0	70.0	-

S.D.	10'0	%	
R.M.U.	0.05	%	
O.M.U	0.71	*	
	Ave A.D.	0.35	水
Standard	Reading	A.D.	
200.0	199.3	0.35	
200.0	199.2	0.40	
200.0	199,4	0.30	

0.08

599.5 599.5 599.6

600.0

% % % 80.0 0.08

0.00 0.02 0.16 Ave A.D. Reading

S.D. R.M.U. O.M.U

A.D.

Standard

0.00 0.01 0.07 Ave A.D. Reading 1399.4
---

38

A.D.

Standard

% % %

0.00 0.01 0.02 Ave A.D. Reading

R.M.U.

0.00

1000.1

1000.0 1000.0

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j	ĕ	į
	à	Ś



4850, bd Gouin est Montréal-Nord, Qc Canada HIG 1A2

Tél. (514) 328-2550 1 800 522-1226 Fax (514) 327-0604

www.chevrierinstruments.com

info@chevrierinstruments.com

Instruments de mesure et de régulation pour les procédés industriels et laboratoire d'étalonnes

## Certificat d'Étalonnage

Numéro du certificat: CE509

Étalonnage effectué par :

LA CIE J. CHEVRIER INSTRUMENTS INC.

4850 GOUIN EST

MONTREAL, QC, CANADA H1G 1A2

Informations sur l'instrument

Description

TUBE DE PITOT EN S

Manufacturier

DWYER

Modèle: 160S-24

Numéro de série

LD

SBI-203

Etat de l'instrument BON

Pour:

3424

SBI INC

250, RUE DE COPENHAGUE

ST-AUGUSTIN-DE-DESMAURES, QC G3A 2H3

Dâte d'étalonnage 2010-12-15

Échéance

Technicien

2011-12-15

Résultat de l'étalonnage: Conforme

Conditions ambiantes 21.1 °C /39 %hr

Abdennour Hocini A. H

Commentaire:



#### Points d'étalonnage

Valeur Appliquée pi/min	Pitot standard "Ce	Pitot Uut "Ce	ratio
298 pi-min	0.0055 poH2O	0 0074 paH2O	0.86
499 pi-min	0.0154 poH2O	0.0231 poH2O	0.82
802 pi-min	0 0398 poH2O	0.0577 poH2O	0.83
1002 pi-min	0.0622 poH2O	0.0920 poH2O	0.82
2004 pi-min	0.2485 poH2O	0 3614 poH2O	0.83
3008 pi-min	0.5592 poH2O	0 8208 poH2O	0.83
4014 pi-min	0.9940 poH2O	1.4596 ppH2O	0.83
5022 pi-min	1,5535 poH2O	2.2827 poH2O	0.82



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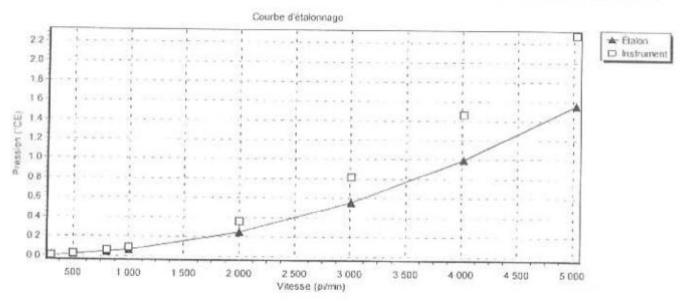
www.chevnerinstniments.com

info@chevrierinstruments.com

Instruments de mesore et de régulation peur les procédés industriels et laboratoire d'étalonnage

## Certificat d'Étalonnage

Numéro du certificat: CE509



Fait conformément à l'Échelle International de Température EIT90.

Étalons utilisés traçable au C.N.R.C / N.I.S.T

LD. Certificat No

Description CHEV029 091210-960294 MANOMETRE NUMERIQUE FURNESS PPC500

CHEV121-100830 CHEV031 TUYÉRE AIRFLOW DEVELOPMENTS

Étalonné le Échéance 2009-12-16 2010 12-16 2010-06-30 2011-02-28

Procedures utilisées dans cet étalonnage

Procédure Description

3PR500-22-CHE

**ÉTALONNAGE TUBE DE PITOT** 

Date de révision



Certificat d'Étalonnage

Groupe de service des instru	ments 1-	800-267-6633	# 724396	- 01	
Client: SBI Stove Builder Inte	ernational		Local: Metro	ologie	
St-Augustin de Desm	aurės		Modèle : TE	2148	
Balance			# Série : 258	351066	
Liste des Vérification	codes		Spécifi	ications : Fabricant:	Client:
Câble d'alimentation	OK	Capacité : 210	0 g	Tolérance : 0.2	ma
Sélecteurs, clavier, commandes	OK	Résolution : 0.1	mg		
Circuits Imprimés	_OK_			☐ Linéarité 🗵	Charge Maximale
Mécanisme de pesée	OK		Relevée	es des vérifications	
Polds d'étalonnage interne	N/A		Référence	Tel que trouvé	Tel que laissé
Horizontalité	OK	⊠g □mg	0.0500	0.0500	0.0500
Piateau et support de plateau	OK	⊠g □mg	5.0000	5.0056	5.0000
Bottier et housse	OK	⊠ g □ mg -	50.0000	50.0564	50.0001
Vitres	_OK_	⊠g □mg	200.0000	200.2254	200.0000
Fonction de tarage	OK	Répond aux spécifi			
Fonction Auto-Calibration	OK	Répond aux spécifi	ications : Tel que l	laissé : 🛛 Oui 🗌 Non	
Hysteresis	OK				
Charges excentrées Tolérance : ±	0.5 mg	4 1/2	1 2	Charges excents	rées ⊠g □kg
Commentaires :		Tel que trouvé :	4 3 Tel que laissé :	in a constitution of the c	as ma
		Centre: 0.0000	Centre: 0.00		
***************************************		1: 0.0000	1: 0.0000		spécifications :
		2: 0.0000	2: 0.0000	Tel que trouvé :	
	**********	3: 0.0000	3: 0.0000	Tel que laissé :	Service Control of the Control of th
***************************************		4: 0.0000	4: 0.0000	· · · · · · · ·	Edour Clinon
Codes : OK = , vérifié , éta	lonné, nettoyé			rrigé Déf = défectueux	Remp = Remplacer
Étalons certifiés	1	and the second second	t de service :	Daniel Toulouse 1	Digitally signed by
eu de poids QUE014		Date d'étalor	inage :	15 Novembre 2010	
			ite d'étalonnage :	30 Novembre 2011	
		Approbation	du client :		
		Date:			

# Appendix E Sample Calculations

## Equations and Sample Calculations - Method 5G

Equations used to calculate the parameters listed below are described in this appendix. Sample calculations are provided for each equation. The raw data and printout results from a sample run are also provided for comparison to the sample calculations.

BR Dry burn rate, kg/hr

ma Total particulate matter collected, mg

V<sub>su(std)</sub> Volume of gas sampled corrected to standard conditions, dscf

v<sub>s</sub> Average dilution tunnel gas velocity, ft/sec

C. Particulate concentration, g/dsef

Q<sub>sd</sub> Average dilution tunnel gas flow rate, dscf/min

E Particulate emission rate, lbs/hr

PR Proportional rate variation, %

## Dry Burn Rate

Using equation 28-3:

$$BR = \frac{60 \times W_{wd}}{\theta} \times \frac{100 - \%M_{w}}{100}$$

Where,

(

BR = Dry burn rate, 1b/hr

Wwd = Mass of wood burned (wet basis) during test run, lb

0 = Total time of test run, minutes

%Mw = Average moisture content of test fuel charge, wet basis percent

Sample Calculation:

Dry basis moisture of fuel = 20.03%

Using the equation 28-2 for converting dry basis moisture to wet basis moisture,

$$\%M_{sg} = \frac{20.03 \times 100}{20.03 + 100}$$

$$\%M_w = 16.69\%$$

The wet weight of the fuel charge was 7.8 pounds. Converting pounds to kilograms yields a weight of 3.538 kg. The run time for this run was 180 minutes. Therefore, the burn rate equation appears thus:

$$BR = \frac{60 \times 3.538 \times (100 - 16.69)}{180 \times 100}$$

$$BR = 0.98 \, kg/hr = 2.17 \, lb/hr$$

## Volume of Gas Sampled Corrected to Dry Standard Conditions

#### Using equation 5-1:

$$V_{m(std)} = V_m \times Y \times (\frac{T_{std}}{P_{std}}) \times \frac{(P_b + \frac{\Delta H}{13.6})}{T_m}$$

Where:

K. = 17.64 °R/in, Hg

Tut = 528 °R

P<sub>sid</sub> == 29.92 in. Hg

V<sub>m</sub> = Volume of gas sample measured at the dry gas meter, def

Y Dry gas meter calibration factor, dimensionless

P<sub>b</sub> = Barometric pressure at the testing site, in. Hg

ΔH = Average pressure differential across the orifice meter, in. H<sub>2</sub>O

T<sub>m</sub> = Absolute average dry gas meter temperature, °R

#### Sample Calculation:

$$V_{\text{in(std)}} = 98.434 \times 1.01 \times (\frac{528}{29.92}) \times \frac{30.03 + \frac{0.7}{13.6}}{532.5}$$

$$V_{m(std)} = 99.116 \, ft^3$$

## Dilution Tunnel Gas Velocity

Using equations 2-7 and 2-6, calculated at each recorded interval:

$$v_s = k_p \times C_p \times \sqrt{\Delta P} \times \sqrt{\frac{T_{s(avg)}}{P_s \times M_s}}$$

$$M_s = M_d \times (1 - B_{vs}) + 18.0 \times B_{vs}$$

Where:

1

v<sub>a</sub> = Average dilution tunnel gas velocity, ft/sec

$$k_p$$
 = Pitot tube constant:  $85.49 \cdot \frac{ft}{see} \left[ \frac{(lb/lb-mole) \times (inches Hg)}{(^oR) \times (inches H_2O)} \right]^{\frac{1}{2}}$ 

C<sub>p</sub> = Pitot tube coefficient (0.99 for standard pitot tube; 0.84 may be used for S-type pitot tubes constructed according to Method 2 procedures), unitless

 $\Delta P$  =  $\Delta P$  measured during the pre-test flow traverse of the dilution tunnel; the square root of the  $\Delta P$  values are averaged for this calculation, in.  $H_2O$ 

P = Barometric pressure at test site, in. Hg

P. = Static Pressure of tunnel, in. Hg

 $P_s = Absolute tunnel pressure, = P_b + P_g$ 

M<sub>4</sub> = Molecular weight of tunnel gas; assume M<sub>d</sub> =29 lb/lb-mole (per method 5G)

B. Moisture content of dilution tunnel gas, ratio; assume 4% (per method 5G)

T<sub>s</sub> = Dilution tunnel temperature, °R; (°R = °F + 460)

Sample calculation:

$$M_x = 29 \times (1 - 0.04) + 18.0 \times 0.04 = 28.56$$

$$v_s = 85.49 \times 0.99 \times \sqrt{0.0351} \times \sqrt{\frac{(548)}{(30.03 + \frac{-0.45}{13.6}) \times (28.56)}}$$

$$v_s = 12.69 \frac{ft}{sec}$$

## Particulate Concentration

Using equation 5G-2:

$$C_s = 0.001 \frac{g}{mg} \times \frac{m_n}{V_{m(std)}}$$

Where:

C<sub>s</sub> = Concentration of particulate matter in stack gas, dry basis, corrected to standard conditions, g/dscf

ma = Total mass of particulate matter collected in the sampling train, mg

 $V_{m(sd)} = Volume of gas sampled corrected to dry standard conditions, dscf$ 

Sample calculation:

$$C_s = \frac{0.001 \times 16.2}{99.116}$$

 $C_s = 0.000163$  g/dscf

### Average Dilution Tunnel Gas Flow Rate

Using equation 2-8, calculated at each recorded interval:

$$Q_{sd} = 3600 \times (1 - B_{ws}) \times v_s \times A \times \frac{T_{std}}{T_{s(avg)}} \times \frac{P_s}{P_{std}}$$

Where:

ţ

Q,d = Gas flow rate corrected to dry, standard conditions, dscf/hr

3600 = Conversion from seconds to hours

B<sub>ws</sub> = Moisture content of dilution tunnel gas, ratio; assume 4% (per method 5G)

v. = Average dilution tunnel gas velocity, ft/sec

A = Cross sectional area of dilution tunnel, ft²

T<sub>std</sub> = Standard absolute temperature, 538°R

T<sub>s(avg)</sub> = Average absolute dilution tunnel temperature, °R, (°R = °F + 460)

P<sub>b</sub> = Barometric pressure at test site, in. Hg

P. = Dilution tunnel static pressure, in. Hg

P. = Absolute dilution tunnel gas pressure, in Hg, (Hg = Ph + Pg)

P<sub>std</sub> = Standard absolute pressure, 29.92 in Hg

Sample calculation:

$$Q_{sd} = 3600 \times (1 - 0.04) \times 12.69 \times \frac{(\pi \times 3^2)}{144} \times \frac{528}{548} \times \frac{30.03 + \frac{-0.45}{13.6}}{29.92}$$

$$Q_{sd} = 8313.36 \, dseffhr = 138.56 \, dseffmin$$

#### Particulate Emission Rate

Using equation 5G-3 and 5G-4:

$$E = C_s \times Q_{sd}$$

$$E_{ndy} = K_3 \times E^{0.83}$$

Where:

E = Particulate emission rate, g/hr

E,dj = Particulate emission rate, adjusted, g/hr

Concentration of particulate matter in the stack, corrected to dry, standard conditions, g/dscf

Q<sub>id</sub> = Average dilution tunnel gas flow rate, dscf/hr

K<sub>3</sub> = Constant, 1.82 for metric units, 0.643 for English units

Sample calculation:

$$E = 0.000163 \times 8313.36$$

$$E = 1.36 \, g/hr$$

$$E_{adj} = 1.82 \times 1.36^{0.83}$$

$$E = 2.35 g/hr$$

## Proportional Rate Variation

Using equation 5H-9, calculated at each recorded interval:

$$PR = \frac{\theta \times (V_{mt} \times V_s \times T_m \times T_s)}{10 \times (V_m \times V_{st} \times T_s \times T_m)} \times 100$$

Where:

1

PR = Percent proportional rate

θ = Time of test, min

S<sub>1</sub> = Measured tracer gas concentration for the "ith" interval, in this case, the inverse of the calculated flow in the stack based on CO<sub>2</sub> concentrations in the stack and in the dilution tunnel

V<sub>mi(thi)</sub> = Volume of gas sample measured by the dry gas meter during the "i<sup>th</sup>" 10 minute interval, dsef

V<sub>m</sub> = Volume of gas sample as measured by dry gas meter, dscf

V<sub>st</sub> = Average gas velocity in the dilution tunnel during each 10 minute interval, i, of the test run, m/sec

V<sub>s</sub> = Average gas velocity in the dilution tunnel, m/sec

T<sub>mt</sub> = Absolute average dry gas meter temperature during each 10 minute interval, i, of the test run, °R

T<sub>m</sub> = Absolute average dry gas meter temperature, °R

T<sub>st</sub> = Absolute average gas temperature in the dilution tunnel during each 10 minute interval, i, of the test run, °R

T, = Absolute average gas temperature in the dilution tunnel, R

Sample calculation (for the reading at 50 minutes into test run 1):

$$PR = \frac{180 \times 5.6 \times 12.69 \times 533 \times 552}{10 \times 98.434 \times 12.63 \times 548 \times 532} \times 100$$

Appendix F

**Test Data** 

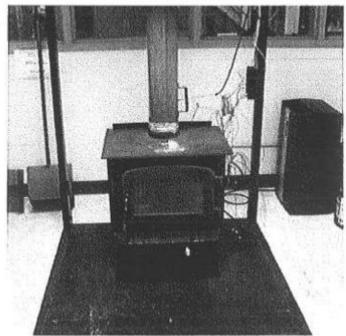


Figure 1 SBI model XTD 1.1 Front View

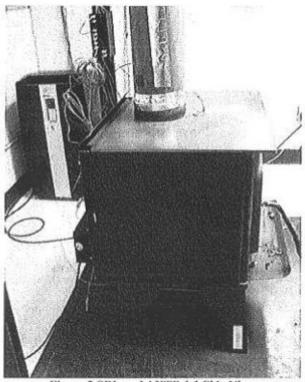


Figure 2 SBI model XTD 1.1 Side View

16. Morga

#### **EPA NSPS WEIGHTED AVERAGE CALCULATION**

V 1.1

2

Sort data from lowest to highest burn rate and enter below.

Weighted Average

Type of Stove:

1=cat

2=noncat 3=pellet

(E) Ave.

Heat (K) Test Burn Emission Output Weighting Rate g/hr No. Rate (OHE) (BTU/HR) Prob. Factor (KxE) **KxOHE** 0.5380 0.90 0.3000 1 4.99 10852.38 2.6846 0.00 1.19 2 4.42 14349.26 0.5380 0.4832 2.1357 0.00 3 1.56 1.82 18810.79 0.7832 0.3636 0.6618 0.00 4 1.93 4.38 23272.33 0.9016 0.2168 0.9496 0.00 0.00 1.0000 0.0000 0.0000 0.00 0.0000 0.00 1.0000 0.0000 0.00 0.00 0.0000 0.00 1.0000 0.0000 0.00 1.0000 0.0000 0.0000 0.00 0.00 1.0000 0.0000 0.0000 0.00 0.0000 0.0000 0.00

Totals: 1.6016 6.4317 0.00

Weighted average emissions rate:	4.0158
Weighted Average OHE:	0.00

16-1. Mong



#### Test Series Parameters EPA Methods 28 and 5G

Project Number	G100527551	
Manufacturer		
	ו,ו סדא	
racking Number	PRT111012 135 3-001	

ID# PRT1110121353-002 Client: Stove Builders International ENG: Ken J Morgan G100527551

Firebox Volume 4.55 ft<sup>3</sup>

Fuel Load Range 2.2 -2.7 lbs.

Fan OPTICHAL (Standard, Optional, None)

The second secon	Equipment Calibrations
Method 28	
Thermometry	
Platform Scale	581-014(BOOK)& SB1-013
Stop Watch	180-592
Audit Weight	20112
Moisture Meter	SBI-214
Method 5G	
Pitot tube	531-203
Pitot Manometer	SBI-101
Thermometry	SB1-135
Dry Gas Meter A	Y= 1.003
Dry Gas Meter B	Y=0, 336
Draft Manometer	SB1-025
Barometer	WEATHER HETWORK
Analytical	
Analytical Scale	581-26
Hygrometer	SDI-212
Thermometer	SB1-212
Audit Weight	OM- 081: 761-081
Pre-Series 10 lb. Audit	10.0 89. 20115

Pre-Series 10 lb. Audit Post-Series 10 lb. Audit	10.0 89. 20115	
Pre-Series Pitot Tube Leak Post-Series Pitot Tube Leak		
Post Series DGM A Cal Post Series DGM B Cal	Y= 0.995 Y= 0.996	
Appliance Photos	Y€S	
Appliance Sealed	YES	
Date: 10-25-14 Test Engineer:	- Hayes	



#### Run Notes EPA Methods 28 and 5G-3

Prelin: 0.90@ 4.56 DT = 86

Coul Bed Range = 2.3-2.

PROJECT /	TEST INFORMATION
Project Number:	G100527551
Manufacturer:	S.B.I.
Model:	XTD 1.1
Sample ID Number:	PRT 1110121353-001
Test Date:	10-18-11
Test Run Number:	
Date tunnel cleaned:	10-13-11
Purpose of Test	CATI ( < 1,0 Kg/

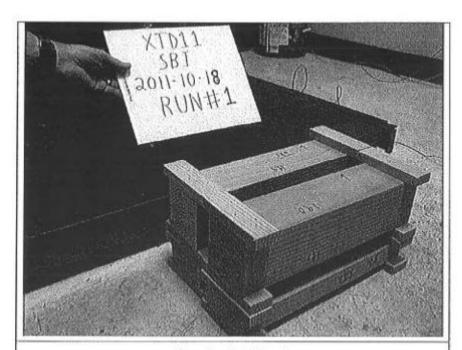
	Appliance Info	rmation
Appliance Type:	2	1 - Catalytic 2 - Non-Catalytic 3 - Pellet 4 - Hydronic
Firebox Volume, ft3:	1.55	N/A for pellet type
Convection Blower	2	1 - No Fan 2 - Optional Accessory 3 - Standard Equipment

	Test Settings
Primary Air:	Fully Closed
Secondary Air:	FIXED
Control Board:	NIA
Blower/Fan:	ON-LOW

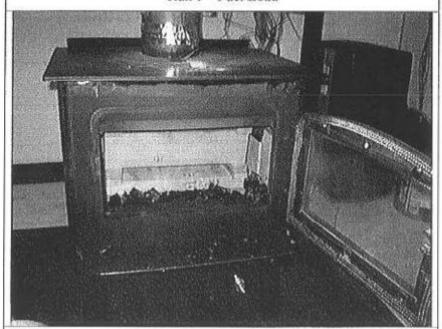
40 MC LOND THE	- 6		Time
HO DAG LOVED TIME	2 AW LAW S	COMIL BED WAS STIRRED	
	MSERTED.	HO DAC LOVED TIME	Thomas and a
1:30 Look was crosed	THE R. P. LEWIS CO., LANSING	1:30 DOOR WAS CLOSE	HISOTOTICS.

	Start-Up Procedure
Loading of fuel, sec. :	40 nec.
Fuel-loading door:	Closed at 1,5 minutes
Primary air:	
Secondary alr:	+ixed
Control board:	tva.
Blower / fan:	

	Other Notes	
NONE.		
11 200		
	777.0	



Run 1 - Fuel Load



Run I - Newly loaded stove

16 1. Magn



#### **TEST FUEL DATA EPA METHOD 5G-3**

Project Number: G100527551

Manufacturer: S.B.I.

Model: XTD 1.1

Sample ID Number: PRT 111012 1353 - 001
Test Date: Octo BER 18, 2011

Test Run Number: 1

Eq. ID No.	SB1-214	Time:	9:20	74.2				
Plece No.	Length, In.	Weight, Lb.	Moisture, %, Dry Basis					
1	10.25	1.10	22.1	21.0	19.5			
2	10.00	1.15	21.3	21.6	20.1			
3	10.00	1.15	13.7	21.2	13.1			
4	10,00	1.15	19,4	18.8	18.5			
5	1.9		21.1	22.4	21.4			
6	12	4.50	21.2	21.1	8.41			
7	7 15		22.0	22.2	18.9			
8 15		1.22	22,3	22.4	19.1			
9								
10	-							
11					100			
12								
Total We	elght	10.95	Avera	ge, %db				

\* Holsture HETER BLOCK 12.0/= 12.0/ 22.0%= 22.0% EQUIPHENT HO, 18701

	70.70	EST FU	L LOAD I	PROPERTIE	S		
Eq. ID No.:	SR1-2	14	Time:	10:00	Temp., °F:	74.2	
Piece No.	Length, Welgh		ht, Lb.				
	In.	2x4	4x4	Moisture, %, Dry Basis			
1	14,25		4.15	19.2	20.3	19.2	
2	14.25	1	3,50.	18.5	20.9	19.3	
3	14.25.	1.50	1000	18.9	19.0	19.5	
4	14.25.	2.00		22.5	22.3	21.9	
5			THE LET	1121/15/15	1/25 102		
6	100000000000000000000000000000000000000	S Envi		2000	STATE OF THE SECOND	THE SECOND	
7	1.1500		Line State	DESTRUCT	1595	A 3 18 18	
8	7. 4.7		11日本		24 7.47		
Totals		3.5	7.65				
% of Weight		31.4	68.6				
Total weight, wet, lb.		11.15		Average M	20.16		
Total weight, dry, kg		2 4.21		Average M	16.78		



#### Supplemental Data EPA Methods 5G and 28

Project Number G100527551 Manufacturer S.B.I.

Model XTD 1.1

Test Date
Test Run Number

Test Run Number

Sampling Start Time

-8:45 M;35 Sampling Stop Time 16:15

Air Velocity (ft/sec)

Initial: <50

Final: 450

Barometric Pressure (in/Hg)

Initial: 29, 69

Final: 25,74

Post - leak Check (cfm @ in/Hg) Train A: \_\_O.003@5 Train B: O.004@5

Date: 10-25-11 Engineer Signature:

	Time					,					
	-	-0									
	Draft										
175	weight										
Unit	Right	402	512	607	645	626	599	656	717	703	670
Unit	L.Side	395	491	578	609	586	569	620	675	671	641
Unit	Back	490	588	564	588	559	633	734	707	639	619
Unit	Bottom	336	440	534	576	009	564	555	571	547	526
Chit	Тор	820	801	706	589	470	879	926	825	969	595
	Dry Bulb										
Room	Temp	80	85	90	85	84	88	86	105	103	98
Flue	Gas	642	615	515	441	495	730	742	406	330	284

O

16. Man

DATA Logger was set to

Record At 10-MINUTE INTÉRVALS,
and was unable to RECORD DATA

AT END OF PRE-BURN which
occured between INTERVALS. Weight
was Noted to BE 2.75 16. TEmperatur,
are represented on First Reading
OF Sampling data.

[L.f. Morge, ETL

2-28-12

				VERSION	1.2	2/5/2010				1			-
Manufacturer:	SBI			CHANGE AND		Man House							
Model:	XTO 1,1								men -	1777			
Date:	10/18/2011									7.5		100	
Run:	1	1	denounces.	44					0.100011.41		1140108-24111-0	11100-1-11	
Project #:	G100527651		********						eterne em			XIII III	11111111
Test Duration:	Principal Control of the Control of												
		Start	End	***************************************	F 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		-			altini =	- 11111		
	Barometer (in.Hg):	29.69	29.74										
		20.00	Acres 4			4114410	**				in acción		*******
	Dry Bulb (F):	79	82										-
	Humidity (%):	49	49								******		
The second section of the second seco	A CONTRACTOR NAMED			+									
THE PROPERTY OF THE PARTY OF TH						-		- 1					
Moisture content of	wood (wet basis):	16.7765							1		-11111		
1 14 1/60 (600)	Average	0.00	0.00	0.00	222.00	84.29	87.45	422.16	345,18	414.00	440.71	443.69	829.9
											•		
Elapsed	Weight				Flue	Room	Tunnel	Unit !	Unit	Unit	Unit	Unit	DOM 1
Time	Remaining	co	CO2	02	Gas	Temp	Dry Bulb	Yop	Back	R.Side	L.Side	Boltom	Reading
0	11.15				230.6	76.8	101.8	343.5	430.1	419.2	459.4	481.2	814.89
10	10.25				230.2	79.7	69.0	398.9	416.1	392.0	437.4	445.4	815.90
20	9.47				255.0	80.9	90.1	416.5	395.2	387,1	405.2	407.2	817.02
30	8.32				290.2	83.2	93.3	537.5	373.3	392.4	398.6	504.7	618.09
40	7.39				306.4	84.2	94.0	574.1	355.8	300.0	400.8	402.6	819.17
50	6.33				312.2	84.4	93.5	601.0	341.6	407.7	419.7	411.1	820.25
60	5.34				309.0	05.4	93.3	612.0	331.4	420.7	440.7	424.0	021.31
70	4.50		manage 1		291.6	85.0	92.4	593.2	324.2	450.1	455.7	439.3	822,40
60	3.87				278.9	85.5	91.1	574.1	320.7	468.8	470.3	452.2	023.48
90	3.20				2/0.2	60.3	90.2	559.7	310.2	497.7	480.1	463.0	824.55
100	2.71				270.6	60.0	90.0	507.3	319.7	494.5	490.8	471.8	825.63
110	2.03				247.4	66.6	88.0	634.2	322.1	400.7	498.4	460.6	828.74
120	2.08	1500			227.5	86.7	68.0	470.7	325.6	479,0	495,7	484.9	827.66
130	1.92			163 (163)	214.5	85.5	85.7	438.0	330.1	472.9	491.6	483.1	820.91
140	1.74				203.5	84.0	84.7	403.6	334.6	453.9	480.2	460.8	829.98
150	1.60				197.4	85.0	84.8	0.186	339.3	438.6	477.9	470.4	831.07
160	1.45				101.5	84.6	84.5	387.8	342.9	430.8	466.4	472.3	832.13
170	1.28	4889			190.1	85.4	84.6	362.1	345.1	413,4	459.2	488.0	833.21
180	1.17				187.6	85.7	85.0	355.2	345.1	408.9	450.0	465.2	834.28
190	1.03				184.5	84.7	84.2	345.0	344.5	401.6	440.7	460.3	835.36
200	0.60				101.0	04.5	83.8	337.0	342.9	391.6	432.8	455.1	635.47
210	0.77;				178,1	84,4	83.5	329,4	341.6	385.3	425.2	449.9	837,54
220	0.63				176.2	84,4	83.6	321.7	340.5	376.0	417.1	442.4	836.63
230	0.49				173.7	63.9	83.7	316.4	339.8	355.4	400.8	432.7	839.72
240	0.38				171.6	84.1	83.6	311.6	338.7	362.5	403.0	423.0	843,81
250	0.21				169.7	83.2	82.8	307.3	338.2	358.3	398.0	413.6	841.01
260,	0.12				107.2	82.9	82.7	301.5	337.0	351.0	392.3	405.0	843.00
270	0.01				184.1	83.4	82.7	292.5	338.0	342.6	385.7	395.5	844.10
The state of the s	0.00	100000000000000000000000000000000000000	11 110 11	44-1-4 (00-1)	ALC: You care	1110-1	4	THE STREET, ST.	**** 25,500,75	THE RESERVE OF STREET	THE PERSON NAMED IN	2012/05/2015 15	ALCOHOLD STATE

1 / Morga

							*********			******		
Manufacturer:	SBI											
Model:	XTD 1.1											
Date:	10/18/11				25.000000000000000000000000000000000000		000011000000		TO STATE OF THE PARTY OF	3-21/20/1982		751653334
Run:	1											
Project #:	G10052755	51	1									
				1								
												*********
	**********	+1-1					**********			200000000000000000000000000000000000000		
										)+=====×		420-020-00
	***************************************			1	***************************************		***************************************		***************************************	***********		
									************	-11		*****
73.62	73.59	75.11	767.14	73.00	73.01	75.73	0.02	-0.041	0.00	413.17		******
	73.59			73.00	73.01	75.73		-0.041	Visual	CARTERIAN	Change in	******
DGM 1	DGM 1	Filter 1	DGM 2	DGM 2	DGM 2	Filter 2	SERVICE SPACE	Chimney	Smoke	Stove	Surface	
Inlet T	Outlet T	Temp	Reading	Inlet T	Outlet T	Temp	Velocity	Draft	Observed	Temp	Temp.	
72.6	72.6	72.0	751,790	72.2	72.2	73.2	0.020	-0.035		429.9	0	
72.7	72.0	74.7	752,960	72.3	72.2	75.0	0.020	-0.040		418.0	-11.92	
72.9	72.7	75.1	764,124	72.4	72.3	75.6	0.020	-0.040		402.0	-27.84	
73.0	72.9	75.4	765.228	72.6	72.6	75.8	0.020	-0.045		419.3	-10.58	***
73.3	73.1	75.6	756,345	72.7	72.8	76.3	0.020	-0.048		425.9	-4.02	*******
73.2	73.1	75.9	757.429	72.8	72.8	76.4	0.020	-0.055		436.2	6.34	***1 (111)
73.1	73.1	76.9	758,498	72.8	72.6	76.5	0.020	-0.055		447.7	17.84	
73.1	73.1	75.8	759,602	72.7	72.8	76.4	0.020	-0.055		452.5	22.62	*******
72.9	73.0	75.8	760.702	72.6	72.4	76.4	0.020	-0.055		457.2	27.34	*******
73.5	73.3	76.0	761.808	72.6	72.8	76.3	0.020	COURSES OF STREET		463.9	34.06	
73.6	74.0	75.9	763.010	73.0	73.2	78.4	0.020	-0.050		468.8	38.94	
	***********		*****	*********		**********	0.020	-0.050		467.0	37.12	******
73.6	73.5	75.6	764.131	72.8	72.8 72.9	76.3		-0.030		453.0	23.14	
73.5	73.5	75.3	765,170	72.8	THE RESERVE	76.1	0.020	CARREST CONTRACTOR		442.8	12.9	4+4+1+++
73.6	73.5	75.1	768.191	72.9	72.9	75.9	0,020	-0,048		A CONTRACTOR	1.94	*****
73.7	73.6	76.0	767.217	73.1	73.1	75,8	0,020	-0.045		431.8	· · · · · · · · · · · · · · · · · · ·	
74.0	73.8	74.9	768.220	73.2	73.2	75.8	0.020	-0.038		422.6	-7.24	
73.8	73.8	74.8	769.270	73.1	73.1	75.7	0.020	-0.038		416.4	STATE OF THE PARTY	******
73.9	73.9	74.8	770,345	73.3	73.3	75.6	0.020	-0.035		409.6	-20.32	
74.1	74.0	75.2	771.415	73.4	73.4	75.6	0.020	-0.033		404,9	-25	
73.8	73.0	75.4	772.476	73.4	73.2	75.7	0.020	-0.035	-14714001000101	398.4	-31.46	
74.2	74.1	76.3	773.587	73.4	73.4	75.7	0.020	-0.035		392.0	-37.88	
74.2	74.1	75.1	774.648	73.4	73.5	75.6	0.020	-0.033	*********	386.3	-43.62	
74.2	74.2	74.0	775.719	73.4	73.6	75.6	0.020	-0,033	*******	379.5	-50.34	
74.1	74.2	74.8	776.807	73.3	73.5	75,5	0.020	-0.033		373.4	-56.46	
74.1	74.0	74.7	777.881	73.0	73.2	75.4	0.020	-0.030		367.9	-62	
74.1	74.1	74.6	778.985	73.3	73.4	75.4	0.020	-0.030		363.1	-66.8	******
74.1	74.1	74.6	780.060	73.4	73.5	75.3	0.020	-0.030	****	357.5	-72.34	
74.1	74.2	74.7	781.160	73.5	73.6	75.4	0.020	-0.030		350.5	-79.38	
74.2	74.2	74.7	782.229,	73.8	73.6	75.4	0.020	-0.030		343.6	-86.32	-86.3

16 f. Morga

		Manufa		SBI					
		M	lodel:	XTD 1.1					
			Date:	10/18/11					
			Run:	1					
		P	roject #:	G1005275	51				
		Test Dura	tion:		280				Contract of the Contract of th
	Total Gas V	olume (Do	3M 1):		29,951	Pil	tot Factor	0.82	
	Total Gas V	olume (Do	3M 2):		30.023		(0	.99 standar	d,
F00:5100	Average Baro	metric Pre	essure:		29.715		0.84 or Ca	I. Factor for	S-Type
		Molecu	lar Weigl	nt:	28.56				
		Pitot Co	orrection:		0.924781526				
	Calibration Fa	ctor (DGN	1#1):		1.0060				
	Calibration Fa	ctor (DGN	1 #2):		1.0030			CANDEL CONTRACTOR	
			oracin re-	(1) VS:	0.0269				
				(2) VS:	0.0269			Filter	Filter
14071-1414								Face	Face
Elapsed	DGM 1	DGM 1	DGM 1	DGM 2	DGM 2	DGM 2	Tunnel	Velocity	Velocity
Time	Reading	Inlet T	Outlet T	Reading	Inlot T	Outlet T	Dry Bulb	DGM 1	DGM 2
0	814.892	72.6	72.6	2011年中央中央公司公司公司公司	72.22	72.16	101.8		
10	815.960	72.7	72.6	752.960	72.29	72.24	88.96	9.11	9.9
20	817.020	72.9	72.7	754.124	72.41	72.32	90.08	9.04	9.9
30	818.092	73.0	72.9	755.226	72.58	72.51	93.28	9.14	9.3
40	819,175	73.3	73.1	756.345	72.72	72.79	94.02	9.23	9.5
50	820.252	73.2	73.1	757.429	72.78	72.75	93.53	9.18	9.2
60	821.312	73.1	73.1	758.498	72.75	72.62	93.32	9.04	9.1
70	822.406	73.1	73.1	759.602	72.74	72.62	92.36	9.33	9.3
80	823.483	72.9	73.0	760.702	72.64	72.4	91.07	9.19	9.3
90	824.558	73.5	73.3	761.806	72.63	72.75	90.2	9.16	9.3
100	825.630	73.6	74.0	763.010	73	73.22	90.03	9.13	10.2
110	826.749	73.6	73.5	764.131	72.78	72.83	88.31	9.53	9.5
120	827.860	73.5	73.5	765.170	72.82	72.86	86.88	9.47	8.8
130	828.910	73.6	73.5	766.191	72.9	72.92	85.71	8.95	8.6
140	829,989	73.7	73.6		73.05	73.07	84.71	9.19	8.7
150	831.070	74.0	73.8	A SECURE OF SECURE	73.18	73.24	84.83	9.20	8.5
160	832.137	73.8	73.8	Secretaria de la materia de la constanta de la	73.13	73.13	84.5	9.09	8.9
170	833.210	73.9	73.9	770.345	73.28	73.25	84.55	9.14	9.1
180	834.285	74.1		771.415	73.41	73.37	84.95	9.15	9.0
190	835.362	73.8	73.9	CONTRACTOR SERVICE CONTRACTOR	73.35	73.21	84.24	9.17	9.0
200	836.470	74.2	74.1	CONTRACTOR STATES	73.44	73.44	83.76	9.43	9.4
210	837.547	74.2	74.1	774.648	73.39	73.49	83.5	9.17	9.0
220	838.631	74.2	74.2	- 电流电路电路电路电路电路电路	73.38	73.51	83.64	9.22	9.1
230	839.726	74.1	74.2	() 中央公司的共產黨的股份的配合工具	73.26	73.48	83.7	9.32	9.2
240	840.811	74.1		777.881	72.98	73.24	83.59	9.24	9.1
250	841.915	74.1	74.1	CHRIST CHRISTING	73.3	73.41	82.8	9.40	9.3
260	843.008	74.1	74.1	THE RESERVE OF THE PARTY OF	73.42	73.48	82.73	9.30	9.1
270	844.105	74.1	74.2	Committee of the second	73.45	73.45	82.7	9.34	9.2
280	. 845.202	74.2		782.229	73.63	73.61	82.39	9.34	9.0

14. Morga

**********	Proportio	nal Rate (	Calculation	ns	(EPA Formu	las from P	R5G)	************
	Stack are	na (#2):	0.34907	****	Mon	ufacturer:	SRI	
Wood	noisture (		16.7765	******	ivian		XTD 1.1	
	Veight (lbs		11.15	***********		Date:		
		P-4	0.902			Run:	************	
Dulli R	ate (Dry k	g/III).	0.902		n.	oject No.:	**********	551
inal Tar	L	/DCM #41	Dogrado	Donkin	· · · · · · · · · · · · · · · · · · ·	oject ivo	G100527	221
	nperature				533,603			**(*****)****
	nperature	the second second second second	A STATE OF THE PARTY OF THE PARTY.	the series as a series were deep of	533.005	2520 44		
	innel Tem				547.453	2536.14		
	innel Velo				7.36437	29		
Sta	ndardized	i unnei F	low (asch	n):	141,77			
	A 1174 21 K41 1 1 1 1	Augus	Augusta					
		Average	Average					
		Inlet +	Inlet +	00.05	00.00	44	40	
Tunnel	Tuesd	Outlet	Outlet	99.95	99.96	#1 dDGM	#2 dDGM	
Tunnel	Tunnel Velocity	Temp. Meter 1	Temp. Meter 2	*********		Vol.Std.	Vol.Std.	
Velocity Delta-P	Ft/Sec	Deg. R	Deg. R	PR1	PR2	(ft3)	(ft3)	Time
0.020	7.460	532.6	532.2				1100/	0
0.020	7.375	532.7	532.3	98.98	107.93	1.057	1.156	10
0.020	7.382	532.8	532.4	98.31	107.46	1.049	1.150	20
0.020	7.404	533.0	532.5	99.68	102.00	1.061	1.088	30
0.020	7.408	533.2	532.8	100.73	103.60	1.071	1.104	40
0.020	7.405	533.2	532.8	100.13	100.31	1.065	1.070	50
0.020	7.404	533.1	532.7	98.55	98.92	1.049	1.055	60
0.020	7.397	533.1	532.7	101.61	102.07	1.082	1.090	70
0.020	7.389	533.0	532.5	99.94	101.62	1.066	1.086	80
0.020	7.383	533.4	532.7	99.60	101.87	1.063	1.090	90
0.020	7.382	533.8	533.1	99.23	110.99	1.059	1.187	100
0.020	7.370	533.5	532.8	103.48	103.24	1.106	1.106	110
0.020	7.361	533.5	532.8	102.61	95.56	1.098	1.025	120
0.020	7.353	533.5	532.9	96.86	93.79	1.038	1.007	130
0.020	7.346	533.7	533.1	99.42	94.14	1.066	1.012	140
0.020	7.347	533.9	533.2	99.58	92.01	1.068	0.989	150
0.020	7.345	533.8	533.1	98,28	96.31	1.054	1.035	160
0.020	7.345	533.9	533.3	98.81	98.58	1.060	1.060	170
0.020	7.348	534.0	533.4	99.01	98.13	1.061	1.055	180
0.020	7.343	533.8	533.3	99.17	97.26	1.064	1.046	190
0.020	7.340	534.1	533.4	101.92	101.77	1.094	1.095	200
0.020	7.338	534.2	533.4	99.03	97.17	1.063	1.046	210
0.020	7.339	534.2	533.4	99.69	98.10	1.070	1.056	220
0.020	7.339	534.1	533.4	100.71	99.67	1.081	1.072	230
0.020	7.338	534.1	533.1	99.80	98.43	1.071	1.059	240
0.020	7.333	534.1	533.4	101.46	101.06	1.090	1.088	250
0.020	7.333	534.1	533.5	100.45	98.93	1.079	1.065	260
0.020	7.332	534.1	533.5	100.81	100.12	1.083	1.078	270
0.020	7.330	534.2	533.6	100.76	97.77	1.083	1.053	280

14. Magn

		Intertek Testing Service	ces					
		SFBA EPA ADJUSTE	D EMISSION	RESULT	S			
Manufacturer:		SBI				RESULT	S	
	SARTER VALUE	XTD 1.1						
	CARREST AND	10/18/11				justed Emis		4.98
	Run:	1		A	verage Una	化拉克 计非电话 化油物子除剂	ission Rate	3,37
PROPERTY AND THE REAL PROPERTY AND THE PERTY	ject#::	G100527551		100000000000000000000000000000000000000	STATE OF THE PARTY	Burn Rate	(Dry kg/hr):	0.90
Test Duration (M		280						
Test Duration (	Hours).	4.67	***::::::::::::::::::::::::::::::::::::					* \- * * * * * * * *
	+4+++++		************			***:-)/***		
			A41114111111111111	BARO	METRIC	PRESSU	RE	**********
						110000	Average:	29.71
TEMPERATI	JRE FAC	TORS			***************************************		Start:	29.6
	10.000.000.00	DGM #1:	0.9895		************	************	End:	29.7
		DGM #2:	0.9906					
	*******			DRY GA	SMETER			** ********
VOLUMES	SAMP	**********				DGM #1	Final:	845.20
		DGM #1:	29.965				Initial:	814.89
		DGM #2:	30.036			5011.00		
TOTAL TO	MAIELY	/OLUME (scf):	20000	*********	**********	DGM #2	Final:	782.22
TOTAL	MNELV	OLOWIE (SCI):	39696				Initial:	751.7
SAMPLE F	ATIOS	******************		TEMP	FRATUR	ES (DEG.	RANKIN	
		Train 1:	1324.8			1	DGM #1:	533.60
		Train 2:	1321.6	**********			DGM #2:	533.00
				***************************************				
TOTAL EN	ISSION	IS		CALIB	RATION	FACTOR	S	.,,,,,,,,,,
Sampl	e Train	1 (g):	15.37				DGM #1:	1.006
j Sampl	e Train	2 (g):	16.12				DGM #2:	1.003
		Ave:	15.75					
EMISSION	CERTIFICATION OF STREET	*********************		TUNN	EL FLOW			141.8
Sample			3.29		PART		CATCH (r	ng)
Sample	Train 2	Agencygac	3.46			Sample	Train 1:	40.
ADMETER	EMIC	SION RATES	3.37				Filters Probe	10.3
Sample			4.89				Total	11.0
Sample			5.09	······································		Sample	Train 2:	
- Campio	. rumi k	Ave:	4.99			Janipie	Filters	10.9
	DEV	MATION:	1.99%				Probe	1.3
1		V-14-14-14-14-14-14-14-14-14-14-14-14-14-	***************				Total	12.3
		ter than 7.5% due to lo		catch				
		ates shall not differ by		Section 1				
of the weig	hted av	erage emission rate lim	nit (4.1 or 7.5)	(5g-3)				
Hen the I-	and a		number links and			*********		
Use the foll	owing:						*****	
Catalytic ur	nite		4.86%	en invest	*))*>			
7.5% of 4.1			4.00%					
1.070 01 4.1	3,111	************				11000		
Non catalyt	ic units		2.65%					
7.5% of 7.5			14			*********	4.5.55.00.00	
17,070 01 1.0								

1/4. Morgn

REPOR	DATA	**************************************					
		İ			1		
	Client:	SBI	*********				1 3 K 4 3 + 3 A
	A STATE OF THE PARTY OF THE PAR		*********	T			*******
	Date:	10/18/11	***********		1	1	
Pro	ject No.:	G100527551				1	
	Model:	XTD 1.1			1		
Fuel Moisture	(Dry):	20.15833333	A STATE OF STATE		1		
Stack Static (ı	neg):	0.0925	**********		1		
Baro	meter:	29.715		1			-
Average Roo	m Temp:	84.29		1	1		
		***********************			1	1	
			ANTON STREET			1	
				1	1		******
Change in stov	e temp:	-86.32	4 4 4 5 4 4 4 4 4 4 4 4 6				
					1		
			A P Brace March Inte-	1	T		
Burn I	ORDER A STATE OF THE RESERVE	0.902		1			
djusted Emissi	on Rate:	4.994		1			
	tem 1:	4.894		1			
	tem 2:	5.093			1		
	ation:	1.99%		1	1		
Filte		75.11			1		de precio
Filte		75.73		1			
Tu	nnel:	87.45		1	1	***********	
	DGM 1:	73.60		1	1	FOURT - 18.65-4-	
	DGM 2:	73.00		i		74.18-11-4-11-2	
Water C	ollected:				1		
				1	1		
	Temp	Bar Pressure		Relative H	umidity	Air Velo	ocity
Before	After	Before	After	Before	After	Before	Afte
79	82	29.69	29.74	49	49	0	0
					1		
Delta H A			W21405			Section 1	i calenda
DGM#1:	0				1		
DGM#2:	0			1	1	1	

14.1. Morga-11-10-11 VERSION 1.2

2/5/2010

## E&E Tunnel Traverse Worksheet

	TUNNEL	TUNNEL	SQUARE ROOT	Static Pressure:	
A CENTER	0.020	93	0.1414		
B CENTER	0.020	88	0.1414		
A1	0.018	92	0.1323	PITOT	
A2	0.020	92	0.1414	CONSTANT:	0.9248
A3	0.018	92	0.1323		
A4	0.015	89	0.1225		
B1	0.018	88	0.1323		
B2	0.020	88	0.1414		
B3	0.018	88	0.1323		
B4	0.013	85	0.1118		
<b>AVERAGE</b>	0.01775	89.35	0.1308		

Tunnel Diameter (in): Tunnel Area (ft2) Tunnel Static Pressure 0.349066 -0.0925

16-10-11 11-10-11



## Vos Prévisions locales: Québec, QC

Conditions actuelles Mar 18 oct 2011, 10:00 HAE Aéroport J-Lesage de Québec



8°C

Falbles averses de pluie

T. ressentie : -Vents : SO 15km/h Rafales: 28km/h Lever : 7:07

Coucher du solell : 17:53

Humldité relative :

100% Pression : 10

Pression: 100.55

kPa ---

Visibilité : 16.0 km Plafond : 1000 pi

#### Prévisions à court terme Émis le : Mar 18 oct 2011, 10:00 HAE

	Mardi après-midi	Mardi solr	Nuit de mardi à mercredi	Mercredi matin	Mercredi après-midi
	الثاني	Con	E	133	100
	Nuageux avec éclaircles	Nuageux avec éclaircles et averses isolées	Passages nuageux	Ensolelllé avec passages nuageux	Ciel variable
Température	11°C	7°C	2°C	2°C	12°C
Vents	SO 20km/h	O 15km/h	SO 10km/h	NE 10km/h	E 20km/h
Humidité	81%	87%	87%	93%	71%
P.D.P.	40%	40%	20%	20%	30%
Plule		moins do 1mm			-

#### Tendance à long terme Émis le : Mardi 18 octobre 2011, 10:00 HAE

and the second state of th						
	Mercredi 19 oct	Jeudi 20 oct	Vendredi 21 oct	Samedi 22 oct	Dimanche 23 oct	Lundi 24 oct
Conditions de	ED.	(0000	Cons	0000	300	血
	Ciel variable	Pluie	Nuageux avec averses	Nuageux avec	Ciel variable	Ciel variable
P.D.P.	30%	90%	80%	70%	30%	30%
T. Max	12°C	10°C	1190	10°C	10℃	9°C
T. Min	1°C	6°C	7°C	6°C	2°C	0.0
Vents	NE 15 km/h	E 25 km/h	SO 10 km/h	S 10 km/h	O 10 km/h	O 5 km/h

1h f. Morg-



# Vos Prévisions locales: Québec, QC

Conditions actuelles Mar 18 oct 2011, 16:00 HAE Aéroport J-Lesage de Québec



Nuageux avec éclaircles

T. ressentle: -Vents: SO 30km/h Rafales: 44km/h Lever: 7:07

Coucher du solell: 17:53

Humidité relative : Pression: 100,72 kPa ▲ Visibilité : 48.0 km Plafond: 5500 pl

Prévisions à court terme Émis le : Mar 18 oct 2011, 16:10 HAE

	Mardi soir	Nuit de mardi à mercredi	Mercredi matin	Mercredi après-midi	Mercredl soir
	and a		363	的	0000
	Nuageux avec averses	Bancs de brouillard	Ensoleltié avec passages nuageux	Ciel variable	Nuageux avec averses
Température	9.0	4°C	4°C	12°C	10°C
Vents	O 15km/h	O 5km/h	E 5km/h	NE 10km/h	NE 30km/h
Humidité	81%	93%	93%	66%	71%
P.D.P.	40%	30%	10%	30%	70%
Pluie	moins de 1mm				près de 1mm

Tendance à long terme Émis le : Mardi 18 octobre 2011, 16:11 HAE

	Mercredi 19 oct	Jeudi 20 oct	Vendredi 21 oct	Samedi 22 oct	Dimanche 23 oct	Lundi 24 oct
Conditions de 6 h à 18 h	13	Coope	Capaco	chools	的	D
	Ensolelilé avec passages nuageux	Falble plule	Nuageux avec averses	Nuageux avec averses	Ciel variable	Clel variable
P.D.P.	30%	80%	80%	70%	30%	30%
T. Max	12℃	12°C	110	10℃	10°C	9°C
T. Min	3.C	8°C	7°C	6°C	2°C	0°C
Vents	E 10 km/h	E 35 km/h	SO 10 km/h	S 10 km/h	O 10 km/h	O 5 km/h



#### Run Notes EPA Methods 28 and 5G-3

Prelin: 1,19@ 4,27

At=42

PROJECT /	TEST INFORMATION
Project Number:	G100527551 517521
Manufacturer:	S.B.I.
Model:	XTD 1.1
Sample ID Number:	PRT 1110121353-001
Test Date:	+0-+6-++ K10-19-11
Test Run Number:	2
Date tunnel cleaned:	10-13-11
Purpose of Test	CAT II

Coal bed Range 22-2.7 PRE-BURN T=# @ 10:04

	Appliance Info	ormation
Appliance Type:	2	1 - Catalytic 2 - Non-Catalytic 3 - Pellet 4 - Hydronic
Firebox Volume, ft3:	1,55	N/A for pellet type
Convection Blower	2	1 - No Fan 2 - Optional Accessory 3 - Standard Equipment

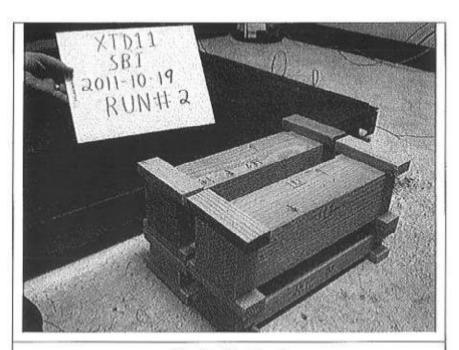
16.1. May

	Test Settings	
Primary Air:	3/16 " Gauce	
Secondary Air:	FIXED	
Control Board:	NA	
Blower/Fan:	ON-LOW	

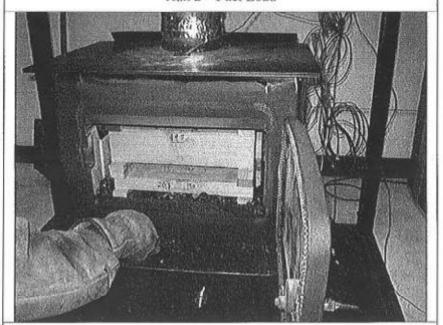
ime	Activity
0	time = 10104 am
45	Stirred Load
07	Removed 0,35 16. Action occupied within 70 Ger
78	Leveled Cod bod

	Start-Up Procedure	1
Loading of fuel, sec. :	Louded by 30 Sec	1
Fuel-loading door:	Agar until 90 sec.	1
Primary air:	Eully Openhantil 5,0 mis. Abruptly Closed to fest getting at 5	t
Secondary air:	FIXED	ľ
Control board:		1
Blower / fan:	OFF 12 30 mm ON - LOW Remander or fost	1

	Other Notes	
NONE		



Run 2 - Fuel Load



Run 2 - Newly loaded stove

16.1 May



#### **TEST FUEL DATA EPA METHOD 5G-3**

Project Number: G100527551

Manufacturer: S.B.I.

Model: XTD 1.1

Sample ID Number: PRT 1110121353-001
Test Date: 10-16-11 14 10-19-11
Test Run Number: Kg 2

12.0 = 12.0

CALIBRATOR: 19701

Market Tolk		URN FUE	L PROPE	RTIES	
Eq. ID No.	5131 214	Time:	08:15	Temp.,°F	75
Plece No.	Length, In.	Welght, Lb,		sture, %, D	
1	10	1,20	23.1.	22,1	20,5
2	10	1.10	22,0	22.1	21.1
3	10	1,15	22.4	220	211
4	10	1,15	231	21.7	21.1
5	15	1.00	19.3	20,8	18.8
6	15	1.00	19.4	20,5	18.7
7	15	1.70	2211	23,1	19.9
8	15	1.75	2211	23,1	18.9
9				15 88 635	CHURA.
10					1 1 3 1 1
11	37 20		de University		
12		46		W-VIII	THE STATE OF
Total W	eight	10,25	Avera	ge, %db	20,9

Eq. ID No.: 581 2		14	Time:	9:10	Temp., °F:	75
Plece No.	Length,	Welg	ht, Lb.	****	Doolo	
rided No.	In.	2x4	4x4	IVIOR	sture, %, Dry	Dasis
1	14.25	1,50	X	18.9	19.2	19.0
2	14,25	2,15	X	23.1	21,0	21.3
3	14,25	X	3,70	2110	19,0	18,6
4	14.25	X	3,65	19,9	19.2	19.7
5	Control of the				100000	
6		The said	100	2563	1000	. Auto
7	THE STATE OF			100 100	133000000000000000000000000000000000000	177
8			17.7	120 X 2 X 2 X	A SCHOOL ST	
Totals % of Weight		3,65	7135			
		33,2 66,8				
Total welght,	wet, lb.	1/,0	A STATE OF THE PARTY OF THE PAR	Average N	20,0	
Total weight,	dry, kg	- Transferrer	16	Average M	14.66	



## Supplemental Data EPA Methods 5G and 28

Project Number	G100527551	
Manufacturer	S.B.I.	
	XTD 1.1	
Sample ID Number	PRT 1110121353-001	
Test Date	10-19-11	
Test Run Number	2	

Sampling Start Time//:4	5	Sampling Stop Time/5:/5
Air Velocity (ft/sec)	Initial: <so< td=""><td>Final: _&lt;50_</td></so<>	Final: _<50_
Barometric Pressure (in/Hg)	Initial: 30,1/	Final: 30,07
Post - leak Check (cfm @ in/Hg)	Train A: 1002 @ 5	Train B: ,002.05

Date: 10-19-11 Engineer Signature: /h/Mings

Gas         Temp         Dry Bulb         Top         Bottom         Back         L.Side         Right         weight         Draft         Time           627.4         83.01         155.2         600.7         635.5         587.7         607         613         10.2         0           466.6         89.88         124.7         794.2         609.6         648.2         605.3         612.5         7.66         10           466.6         89.88         124.7         794.2         609.6         648.2         605.3         611.7         6.38         20           468.6         89.88         107.7         687         565.3         549.4         607.9         611.7         6.38         20           380.8         90.65         106.3         678.4         533.9         578.4         616.1         621.8         4.47         40           349         93.9         104.2         656.5         507.2         553.7         621.7         630.4         3.74         50           268.9         87.84         4183.1         488.7         464.8         502.6         577.4         590.7         3.26           268.9         86.5         573.6 <t< th=""><th>9</th><th>Doom</th><th>Time</th><th>I lait</th><th>1 1-24</th><th>1 1-24</th><th>71.11</th><th></th><th>Taccoston.</th><th></th><th></th></t<>	9	Doom	Time	I lait	1 1-24	1 1-24	71.11		Taccoston.		
Temp         Dry Bulb         Top         Bottom         Back         L.Side         Right         weight         Draft           83.01         155.2         600.7         635.5         587.7         607         613         10.2           89.88         124.7         794.2         609.6         648.2         605.3         612.5         7.66           88.32         111.8         698.9         591.5         623.4         602.2         611.7         6.38           89.88         107.7         687         565.3         549.4         607.9         614.3         5.38           90.65         106.3         678.4         533.9         578.4         616.1         621.8         4.47           93.9         104.2         656.5         507.2         553.7         621.7         630.4         3.74           92.59         99.56         573.6         487.4         549.2         611.2         622.2         3.34           87.84         4183.1         488.7         464.8         502.6         577.4         590.7         2.81           83.54         91.17         393.8         436.7         516.3         525.7         2.74	000	1000	2000	1115	JIIIO	Unit	Chit	Chit	Scale		
83.01 155.2 600.7 635.5 587.7 607 613 10.2 89.88 124.7 794.2 609.6 648.2 605.3 612.5 7.66 88.32 111.8 698.9 591.5 623.4 602.2 611.7 6.38 89.88 107.7 687 565.3 549.4 607.9 614.3 5.38 90.65 106.3 678.4 533.9 578.4 616.1 621.8 4.47 93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	as	Temp	Dry Bulb	Top	Bottom	Back	L.Side	Right	weight	Draft	Time
89.88 124.7 794.2 609.6 648.2 605.3 612.5 7.66 88.32 111.8 698.9 591.5 623.4 602.2 611.7 6.38 89.88 107.7 687 565.3 549.4 607.9 614.3 5.38 90.65 106.3 678.4 533.9 578.4 616.1 621.8 4.47 93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	27.4	83.01	155.2	600.7	635.5	587.7	607	613	10.2		c
88.32 111.8 698.9 591.5 623.4 602.2 611.7 6.38 89.88 107.7 687 565.3 549.4 607.9 614.3 5.38 90.65 106.3 678.4 533.9 578.4 616.1 621.8 4.47 93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	9.99	89.88	124.7	794.2	9.609	648.2	605.3	612.5	7.66		2 5
89.88 107.7 687 565.3 549.4 607.9 614.3 5.38 90.65 106.3 678.4 533.9 578.4 616.1 621.8 4.47 93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 643.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	8.80	88.32	111.8	698.9	591.5	623.4	602.2	611.7	85.38		200
90.65 106.3 678.4 533.9 578.4 616.1 621.8 4.47 93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	385	89.88	107.7	687	565.3	549.4	607.9	614.3	22.38		3 6
93.9 104.2 656.5 507.2 553.7 621.7 630.4 3.74 92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	80.8	90.65	106.3	678.4	533.9	578.4	616.1	621.8	4.47		40
92.59 99.56 573.6 487.4 549.2 611.2 622.2 3.34 87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	349	93.9	104.2	656.5	507.2	553.7	621.7	630.4	3.74		2 0
87.84 4183.1 488.7 464.8 502.6 577.4 590.7 3.26 84.57 4183.3 428.2 450.5 476.7 543.2 557.1 2.81 83.54 91,17 393.8 435 438.7 515.3 525.7 2.74	12.1	92.59	99.56	573.6	487.4	549.2	611.2	622.2	3.34		2 6
84.57 4183.3 428.2 450.5 476.7 643.2 557.1 2.81 83.54 91,17 393.8 435 438.7 515.3 525.7 2.74	58.9	87.84	4183.1	488.7	464.8	502.6	577.4	590.7	3.26		2 6
83.54 91.17 393.8 435 438.7 515.3 525.7 2.74	46.3	84.57	4183.3	428.2	450.5	476.7	543.2	557.1	2.81		0 00
	31.2	83.54	91,17	393.8	435	438.7	515.3	525.7	2.74		06

16/1 Morga

DATA LOGGER WAS SET TO RECORD ON 10-MINUTE INTERVALS, AND WAS UNABLE TO RECORD FINAL PAE-BURN PATA WHICH OCCURGO BETWEEN INTERVALS. FINAL SCALE WEIGHT WAS NOTED TO BE 2.75 B. TEMPERATURES ARE REPRESENTED ON FIRST LINE OF SAMPLING DATA.

11. 1. Maya, ETL 2.28-12

				VERSION	12	2/5/2010				100		Source &	-
Manufacturer	SBI			200,000,000		ACCOUNT.	1		0.000000				110,00
	XTD 1.1			The state of the					Catalog 1				
Date:	10/19/2011	77			*******				4-4-1-	+	laboration .	History At	
Run	2	Photo and the second		and the same of the	P. B. Continues					37171777	riterior est	mme.	-
THE RESIDENCE OF A SECOND CONTRACTOR OF A SECOND CONTRACTOR OF THE PARTY OF THE PAR	G100527551		100 000 0							2-11-01		1 100	100
Test Duration:	CONTRACTOR OF THE PERSON NAMED IN				17-001					+ 10 00-0	1111-10-2		-
	Territoria contracti	Start	End	11 - 11 - 11	2110		-		1000000	4071046436	11-1-11-1-1-1		
******	Barometer (in.Hg):	30.11	30.07		***********				n 4-1441514-9	- 11-49			Conn
	I Programme form with	00.11	00,01	******						× ++ ++ +	et an alpha d		
	Dry Bulb (F):	80	78		pris month	(44.00) (40.00)	****			-1-19-11	10-11-111		
	Humidity (%):	33.7	32		1-1-1-1-11		- 1				8-100 X-114A		-
	322	-	-		THE ST		TV.	7	1000	F11 - 1 - 10-11 - 10-1	gorane a		
Moisture content of	fundad Acad Santa	40.0044			1111					*********			
eviolstore content of			CHO SHIPPER	0.110146-04				to the service	- 55.5 13		SALE	Table	
	Average	0.84	4,63	15.30	276.53	83.48	95.06	457,10	361.49	457.38	484.30	453.36	856.4
Elapsed	Weight				Flue	Room	Tunnel	Unit	Unit	Unit	Unit	Unit	
Timo	The second secon	co	CO2	02	Gas	Temp	Dry Bulb	Top	Back	Raide	L.Side	Bolton	DOM 1
0	11.00	0.61	0.94	17.63	260.7	79.6	95.0	355.2	414.8	416.0	482.2	483.8	Reading 845.24
10	9.76	0.32	2.67	18.15	280.1	79.3	99.4	441.9	402.5	399.2	4563	451.0	846.26
20	8.87	0.69	5.65	15.60	313.2	60.0	93.8	645.9	385.8	387.3	428.8	423.0	847.34
30	7.81	0.78	0.05	14.17	336.5	81.3	100.5	506.1	369.4	384.0	422.4	417.2	848.30
40	6.67	0.62	7,16	13.34	348.8	84.6	101.6	554.5	358.6	416.0	435.9	425.3	849.45
50	6.63	0.41	6.38	12.20	360.0	65.8	104.8	013.3	349.0	453.4	460.3	442.1	850,63
80	4.45	0.41	7.87	12.61	359.0	55.8	101.6	618.4	342.0	484.7	489.2	190,000	(0,199,26.8)
70	3.60	0.38	7.60	12.87	348.3	88.1	100.6	607.0	340.0	613.1	510.5	468.9	851.6
80	2.88	0.30	7.54	13.03	338.1	89.0	99.6	594.3	339.8	643.6	623.6	11909/93	ALC: A DESCRIPTION
90	2.22	0.02	7.40	13.01	528.0	87.0	08.9	505.2	341.0	539.1	534.4	513.9	853.70
100	1.84	0.84	5.10	14.64	290.8	84.2	95.3	531.7	345.3	555.2	540.0	533.5	654.70
110	1.64	0.78	4.27	15.24	260.3	83.0	04.5	402.1	353.0	674.6	9.76 90.40	548.5	855.6
120	1.43	0.93	3.82	15.82	251.5	85.0	92.6	442.6	380.1	79151302	532.0	550.0	650.91
130.	1.29	0.96	3.73	15.77	242.6	66.1	92.6		# 1 BARBOLA	602.7	523.2	541.6	657,99
140	1.09	1.09	3.49	15.07	B11110 B	100.00		416.8	363.9	472.6	514.3	529.4	859.06
150	0.92	1.17	Total Control of	110000	237.1	68.4	01.5	400.3	304,9	453.6	508.2	518.0	860.15
160	7. 5.5.4	15000	3.32	15.90	233,3	84.5	91.0	387.0	365.1	438.6	602.1	509.5	661.24
	0.74	1.22	3,14	16.21	227.7	82.7	90.4	375.0	383,8	439.2	494.3	494.8	662.32
170	0.64	1,37	2.91	10.38	221,4	83.5	89.5	363.8	362.7	441.1	484.7	484.0	863.40
180	0.41	1.41	2.50	16.68	216.0	\$1.8	89.1	353.8	360.7	439.6	474.3	472.2	664.48
190	0.27	1.40	2.32	16.87	211.3	80.3	88.6	341.8	358.9	430.7	461.4	460.0	665.55
200	0.14	1.49	1.88	17.29	204.4	79.5	88.0	329.2	356.0	410.5	447.2	445.9	885.66
210	0.00	1.47:	1.69	17,44	197.7	78.3	87.1	3153	353.0	408.3	430.5	432.7	857,70

16 1. Morga

***************************************		********	Y		· · · · · · · · · · · · · · · · · · ·			y		**********	Y	
					***************************************		>++×+++++++	common				
Manufacturer:	eni		I					**********		1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		
THE RESERVE OF THE PARTY AND ADDRESS.	XTD 1.1	(************							*****			
	10/19/11			-314-1417344		19:	********	******		*******		
Run:	********				OTTO TOTAL		*****		occurronne)			-
	G1005275											
Project M.	G1000276	28				**********				********		
********	irriy	10111111111						11)1(11)(00)00		*******	*********	
				*********			******		***********			
***************************************				******								
		********					********					
							*********					
							******					
		47 (.11 (-114)					*******	-01114/1143/84				
74.00	74.40	700 40	700.00									
74.20	74.12	76.42	793.98	73.66	73.68	77.82	0.02	-0.048	0.00	448.73		
DGM 1	DGM 1	Filter 1	DOMA	DOMA	DOM		**********		Visual	THEFT	Change In	
Intet T	Outlet T	Temp	DGM 2 Reading	DGM 2	DGM 2 Outlot T	Filter 2	Tunnel	Chimney	Smoke	Stove	Surface	
73.0	72.8	72.9	782.243	72.4	72.5	Temp 73.9	Velocity 0.023	-0.045	Observed	Temp 430.4	Tomp.	
73.1	73.0	75.4	783.400	72.6	72.6	76.7	0.023	Fig. Street, Contract of Contract		430.2	-0.22	200010
73.3	73.2	76.2	784.548	72.7	72.8	77.4	0.023	-0,080		413.9	-16.46	
73.5	73.3	76.4	785.681	72.9	72.9	77.8	0.023	-0.063		419.8	-10.58	
73.0	73.4	76.5	786.762	73.0	73.0	78.1	0.023	-0.083		438.1	7.66	******
73.7	73.6	76.7	787.842	73.1	73.1	78.3	0.023	-0.063	*********	463.8	33,4	*****
73.8	73.7	76.9	788,940	73.3	73.3	78.5	0.023	-0.088		480.4	50.02	
73.9	73.8	76.9	790.053	73.4	73.4	78.6	0.023	-0.065	************	491.5	61.08	*******
74.0	73.9	77.2	791,170	73.5	73.5	78.5	0.023	-0.063		503.0	72.64	117100-
74.1	74.0	77.1	792.287	73.6	73.6	78.5	0.023	-0.065		506.8	76.36	******
74.2	74.1	76.9	793,442	73.7	73.7	78.5	0.023	-0.063		504.1	73.74	
74.4	74.2	76.6	794.545	73.8	73,9	78.4	0.023	-0.055		488.5	58.1	
74.5	74.4	76.6	795.648	73.9	73.9	78.3	0.023	-0.053		474.0	43.64	
74.5	74.5	76.9	796.755	74.0	74.0	78.2	0.023	-0.045		459.4	28.98	*
74.6	74.6	76.8	797.852	74.1	74.1	77.9	0.023	-0.045		449.0	18.64	
74.7	74.6	76.7	798.955	74.2	74.2	77.8	0.023	-0.045	10111111	439.9	9.46	
74.7	74.6	76.5	800.085	74.1	74.1	77.8	0.023	-0.045		433.4	3.02	*****
74.8	74.8	76.2	801,175	74.3	74.3	77.9	0.023	-0.043		427.3	-3.14	******
74.8	74.9	76.4	802.288	74.4	74.3	77.8	0.023	-0.043		420.2	-10.24	
7 114 7 1133 230	75.0	76.4	803.398	74.4	74.4	77.8	0.023	-0.043		410.6	-10.24	
75.6									THE PARTY NAMED IN	9 10.00	# 125 CH1	
76.0 76.3	75.2	76.5	804,510	74.6	74.7	77.9	0.023	-0.043		399.8	-30.64	*****

16 f. Monga

		Manufa	ohurer	SBI					
		En more and a section of the	lodel:	XTD 1.1					
		Strategic and the strategic an	Date:	10/19/11			**********		
			Run:	10/19/11					
*		Acarete areas	roject #:	G1005275	E4				
		BANKS FREEZENANA	Charles Barriers	G1000270	****************				
	Total Gas \	Test Dura			210 22,444	Di	tot Factor	0.82	
	Total Gas \				23,314		(0.99 standard,		3
	Average Bar	********			30.09			l. Factor for	
	Average bar	AREA SWITTERSON	lar Weigi	J	28.56		0.04 01 06	ii. ractor ioi	S-Type)
		Advantage a new party	orrection:		0.942984935	*******	***********		*** [** *** ***
	Calibration F				1.0060			*******	
	Calibration F				1.0030				
	Calibration	I I	1721	(1) VS:	0.0384				
******				(2) VS:	0.0370		**********	Filter	Filter
		**********		X-7	0.0070	******		Face	Face
Elapsed	DGM 1	DGM 1	DGM 1	DGM 2	DGM 2	DGM 2	Tunnel	Velocity	Velocity
Time	Reading	**** · · · · · · · · · · · · · · · · ·	Outlet T	Reading	Intet T	Outlet T	Dry Bulb	DGM 1	DGM 2
0	845.246	73.0	72.8		72.41	72.49	94.96		.,
10	846.298	73.1	73.0	783.400	72.59	72.58	99.37	9.08	9.9
20	847.348	73.3	73.2	784.548	72.73	72.8	98.81	9.06	9.8
30	848.399	73.5	73.3	785.681	72.86	72.9	100.5	9.07	9.7
40	849,458	73.6	73.4	786.762	72.96	72.95	101.6	9.14	9.3
50	850,520	73.7	73.5	787.842	73.13	73.13	104.8	9.16	9.3
60	851.575	73.8	73.7	788.940	73.28	73.27	101.6	9.10	9.4
70	852.640	73.9	73.8	790.053	73.35	73.42	100.6	9.18	9.5
80	853.700	74.0	73.9	791.170	73.51	73.46	99.55	9.14	9.6
90	854.760	74.1	74.0	医二种性 化铁铁 化铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁铁	73.6	73.59	98.9	9.14	9.6
100	855.845	74.2	74.1	The second second second second	73.67	73.69	95.25	9.35	9.9
110	856.910	74.4	74.2	the second contract and according	73.77	73.85	94.49	9.18	9.4
120	857.990	74.5	74.4	- cerement and a contract of	73.89	73.92	92.84	9.30	9.4
130	859.065	74.5	74.5	for the first of the state of the state of	74.03	73.99	92.61	9.26	9.5
140	860.158	74.6	74.6	A	74.14	74.1	91.54	9.41	9.4
150	861.240	74.7	74.6		74.15	74.16	90.99	9.32	9.4
160	862.325	74.7	74.6	But the manager of the second of the second	74.14	74.14	90.37	9.34	9.5
170	863.405	74.8	74.8	the property of the property of the first	74.28	74.31	89.54	9.30	9.5
180	864.482	74.8	74.9	A CONTRACTOR OF THE PARTY OF TH	74.37	74.34	89.14	9.27	9.5
190	865.552	75.0	75.0		74.44	74.44	88.77	9.21	9.5
200	866.663	75.3	75.2		74.62	74.71	87.95	9.56	9.5
210	867.701	75.2	75.2	805.616	74.65	74.72	87.14	8.93	9.4

1h f. Morga

	Proportio	nal Rate	Calculatio	ns	(EPA Form	ulas from F	R5G)		
	Stack are	ea (fl2):	0.34907		Man	ufacturer:	SBI		
Wood	moisture (	Marketon Statement Seattlement of	16.6644	20 40 0 10 10 10 10 10 10 10 10 10 10 10 10	Wildi	Model:	XTD 1.1		
grade or many or he he had seen at the her-	Veight (lbs	THE RESERVE OF THE PARTY OF	11	********		Date:	10/19/11	N 27 S S S S S S S S S S S S S S S S S S	
THE REST P. LEWIS P. LEWIS CO., LANSING	Rate (Dry k	to the decision of the state of the	1.188			Run:	CHAPA COLUMN COLUMN	******	
	1			****	Pr	oject No.:	G100527	551	
Final Ter	mperature	(DGM #1	) Degrees	Rankin:	534.161	oject ivo	O TOOOZ T	1	
CARROLINA AND MARKON.	mperature	and the property of the proper	A SECURE OF SECURITY OF SECURITY	a ger dating the set to be at the day to be	533.671	******	***********		
COLUMN TO A SECRET THE PARTY.	unnel Tem	or security to the first terminal and the security of the			555.060			***********	
For any part of the service part of the service	unnel Velo	to be to be at the control of the co	er to be at the first and a contract to the first	CHECKSON TO SELECT A SECURITION OF THE	7.969859	175.337			
	andardized				153.24		************		
	I								
		Average	Average						
		Inlet+	Inlet+				***************************************		
		Outlet	Outlet	99.99	100.00	#1	#2		
Tunnel	Tunnel	Temp.	Temp.			dDGM	dDGM		
Velocity	Velocity	Meter 1	Meter 2			Vol.Std.	Vol.Std.		
Delta-P	Ft/Sec	Deg. R	Deg. R	PR1	PR2	(ft3)	(ft3)	Time	
0.023	7.969	532.9	532.5					0	
0.023	8.001	533.1	532.6	98.98	104.58	1.054	1.157	10	
0.023	7.997	533.3	532.8	98.70	103.68	1.051	1.147	20	
0.023	8.009	533.4	532.9	98.93	102.46	1.052	1.132	30	
0.023	8.017	533.5	533.0	99.76	97.84	1.060	1.080	40	
0.023	8.040	533.6	533.1	100.31	97.99	1.063	1.078	50	
0.023	8.017	533.7	533.3	99.34	99.31	1.055	1.096	60	
0.023	8.010	533.9	533.4	100.16	100.56	1.065	1,111	70	
0.023	8.002	533.9	533.5	99.58	100.81	1.060	1.115	80	
0.023	7.997	534.0	533.6	99.51	100.73	1.060	1.114	90	
0.023	7.971	534.2	533.7	101.50	103.80	1.085	1.152	100	-
0.023	7.966	534.3	533.8	99.53	99.03	1.064	1.100	110	
0.023	7.954	534.4	533.9	100.76	98.87	1.079	1.100	120	
0.023	7,952	534.5	534.0	100.26	99.19	1.074	1.104	130	
0.023	7.945	534.6	534.1	101.83	98.18	1.092	1.093	140	
0.023	7.941	534.7	534.2	100.74	98.66	1.081	1.099	150	
0.023	7.936	534.7	534.1	100.96	99.23	1.084	1.106	160	
0.023	7.930	534.8	534.3	100.39	99.13	1.078	1.106	170	
0.023	7.927	534.9	534.4	100.06	99.44	1.075	1.110	180	
0.023	7.925	535.0	534.4	99,36	98.94	1.068	1.105	190	
0.023	7.919	535.2	534.7	103.04	99.09	1.108	1.107	200	
0.023	7.913	535.2	534.7	96.20	98.48	1.036	1.101	210	

16 1. Mary

	Intertek Testing Servic	08				
	SFBA EPA ADJUSTEI	EMISSION	RESULTS			
	I THE THOUSANT	Liniodidit			1	
Manufacturer:	SBI	*******		RESULT	rs	Derect Labor.
	XTD 1.1				1	
T11.00.01	10/19/11	.4	OSSESSALO.	Average Adjusted Emi	sions Rate:	4.42
Run:				werage Unadjusted En		2191
	G100527551				(Dry kg/hr):	1.18
Test Duration (Minutes):				1	1 1	
Test Duration (Hours):					1	
		************			1	
			BARO	METRIC PRESSU	RE	
					Average:	30.0
TEMPERATURE FAC	TORS				Start:	30.1
	DGM #1:	0.9885			End:	30.0
	DGM #2:	0.9894				
	144001533344343404(743)04443111	The state of the s	DRY GA	S METER VALUES		
VOLUMES SAMPI	LED			DGM #1	Final:	867.70
	DGM #1:	22.456			Initial:	845.24
	DGM #2:	23.326				
				DGM #2	Final:	805.61
TOTAL TUNNEL V	OLUME (scf):	32180			Initial:	782.24
SAMPLE RATIOS			TEMP	ERATURES (DEG		
Sample	Train 1:	1433.0			DGM #1:	534.16
Sample	Train 2:	1379.6			DGM #2:	533.67
				l	1	
TOTAL EMISSION			CALIB	RATION FACTOR	THE COURSE PRINCIPAL CO.	
Sample Train		10.32			DGM #1:	1.006
Sample Train	2 (g):	10.07			DGM #2:	1.003
	Ave:	10.19				
EMISSION RATES			TUNN	EL FLOW RATE:	1	153.2
Sample Train 1		2.95		PARTICULATE		ng)
Sample Train 2	(g/hr):	2.88		Samp	le Train 1:	
	Ave:	2.91		l	Filters	6.
ADJUSTED EMISS					Probe	0.
Sample Train 1		4.46			Total	7.
Sample Train 2	Again the season of the season	4.38		Samp	le Train 2:	
	Ave:	4.42			Filters	7.
DEV	/IATION:	1.00%			Probe	0.
		Section Committee			Total	7.
W dovide the a local	or then 7 EP days to 1	t mortile data	ntoh			
	ter than 7.5% due to lov		accn			
· · · · · · · · · · · · · · · · · · ·	rates shall not differ by		5n. 2)			
or the weighted av	erage emission rate limi	(4.1 01 7.5)	09-07			
Il lea the following	*****************		********		0	*******
Use the following:						
Cololulla valta		2,17%				
Catalytic units		2.17%		114445114111 4 7111 1114		
7.5% of 4.1 g/hr		*********				
Non ortalida velta		4 400/		-11-1-1-1		1 (4 - (4 to 6)
Non catalytic units		1.18%		1-11-1		
7.5% of 7.5 g/hr			1	L	1	

16.4. Morga

IRE	PORT	DATA		R 14 04 04 07 08 08 08 08 08 08 08 08 08 08 08 08 08			*****	
	41414				1	1		
		Client:	SBI	*****				
		Deliver was a series of	2		1	1	1	
	*****	Date:	10/19/11					
	Pro	ject No.:	G100527551	44444444				
		What was a more to the more than a	XTD 1.1	1. p. tr. h				
Fuel Mois	ture	(Dry):	19.99666667	*****			THE SECTION ASSESSMENT	
Stack Sta	A RE OF THE PARTY.	WHERE IS NOT THE OWNER.	0.095				1	Common Services
		meter:	30.09			1	1	
Average	Roo	m Temp:	83.48					
	Cultural			N PAN SI C. R. PETICINE A	I		1	
	1111111			**********		1		
Change in	stov	e temp:	-42.44					
								-
						l		
	Burn I		1.188					
Adjusted Er			4.420					
		tem 1:	4,464	**********				
		tem 2:	4.376					
	MARKET.	ation:	1.00%		1			
	Filte	with the series have been all processors of	76.42	*******		l		
	Filte	er 2:	77.82		L			
	Tu	nnel:	95.06		1			
		DGM 1:	74.16					
		DGM 2:	73.67	******				
Wa	ter C	ollected:						
	naevan	TRANS.						hat an are w
		Temp	Bar Pressure		Relative H		Air Velo	
the art has broad an occurrent by the section as per	fore	After	Before	After	Before	After	Before	Afte
8	0	78	30.11	30.07	33.7	32	0	0
Delt	а Н А	verage	****************************					*****
	VI#1:	0						
1001	Λ#2:	0	Contract of the second second	G	1	1	1	

1h f. Morg-

VERSION 1,2

2/5/2010

# E&E Tunnel Traverse Worksheet

	TUNNEL	TUNNEL	SQUARE	Static Pressure:	
A CENTER	0.023	95	0.1500		
<b>B CENTER</b>	0.023	97	0.1500		
A1	0.018	94	0.1342	PITOT	
A2	0.020	94	0.1414	CONSTANT:	0.9430
A3	0.023	94	0.1500		
A4	0.018	88	0.1323		
B1	0.020	96	0.1414		
B2	0.023	96	0.1500		
B3	0.023	96	0.1500		
B4	0.018	93	0.1323		
AVERAGE	0.02055	94.44	0.1414		

Tunnel Diameter (in): Tunnel Area (ft2) Tunnel Static Pressure 0.349066 -0.095

12 1. Morga



#### Run Notes EPA Methods 28 and 5G-3

PROJECT /	TEST INFORMATION
Project Number:	G100527551
Manufacturer:	S.B.I.
	XTD 1.1
Sample ID Number:	4KLY110151323-007
Test Date:	
Test Run Number:	3
Date tunnel cleaned:	10-13-11
Purpose of Test	CAT. 3

Prelim 1 1,56 @ 2.0 DT 53 DEV 0.734

	Appliance Inf	ormation
Appliance Type:	2	1 - Catalytic 2 - Non-Catalytic 3 - Pellet 4 - Hydronic
Firebox Volume, ft3:	1.55	N/A for pellet type
Convection Blower	2	1 - No Fan 2 - Optional Accessory 3 - Standard Equipment

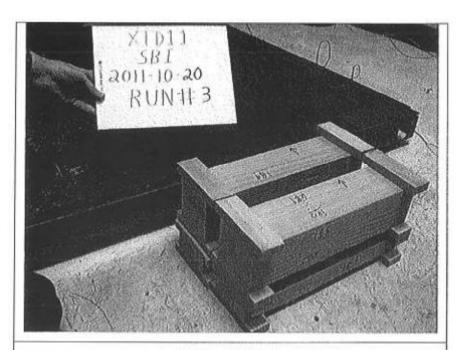
16.1. Morg

	Test Settings	
Primary Air:	314" & GAUGE	
Secondary Air:	FIXED	
Control Board:	NIA	
Blower/Fan:	ON-LOW	

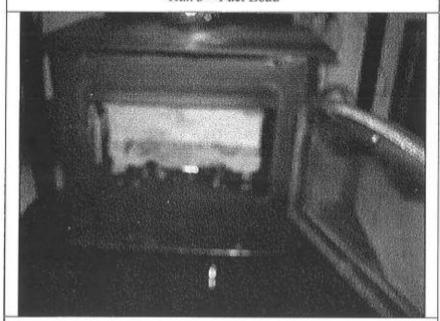
Activity  O TEST Seffing - Jun DAI - LOW	
A TEST Setting - FUN ON -LOW 45 STIRRED FULL LOUR	
72 COAL BED LEVELED	

wines and an incident	Start-Up Procedure
Loading of fuel, sec. :	204
Fuel-loading door:	CLOSED AT 1115
Primary air:	FULLY OPEN 5 MIN. ADRUPTLY CLOSED AT 3/4" 25 TH
Secondary air:	HOT ADJUSTABLE
Control board:	
Blower / fan:	TO A STATE OF THE PROPERTY OF

CONTRACTOR OF THE CONTRACTOR O	Other No	otes	
CBR = 22-2.7 LB			
	77.00		
The second secon	r consum		



Run 3 - Fuel Load



Run 3 - Newly loaded stove

16. f. Morg



#### **TEST FUEL DATA EPA METHOD 5G-3**

Project Number: G100527551

Manufacturer: S.B.I.

Model: XTD 1.1

Sample ID Number: PRT AMORE 1353 - 001
Test Date: OCTOBER 20, 2011
Test Run Number: 3

12.0 = 12.0 22.0 = 22.0

CALIBRATOR - 19901

Eq. ID No.:	181-214	Time:	8:30	Temp., °F:	73.7
Piece No.	Length, In.	Welght, Lb.		y Basis	
1	10	1,25	20,4	21.5	19.5
2	10	1.20	21.7	22.5	19.5
3	10	1.13	23.4	21.5	19.5
4	10	1,45	21.5	22.4	19.5
5	12	1.70	21.0	22.2	13.4
6	15	1.70	21.2	13.9	20.0
7	15	1.90	22.1	21.9	19.3
8	12	1.40	21.5	23.1	13.8
9	15	1.75	21.2	F.15	20,1
10					
11					
12					
Total We	elght	13,40	Avera	ge, %db	

19.3 15

Eq. ID No.:	281-	214	Time:	8:35	Temp., °F:	74
Plece No.	Length,	Welg	ht, Lb.			-
1 1000 140.	ln.	2x4	4x4	IVIDIS	ture, %, Dry	basis
1	14.25	1.45		E. C.V	19.0	187
2	14.25	2.15		19.7	13.2	19,1
3	14.25		3.82.	18.0	(9.0	20.2
4	14.25		3,60'	19.5	20	190
5						
6		A 1	1000			
7		25				
8						
Total	8	3,60	7.45			
% of We	light	32,6	67.5			
Total weight,	wet, lb.	11.0	5	Average M	olsture, dry	19.03
Total weight,	dry, kg	4.1	9		olsture, wet	16.39

19

10-25-11



### Supplemental Data EPA Methods 5G and 28

Project Number G100527551 Manufacturer S.B.I. Model XTD 1.1

Sampling Start Time 40:35

Sampling Stop Time イン: なり

Air Velocity (ft/sec)

Initial: <50

Final: <50

Barometric Pressure (in/Hg)

Initial: 29,72

Final: 29. C

Post - leak Check (cfm @ in/Hg) Train A: 0.005@5"Hy Train B: 0.002@5

Date: 10-25- A1 Engineer Signature:

SBI-Stove Builder International
October 12, 2011 October 20, 2011
Project No. G100527551

Flue	-	12	Unit	Unit	Unit	Unit	Unit	Scale		
Gas	Temp	Dry Bulb	Тор	Bottom	Back	L.Side	Right	weight	Draft	T I
583			595.5	171.4	289.7	210.5	246.1	11.85		4
537.5			651.8	256	349.4	289.6	317.8	9.83		
524.9			712.1	322.4	389.9	367.8	386.6	7.99		
494.7			675.3	372.2	455.9	425.1	447.8	661		
505.5			674.2	418.8	497.4	468.7	511.9	5.25		
502.6			697.9	470.8	498.5	516.1	574.1	3.99		
403.8			601.3	470.9	511.9	557.6	605.9	3.39		
363.2			528.2	455.6	502	563.8	588.8	3.08		

1h f. Magn

DATA LOGGER WAS SET TO RECORD ON 10-MINUTE INTERVALS, AND WAS UNABLE TO RECORD FINAL PAE-BURN PATA WHICH OCCURGO BETWEEN INTERVALS. FINAL SCALE WEIGHT WAS NOTED TO BE 2.70 B. TEMPERATURES ARE REPRESENTED ON FIRST LINE OF SAMPLING DATA.

LINE OF SAMPLING DATA.

2-28-12

		1 1		VERSION	1.2	2/5/2010							
Manufacturer	: 581				****	Or electric				100	2 7 7 19		
Model	XTD 1.1				tota tomornia		70000		- tr m	1000			7,000
Date	: 10/20/2011				3								
Run	: 3										V		
Project #	G100527551		airte annie								0.400.000.000		
Test Duration	160												-
		Start	End										
	Borometer (in.Hg):	29.72	20.6							11.41.41.41.4			
			-	111	3					West Land			
	Dry Bulb (F):	83	85		10-11-11-11-11-1			1		rummeta	- Content of		
	Humldity (%):	49	49										
		and the same											
Maisture content of	f wood (wet basis):	16,1836									e Tilbail		
	Average	0.60	6.88	14.01	407,62	85.70	117.55	657.98	358.21	652.41	578.64	588.32	875.3
	*********										•		
Elapses				resident.	Flue	Reem	Tunnet	Unit	Unit	Unit	Unit	Unit	DGM 1
Tine	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	00	CO2	02	Gas	Temp	Dry Bulb	Top	Back	R.Side	L.Side	Bottom	Reading
	10.95	Section of Control of Section 2	11,74	8.88	350.7	83,4	135.6	433,4	437.1	464.0	639.5	545.2	867.72
	9.02		11,75	8.88	590.6	86.1	142.3	731.0	421.0	478.1	517.8	535.7	888.76
20	0.97	0.56	12.44	7.87	623.3	87.0	145.0	847.3	409.4	553.0	635.3	571.8	869.66
30	5.25	0.23	11.21	8.91	570.4	87.3	141.3	838.3	399.7	635.2	676.2	616.9	870.95
40	3.96	0.23	0.07	11.28	518.5	90.5	132.7	752.4	395.7	683.3	023.1	652.7	872.03
	2.94	0.20	0.07	12.69	475.3	63.6	129.0	692.9	392.8	671.1	649.3	673.2	873.10
	2.48	0.30	5.10	15.10	427,3	84.0	121.6	614.3	354.3	610.4	648.3	667.4	874.18
	1.90	0.29	5.02	14.03	420.0	84,0	115.8	680.0	376.3	595.2	636,7	654.6	875.25
60	1,57	0.30	4.77	14.76	388,6	84.9	111.0	654.6	376.3	589.0	635.0	645.9	878.33
PC	1,33	0.73	3.68	10.01	301.2	85,0	107.9	507.2	370.3	558.0	620.2	627.9	677.40
100	1.12	0.63	3,63	16.07	347.8	60.2	107.2	470.4	377.6	540.0	602.0	606.7	878.47
110	0.90	0.65	3.13	16.47	336.1	80.8	105.2	453.0	379.6	532.8	585.4	586.3	870.55
	0.67	0.90	2.88	10.04	326.2	86.3	103.4	433.7	379.8	510,1	570.7	565.1	660,63
100	A R. Britania and Company of the Aura of St.	100000					101.7	418.6	378.9	609.6		544.8	881.70
130	0.45	1,02	2.51	10,91	315.1	85.9		111111111111111111111111111111111111111	A SECTION OF PERSONS		658,0	THE PERSON	and the contract of the contra
140	0.45 0.28	1,09	1.92	17,31	301.7	85.6	100.4	405.B	374.9	502.8	539.6	523 9	882.77
and the second contract of the second contrac	0.45 0.28 9.12	and the second			ALE CHEST STATE	141111 3411114		111111111111111111111111111111111111111	A SECTION OF PERSONS		1.51000.00	THE PERSON	882.77 683.85 884.92

16.1. Morgan

***********	p		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,							
Manufacturer:	SBI											
Model:	XTD 1.1									**********		
Date:	10/20/11											
Run:	3											
Project #:	G1005275	51										
				***************************************			114   81125-201					
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					**********					
		**********	***********	**********								
72.20	72.27	77.71	814.46	71,76	71.74	78.65	0.02	-0.064	0.00	533,11	.,	WILLIAM THE B
		*	*	*	*	*		•	Visual	Average	Change In	**********
DGM 1	DGM 1	Filter 1	DGM 2	DGM 2	DGM 2	Filter 2	Tunnel	Chimney	Smoke	Stove	Surface	*********
Inlet T	Outlet T	Temp	Reading	Inlet T	Outlet T	Temp	Velocity	Draft	Observed	Temp	Tomp.	********
71.3	71.3	72.4	805.631	70.9	70.9	72.6	0.020	-0.035		483.8	0	
71.4	71.2	78.6	806,720	70.9	70.9	76.7	0.018	-0.050		536.9	53.06	
71.7	71.5	79.9	807.848	71.1	71.1	80.2	0.018	-0.055		583.4	99.52	
72.3	71.9	79.7	808.975	71.3	71.5	80.9	0.018	-0.063		613.1	129.22	
72.5	72.2	80.2	810.081	71.6	71.8	81.5	0.018	-0.085		621.4	137.6	227000000
72.4	72.4	80.4	811.182	71.0	71.8	81.5	0.018	-0.093		615.9	132.02	*********
72.6	72.4	79.8	812.275	71.8	71.9	80.9	0.018	-0.090		586.5	102.7	
72.6	72.6	79.0	813.381	71.9	71.9	80.0	0.018	-0,080		569.4	85.52	*********
72.7	72.6	78.0	814.428	72.0	72.0	79.4	0,018	-0.073		559.9	76.1	*********
72.6	72.6	77.4	815,490	72.0	71.9	78.7	0.018	-0.068	SCHOOL ST	537.9	54.08	********
72.5	72.6	77.0	816.581	72.1	72.0	78.3	0.018	-0.063		522.3	38.46	
72.4	72.6	76.8	817.708	72.0	71.9	77.8	0.018	-0.080		507.4	23.56	
72.4	72.6	76.8	618.831	72.1	72.0	77.7	0.018	-0.060		493.5	9.64	
72.5	70.7	76.6	819,961	72.2	72.1	77.6	0.018	-0.060		481.6	-2.28	*******
	72.7	10.01							contract the state of the state of the state of the	A CARREST CARREST	Acres de la resta de la constante de la consta	
72.5	72.7	76.4	821.088	72.2	72.1	77.3	0.018	-0.058		468.6	-15.24	
**********	I I I I I I I I I I I I I I I I I I I		ATT STATE A PROPERTY.	47111110000000		77.3 77.1	0.018	*********		468.6 450.8	-15.24 -33.02	

16-10-4

		Manufa	ah mar	CPI					
		Manufa	odel:	SBI XTD 1.1		********	*****	*******	
		W	Date:						
******			Run:	10/20/11					
			*********	Sycaronizations.	E4				
********			roject #:	G1005270	**************			***************************************	
	T-1-10	Test Dura	CAROLES CALLED		160			0.00	
	Total Gas \				17.010	PI	ot Factor	0.82	3
	Total Gas \				17,480		the contract of the contract of the contract of	.99 standar	the feet of the second second
	Average Baro	THE RESERVE OF THE PARTY OF THE		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	29.66		0.84 or Ca	al. Factor for	S-Type)
			lar Weigl	the same of the same of the same of	28.56				
	2010011101110	PROPERTY OF THE PARTY OF THE PA	orrection:		0.942286731				
	Calibration Fa				1.0060				
	Calibration Fa	actor (DGN	1#2):	711712	1,0030			(410) 7817 1831 01	
				(1) VS:	0.0447			***************************************	
				(2) VS;	0.0435			Filter	Filter
								Face	Face
Elapsed	P31	DGM 1	DGM 1	DGM 2	DGM 2	DGM 2	Tunnel	Velocity	Velocity
Timo	Reading	Inlet T	Outlet T	Reading	Inlet T	Outlet T	Dry Bulb	DGM 1	DGM 2
0	867.722	71.3	71.3	805.631	70.87	70.86	135.6		
10	868,760	71.4	71.2	806.720	70.88	70.86	142.3	8.86	9.2
20	869,868	71.7	71.5		71.07	71.1	145	9.46	9.6
30	870.951	72.3	71.9	808.975	71.33	71.52	141.3	9.24	9,5
40	872.034	72.5	72.2	810.081	71.62	71.76	132.7	9.23	9.4
50	873,103	72.4	72.4	811.182	71.85	71.83	129.9	9.11	9.3
60	874.182	72.6	72.4		71.82	71.89	121.5	9.19	9.3
70	875.258	72.6	72.5		71.87	71.86	115.8	9.17	9.4
80	876.330	72.7	72.6	Commercial and Challenger	72	72	111.6	9.13	8.9
90	877.407	72.6	72.6	for which was a property of	72.01	71.94	107.9	9.18	9.0
100	878.479	72.5	72.6		72.05	71.97	107.2	9.13	9.2
110	879.551	72.4	72.6	A STATE OF THE PARTY OF THE PAR	72.01	71.91	105.2	9.14	9.5
120	880.630	72.4	72.6		72.12	71.99	103.4	9,19	9.5
130	881.703	72.5	72.7	819.961	72.21	72.07	101.7	9.14	9.6
140	882.774	72.5	72.6	821.088	72.17	72.06	100.4	9.12	9.5
150	883.852	72.3	72.5	822.218	72.11	71.89	98.83	9.19	9.6
160	884.926	72.6	72.4	823.345	71.95	72	97.98	9.15	9.5

16 f. Worgn

	Proportio	nal Rate (	Calculatio	ns	(EPA Form	ulas from F	PR5G)		
	10.0-0.0-0.000	*** AND THE RESIDENCE		4 1 2 4 4 5 7 7 7 7 7 7 7		***********			
*****	Stack are	and the first of the second of the second of	0.34907	ere en en en en en en en	Mar	ufacturer:	SBI		
WHAT THE REAL PROPERTY AND ADDRESS.	moisture (	TO THE RESERVE OF THE PARTY OF	16.1836	************		Model:	XTD 1.1		to a very
Load V	Veight (Ibs	wet):	10.95			Date:	10/20/11		
Burn R	ate (Dry k	g/hr):	1.561			Run:			
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Pi	roject No.:	G100527	551	
Final Ter	nperature	(DGM #1	) Degrees	Rankin:	532.281				
Final Ter	nperature	(DGM #2	) Degrees	Rankin:	531.749				
Final Tu	innel Tem	perature	Degrees F	Rankin:	577.548				
CONTRACTOR OF STREET	innel Velo	A TAX AND ADDRESS OF A STREET AND ADDRESS OF A STREET	CONTRACTOR SERVICE	SECURE OF SECURITION AS A SEC	7.323379	***********			
er om der der einem der Sanger der ein der	ndardized	a territoria dell'attendo dell'	the last contract of the second contract of	manufactured to the second	133,39				
Community.	***************************************			gel witte fatter)					
	**************************************	Average	Average	*********	LHNERDERFER	***********			111111
		Inlet +	Inlet +			************			
*****	N. 231 7 20 A 11 R 11 R 11 PK	Outlet	Outlet	100.22	100.22	#1	#2		
Tunnel	Tunnel	Temp.	Temp.			dDGM	dDGM		
Velocity	Velocity	Motor 1	Meter 2			Vol.Std.	Vol.Std.		
Delta-P	Ft/Sec	Deg. R	Deg. R	PR1	PR2	(ft3)	(ft3)	Time	
0.020	7,834	531.3	530.9					0	
0.018	7.369	531.3	530.9	100.24	102.12	1.028	1.076	10	
0.018	7.491	531.6	531.1	105.68	104.49	1.097	1.115	20	
0.018	7.468	532.1	531.4	102.89	104.01	1.071	1.113	30	
0.018	7.414	532.4	531.7	102.10	101.29	1.071	1.092	40	
0.018	7.396	532.4	531.8	100.54	100.56	1.057	1.086	50	
0.018	7.241	532.5	531.9	102.16	100.52	1.067	1.078	60	
0.018	7.308	532.5	531.9	99.95	99.80	1.064	1.091	70	
0.018	7.179	532.6	532.0	100.60	95.44	1.059	1.033	80	*****
0.018	7.257	532.6	532.0	99.34	95.15	1.064	1.048	90	
0.018	7.253	532.6	532.0	98.82	97.68	1.059	1.076	100	
0.018	7.240	532.5	532.0	98.67	100.56	1.060	1.110	110	
0.018	7.228	532.5	532.1	99.15	100.38	1.067	1.110	120	
0.018	7.218	532.6	532.1	98.44	100.66	1.060	1.114	130	
0.018	7,209	532.6	532.1	98.14	100.28	1.058	1.111	140	*****
0.018	7,199	532.4	532.0	98.67	100.43	1.066	1.115	150	
0.018	7.194	532.5	532.0	98.21	100.09	1.062	1.112	160	

1h f. Morgn

		Intertek Testing Service	oes				
		CEDA EDA AD HIOTE	L PURBLEY	DECLU TO			
		SFBA EPA ADJUSTE	LMISSION	RESULIS			
Mani	ifacturer:	SBI			RESULT	8	
1		XTD 1.1	Sample man		THEOUR!	ř	24-440221111
	Date:	10/20/11		Averag	e Adjusted Emis	sions Rate	1.82
	Run:	3			Unadjusted Em		11.00
	Project #::	G100527551				(Dry kg/hr):	1,50
Test D	Ouration (Minutes):	160					
Test	Duration (Hours):	2.67					
						***********	********
					and Langer		
			*************	BAROMETI	RIC PRESSU	4 to 4 to 4 to - 1 to 5 to 5 to 5	
	TOURSONTURE	1				Average:	29.6
1000	TEMPERATURE FAC	DGM #1:	0.9920			Start: End:	29.7
200		DGM #2:	0.9930			Eng.	29.
1		DOWNZ.	0.8830	DRY GAS ME	TER VALUES		
	VOLUMES SAMP	LED	***************		DGM #1	Final:	884.92
		DGM #1:	17,019		******	Initial:	867.72
		DGM #2:	17.489				**********
					DGM #2	Final:	823,34
	TOTAL TUNNEL \	/OLUME (scf):	21342			Initial:	805.63
	21770112						
	SAMPLE RATIOS			TEMPERAT	TURES (DEG.	REPORT REPORTS AND A	
		e Train 1:	1254.0			DGM #1:	532.28
	Sample	e Train 2:	1220.4			DGM #2:	531.75
	TOTAL EMISSION	IQ		CALIBRATI	ON FACTOR		
	Sample Train	F 2 P 3 5 P 4 P 5 P 100 P 10 P 10 P 10 P 2 P 2 P 2 P 2 P 2 P 2 P 2 P 2 P 2 P	2.76	- Onto Division	OIL TAOLOIG	DGM #1:	1.006
-	Sample Train		2.56	PARKET TO PROPERTY AND THE		DGM #2:	1.003
		Ave:	2.66			Panan	
	EMISSION RATES	3		TUNNEL FL	OW RATE:		133.4
	Sample Train 1	(g/hr):	1.03		ARTICULATE	CATCH (r	ng)
	Sample Train 2	(g/hr):	0.96		Sample	Train 1:	
		Ave:	1.00		1	Filters	1.
	ADJUSTED EMIS				na congression conserva-	Probe	0.
	Sample Train 1		1.87			Total	2.
	Sample Train 2	44.14.14.14.11.11.11.11.11.11.11.11.11.1	1.76		Sample	Train 2:	
	PART	/ATION:	1.82 3.06%			Probe	0.
		ATION.	3.0078			Total	
						Total	2.
i	f deviation is area	ter than 7.5% due to lo	w particulate o	eatch			
		rates shall not differ by					
		erage emission rate lim		(5g-3)		-2444-4444	********
	les the feller for	1111-(44(1)1111-1111-1111-1111-1111-1111					
	Use the following:	***************************************					
10	Catalytic units		2.71%				
	7.5% of 4.1 g/hr		J				
1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		4+1+1				
1	Non catalytic units		1.48%				
17	7.5% of 7.5 g/hr						
100 miles							

1h.f. Morga

IKEPONT DATA			1	1		
REPORT DATA						100000000000000000000000000000000000000
Clien	: SBI	4341034103				4 N 14 ( 1 4 H ) - 4 H
Rur						
Date				*********		
				ļ		
Project No.	C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1			ļ		
to be a printed of the state of	1: XTD 1.1					
Fuel Moisture (Dry):	19.30833333					
Stack Static (neg):	0.0975					
Barometer:	29.66					
Average Room Temp	85.70					
		*********				
Change in stove temp:	-53.36					
		MARKET AND CAR				
Burn Rate:	1.561					100 m to 100
Adjusted Emission Rate		******				
System 1:	1.872					
System 2:	1.761					
Deviation:	3.06%					
Filter 1:	77.71					
Filter 2:	78.65					
Tunnel:	117.55					
DGM '	1: 72.28		1			
DGM 2	2: 71.75	********				
Water Collected		4.000 0 0 0 0 0 0 0 0 0 0		100000000000000000000000000000000000000	***********	1000000
		**********				
Room Temp	Bar Pressure	******	Relative H	umidity	Air Velo	ocity
Before After	Before	After	Before	After	Before	Afte
83 85	29.72	29.60	49	49	0	0
		*********				
Delta H Average		A 1-31-41-4-31-31 = - 41-				
DGM#1: 0	***********************	******			**********	
DGM#2: 0						

16 f. Morg

VERSION 1.2

2/5/2010

## E&E Tunnel Traverse Worksheet

	TUNNEL	TUNNEL TEMP	SQUARE ROOT	Static Pressure:	
A CENTER	0.020	134	0.1414		
<b>B CENTER</b>	0.020	123	0.1414		
A1	0.018	130	0.1323	PITOT	
A2	0.020	130	0.1414	CONSTANT:	0.9423
A3	0.018	130	0.1323		
A4	0.015	122	0.1225		
B1	0.018	121	0.1323		
B2	0.020	121	0.1414		
B3	0.020	121	0.1414		
B4	0.015	111	0.1225		
AVERAGE	0.01825	124,26	0.1333		

Tunnel Diameter (in): Tunnel Area (ft2) Tunnel Static Pressure 0.349066 -0.0975

16 f. Morg



Weather Forecast: Québec, QC

alerts

Wind warning for Quôbec area

Current Weather Thurs, Oct 20, 2011, 9:00 EDT Jean-Lesage Intl Airport

(0000)

8°C

Feels Like: -Wind: E 45km/h Wind gusts: 70km/h Sunrise: 7:10 Sunset: 17:50 Relative Humidity: 93% Pressure: 100.63 kPa ▼ Visibility: 16.0 km Celling: 1000 ft

Short Term Forecast Updated: Thurs, Oct 26, 2011, 8:00 EDT

	Thursday Afternoon	Thursday Evening	Thursday Overnight	Friday Morning	Friday Afternoon
	(0000)	Cook	Culton	0000	with
	Light rain	Cloudy with showers	Lightrain	Light rain	Cloudy with showers
Temp.	120	12°C	9.0	10%	110
Wind	NE 35km/h	NE 15km/h	SW 15km/h	SW 15km/h	SW 15km/h
Relative Humidity	94%	94%	87%	62%	93%
P.O.P.	80%	80%	80%	70%	60%
Rain	1-3mm	2-4mm	2-4ntm	1-3mm	less then 1mm

Long Term Forecast Updated: Thursday, October 20, 2011, 8:00 EDT

	Friday Oct 21	Saturday Oct 22	Sunday Oct 23	Monday Oct 24	Tuesday Oct 25	Wednesday Oct 26
Conditions 6am - 6pm	(0000	wind)	100	(3000)	Color	46
	Light rain	Cloudy with showers	Variable cloudiness	Cloudy with showers	Cloudy with showers	Cloudy periods
P.O.P.	70%	40%	20%	40%	80%	20%
High	11°C	11°C	10°C	1110	970	970
Low	9.0	70	5°C	570	670	579
Wind.	SW 15 km/h	W 10 km/h	W 5 km/h	SE 6 km/h	NE 5 km/n	W 5 km/h

1h 1. Morgn



### Weather Forecast: Québec, QC

alerts

Wind warning for Québec area

Current Weather Thurs. Oct 20, 2011, 12:00 EDT Jean-Lesage Intl Airport



9°℃

Partly cloudy

Feels Like: -Wind: E 59km/h Wind gusts: 81km/h Sunriso: 7:10 Sunset: 17:50 Relative Humidity: 81%
Pressure: 100.23 kPa 
Visibility: 40.0 km
Celling: 1200 ft

### Short Term Forecast Updated: Thurs, Oct 20, 2011, 10:00 EDT

	Thursday Afternoon	Thursday Evening	Thursday Overnight	Friday Morning	Friday Afternoon
	cooper	(3506)	0000	wood	(2000)
1	Light rain	Cloudy with showers	Light rain	Light rain	Cloudy with showers
Temp.	12°C	12°C	8°C	10°C	11°C
Wind	NE 35km/h	NE 15km/h	SW 15km/h	SW 15km/h	SW 15km/h
Relative Humidity	94%	94%	87%	82%	93%
P.O.P.	80%	80%	80%	70%	60%
Rain	1-3mm	2-4mm	2-4mm	1-3mm	less than 1mm

#### Long Term Forecast Updated: Thursday, October 20, 2011, 10:00 EDT

	Friday Oct 21	Saturday Oct 22	Sunday Oct 23	Monday Oct 24	Tuesday Oct 25	Wednesday Oct 26
Conditions 6am - 6pm	(0000	(0000	1 Dis	0000	0000	1
	Light rain	Cloudy with showers	Variable cloudiness	Cloudy with showers	Cloudy with showers	Cloudy periods
P.O.P.	70%	40%	20%	40%	80%	20%
High	11°C	11°C	10°C	11°C	9°C	9°C
Low	8°C	7°C	5°C	5°C	6°C	6°C
Wind	SW 15 km/h	W 10 km/h	W 5 km/h	SE 5 km/h	NE 5 km/h	W 5 km/h

16 f. Morg



#### Run Notes EPA Methods 28 and 5G-3

PROJECT /	TEST INFORMATION
Project Number:	G100527551
Manufacturer:	S.B.I.
Model:	XTD 1.1
Sample ID Number:	PRTM10121353-00
	OCTOBER 21, 2011
Test Run Number:	4-
Date tunnel cleaned:	10-13-11
Purpose of Test	CAPT. 4

1.93 @ 4.4 DEV. 2.33%

	Appliance Info	rmation
Appliance Type:	2	1 - Catalytic 2 - Non-Catalytic 3 - Pellet 4 - Hydronic
Firebox Volume, ft3:	1.55	N/A for pellet type
Convection Blower	2	1 - No Fan 2 - Optional Accessory 3 - Standard Equipment

KJ. Morg

E	K-0	Test Settings
Primary Alr:	FULLY	OPEH
Secondary Air:	FIXED	
Control Board:	HA	35112 3 3 3 4 W 5 7 1
		AFTER BOHIN

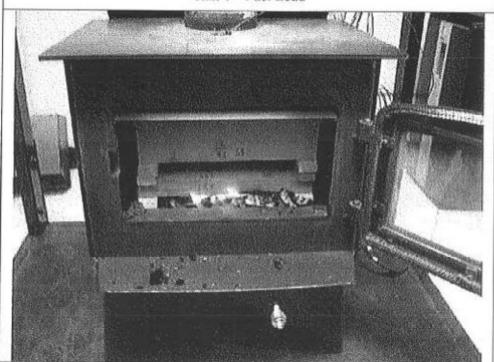
ime	Activity
Ø	TEST SETTING - FAH OH-LOW - 8:40 AM
44	STIR THE GOAL BED
CZ./	LEVEL THE COALBED

	Start-Up Procedure
Loading of fuel, sec. :	20 MC
Fuel-loading door:	
Primary air:	
Secondary air:	
Control board:	
Blower / fan:	OH AT LOW FOSITION AT 301 14TO THE TEST

40'	MIR IAL	HISTO TIE	ING OF TUI	MEL ,	WAS PHORE	ASEN
70	PHIXIH	BATTLE	OPEHING	WAS	DECREASE	7
	70	70 HIXING	70 HIXING BAFFLE	TO MINHE BATTLE OPENING	TO MIXING BAFFLE OPENING WAS	40, MIR INLET OPENING OF TUNNEL WAS PHORES



Run 4 - Fuel Load



Run 4 - Newly loaded stove

16. Marg-



#### TEST FUEL DATA EPA METHOD 5G-3

Project Number: G100527551

Manufacturer: S.B.I.

Model: XTD 1.1

Sample ID Number:

Test Date: OCTOBER 213 2014

Test Run Number: 4

Eq. ID No.:	531-214	Time:	8:10	Temp., °F:	73.7
Piece No.	Length, In.	Weight, Lb.		sture, %, Dr	
1	10	1.20	23.4	24.2	22.5
2	10	1.25	23,4	21.1	20.2
3	10	1.20	21.2	21.4	19.5
4	10	1.15	20,0	20.9	20.0
5	12	1.35	23,1	23.6	22.4
6	12_	1.75	23.7	24.3	23.4
7	15	1.85	23.8	23.1	23,1
8	15	1.85	23,5	23.8	23.4
9	15	1.85	22,0	22,2	19.3
10					
11					
12	7				
Total We	eight	13.80	Avera	ge, %db	

12.0% = 12.0%

EQ. : 19701

	1	EST FUE	L LOAD F	ROPERTIE	S	
Eq. ID No .:	531-		Time:	8:30	Temp., °F:	
Piece No.	Length,	Weig	ht, Lb.	Molo	ture 9/ Day	Deele
riece No.	In.	2x4	4x4	IVIOIS	ture, %, Dry	basis
1	14.25	2.05	1	19.2	13.2	19.2
2	14.25	4,60		20.1	19.5	18.4
3	14.25		3.65	20.0	19.2	20.3
4	14.25		3.75	8.EK	19,7	20.5
5						
6						
7						
8						
Totals	3	3.65	7.4			
% of We	ight	33	67			
Total weight,	otal weight, wet, lb.		5	Average M	loisture, dry	19,59
Total weight, dry, kg		4.	19	Average M	oisture, wet	16.38

10-25-11 Theres



#### **Supplemental Data** EPA Methods 5G and 28

Project Number G100527551 Manufacturer S.B.I.

Model XTD 1.1

Sample ID Number \_ PRT-MAO121353 - 00 1

Test Date OCTOBER 21, 2011

Test Run Number 4-

Sampling Start Time 9:56 Sampling Stop Time 12:06

Air Velocity (ft/sec)

Initial: 450

Final: <50

Barometric Pressure (in/Hg)

Initial: 23.65

Final: 23,67

Post - leak Check (cfm @ in/Hg) Train A: 0.003

Train B: 0.00 Z

Date: 10-25-M Engineer Signature:

Pre-Burn Data

Draft 2.45 55.88 12.35 9.7 7.14 5.06 3.22 2.56 70.9 129.4 208.4 290.4 385.4 482.4 583.3 635.6 Right 70.54 133.3 208.8 290.5 372.4 449 537.9 588 Side. 204.8 260.9 397 530.5 628.3 683.7 Unit 70.91 90.06 173.1 262.9 358.6 456.4 556.1 Bottom 69.39 273 569.6 728.3 860.4 827.8 828.1 673.1 70.04 159 147.8 163 168.5 161.7 155.6 134.5 Temp Dry Bulb Room Tunnel SBI-Stove Builder International Project No. G100527551 66.17 70.12 73.22 77.16 82.44 84.61 86.45 October 21, 2011

68.63 322.9 580.7 627.1 666.6 636.7 593.6

Gas

Time

BETWEEN

	1			VERSION	1.2	2/6/2010		0.100.00	0100001				
Manufacturer	SBI			A ACCOUNT.	1					A 10-11-1-11-1			
Model	XTD 1.1									21-8 2 21-12			
Date	: 10/21/2011				HOME I	100							
Run	: 4									77			
Project #	G100527551	7							11(4)(		WO HILL		
Test Duration	130							111110,4			10000	0.54	
		Start	End										1
	Barometer (in Hg):	29.65	29,67		in the same of		1			(m. 1114) (m. 1114)			
			1000		*****					0.100			
	Dry Bulb (F):	83	85								1	-	-
	Humidity (%):	38	39										
Moisture content o	f wood (wet basis):	16.3821	ere amuse a										
Market State Committee Com	Average	8.40	10.13	10.04	602.00	84.34	143.53	656.51	484,48	643,41	632.98	665.49	Control of the latest and the
Elapses	THE R. P. LEWIS CO., LANSING, MICH.	man.			Flue	Reom	Tunnel	Unit	Unit }	Unit	Unit	Unit	DGM 1
Jim	The Participant of the Participa	CO	CO2	02	Gas	Temp	Dry Bulb	Top	Back	R.Side	L.Side	Bottom	Reading
	11.1	0.26	12.60	8.0%	435.4	82.8	130.1	564.7	537.1	595.6	500.5	630.3	884.94
	9.0	0.26	12.50	8.01	092.2	63.0	171.2	839.7	515.7	553.2	667.5	599,6	885.98
	6.5	0.23	13.47	0.06	733.6	86,4	184.4	983.5	491.0	620.8	588.3	633,0	887.01
30	4.4	0.24	13.42	7.39	695.0	85.2	181.5	977.6	475.8	725.0	638.6	691.4	888.00
	3.1	0.25	13.31	7.65	595.5	85.1	168.4	836.9	464.9	774.0	691.4	739.7	689.01
	23	0.27	13.60	7.72	523.7	87.9	156.7	714.8	460.6	768.9	709.3	751.6	690.05
	1.7	0.27	13.61	7.73	503.7	65.8	150.2	657.6	457.0	747.8	705.8	741.3	891.10
70	1.3	0.28	13.60	7.73	407.5	80.2	135.8	620,4	455,6	700.6	609.4	727.6	892,10
60	1.0	0.27	13.09	7.66	435.2	84.8	129.6	565.8	440.5	618.2	674.9	690.5	893.20
90	0.7	0.30	8.70	7.62	417.8	83.3	124.8	628.0	443.0	619.3	644.7	605,9	894.253
100	0.6	0.66	4.38	13.01	408.3	82.7	123.4	609.6	440.0	608.4	620.6	643.3	895.29
110	0.2	0.71	3.66	10,13	393.3	62.0	119.6	457.6	438.7	683.6	600.5	623.6	895.291
120	0.0	0.80	3.00	16.79	376.9	84.7	118.3	405.3	437,6	602.7	570.2	599.6	097,320

16 p. Morga

				***********				,	*************			*******
*****		A-1-1-1-1-1		******			44144444444	(				
Manufacturer:	SBI		loon man	***********	construction of	***********	*********					******
	XTD 1.1						*1(1) /****	(4.1.19.)		2199007-03		*******
	10/21/11			**********			FOX			***************************************		
Run							**********			*********		****
Profect #	G10052755	ú							**********	*********		*******
		7	p. 144 - D. 174	10000000000	**********	211177.112-49			*********			*******
							***********					******
************				***************************************		*********	*****	.,,,,,,,,,,,,,,,				
**********	***********	***********	***************************************	*********	***********	**********	*********	***********	***************************************			*******
***************************************						11-11-11-11	(					
			***********			***********	**********		*********	sommer.		*******
	444-144-11		4+01/00/0140	**********			1-11-1-11	1441211111111111		*********		********
72.74	72.52	80.33	830.10	72.25	72.24	82.07	0.02	-0.068	0.00	612.57		******
							*		Visual	Average	Change In	
DGM 1	DGM 1	Filter 1	DGM 2	DGM 2	DGM 2	Filter 2	Tunne!	Chimney	Smoke	Stove	Surface	7
Infot T	Outlet T	Temp	Reading	Inlet T	Outlet T	Temp	Velocity	Draft	Observed	Temp	Temp.	
71.0	71.6	72.3	823.365	71.3	71.3	73.1	0.020	-0.035		583.6	0	
71.8	71.6	79.6	824.371	71.4	71.3	80.8	0.023	-0.045		615.1	31.5	
72.0	71.7	83.5	825.408	71.5	71.5	84.0	0.021	-0.026		664.7	81.06	
72.5	72.0	83.6	828.480	71.8	71.8	84.0	0.023	-0.080		701.7	118.04	
72.7	72.3	82.0	827,533	72.0	72.0	84.4	0.020	-0.100		701.8	118.14	
72.7	72.4	82.7	828.538	72.2	72.2	85.4	0.020	-0.095		681.0	97.4	
73.0	72.7	82.6	829.560	72.4	72.5	84.9	0.020	-0.082		661.9	78.24	
73.0	72.8	81.8	830.592	72.6	72.6	84.4	0.023	-0.082		640.7	57.06	
73.2	73.0	80.8	831.617	72.7	72.7	83.0	0.020	-0.078		601.0	17.34	
73.0	72.9	79.6	832,598	72,6	72.5	82.0	0.020	-0.077		580.2	-3.46	
73.2	73.0	79.8	833.715	72.6	72.6	81.4	0.021	-0.074		564.6	-19.08	
73.4	73.2	79.3	834.825	72.9	72.0	80.9	0.021	-0.070		546.9	-36.74	
73.2	73.2	78.6	835.842	72.8	72.8	80.6	0.021	-0.063		528.7	-54.92	
73.2	73.2	78.4	836,998	72.8	72.8	80.3	0.021	-0,062		504.1	-79.5	-79

16-10-11

		Manufa	cturer:	SBI					
		M	lodel:	XTD 1.1					
5000000000		I	Date:	10/21/11			***************************************		********
		************	Run:	4					
		P	roject #:	G1005275	51				**********
	***************************************	Test Dura	tion:	***********	130	**********	*****		***********
	Total Gas V	olume (DO	3M 1):		13,231	Pit	ot Factor	0.82	
********	Total Gas V	olume (D0	GM 2):		13.440		(0	.99 standar	d,
	Average Baro	metric Pre	essure:		29.66		0.84 or Ca	l. Factor for	S-Type)
		Molecu	lar Weigl	ht:	28.56		1		
		Pitot Co	orrection:	1	0.954891641				
	Calibration Fa	ctor (DGN	1 #1):		1.0060				
	Calibration Fa	ctor (DGN	A #2):		1.0030				
				(1) VS:	0.0614				
				(2) VS:	0.0604			Filter	Filtor
								Face	Face
Elapsed	DGM 1	DGM 1	DGM 1	DGM 2	DGM 2	DGM 2	Tunnel	Velocity	Velocity
Time	Reading	Inlot T	Outlet T	Reading	Inlet T	Outlet T	Dry Bulb	DGM 1	DGM 2
0	884.946	71.6	71.5	823.365	71.33	71.32	130.1		
10	885.982	71.8	71.5	824.371	71.36	71.29	171.7	8.84	8.5
20	887.010	72.0	71.7	825,408	71.5	71.5	184.4	8.77	8.83
30	888.007	72.5	72.0	826.480	71.8	71.84	181.9	8.50	9.12
40	889.012	72.7	72.3	827.533	72.01	72.03	168.4	8.56	8.9
50	890.055	72.7	72.4	828.538	72.19	72.21	156.7	8.89	8.5
60	891.104	73.0	72.7		72.41	72.46	150.2	8.93	8.6
70	892.160	73.0	72.8	830.592	72.56	72.56	135.8	8.99	8.7
80	893.207	73.2	73.0	831.617	72.67	72.68	129.5	8.91	8.7
90	894.252	73.0	72.9	832.596	72.55	72.51	124.8	8.90	8.32
100	895,298	73.2	73.0	CONTROL WARRANTS OF	72.61	72.6	123.4	8.90	9.50
110	896.299	73.4	73.2	process to be a section to the section of the	72.86	72.87	119.8	8.52	9.42
120	897.320	73.2	73.2	835.842	72.81	72.78	118.3	8.69	8.64
130	898.337	73.2	73.2	836.998	72.81	72.75	114.4	8.65	9.82

16 f Mary

	Proportio	nal Rate	Calculatio	ns	(EPA Formu	ulas from F	R5G)		
	Stack are	ea (ft2):	0.34907	******	Man	ufacturer:	SBI		
Wood	moisture (		16.3821	V	,	Model:	XTD 1.1		1233
AT THE RESIDENCE OF THE REAL PROPERTY.	Veight (lbs	and make the part of the control	11.05			Date:	10/21/11		
	ate (Dry k	WHEN PERSON ASSESSMENT	1.934	*********		Run:	4		
	1	1	0 % B % B # # # # # # # # # # # # # # # #	WH-1-4-14 (0 K-1)	Pr	oject No.:	G100527	551	
Final Ter	nperature	(DGM #1	) Degrees	s Rankin:	532.634	- Carrie and a series	1	T	
the state of the s		(DGM #2	· · · · · · · · · · · · · · · · · · ·	and the collection of the part of the little of the collection of	532.245				200
and the second second second second second	NAME OF STREET OF STREET, STREET	perature	Some in the first on the second or section in	man and an indicator of the second of	603.529				
to be the first the second or second	RESIDENCE AND ADMINISTRA	city (feet	SERVICE STREET, STREET	er en en omner server set de de en et selver och	8.169013				
		Tunnel F			142,39		THE PERMITTER		
					Discourage of the Control of the Con				-
		Average	Average						
	*******	Inlet+	Inlet+	MARK SHIPPERDE					
		Outlet	Outlet	99.93	99.88	#1	#2		
Tunnel	Tunnel	Tomp.	Temp.			dDGM	dDGM		
Velocity	Velocity	Meter 1	Meter 2			Vol.Std.	Vol.Std.		
Delta-P	Ft/Sec	Deg. R	Deg. R	PR1	PR2	(ft3)	(ft3)	Time	20
0.020	7.902	531.6	531.3					0	Mine in
0.023	8.672	531.7	531.3	99.36	94.76	1.026	0.994	10	
0.021	8.512	531.9	531.5	102.43	101.48	1.017	1.024	20	
0.023	8.742	532.2	531.8	96,29	101.69	0.986	1.058	30	
0.020	8.155	532.5	532.0	101.82	104.79	0.993	1.039	40	
0.020	8.078	532.6	532.2	104.65	99.05	1.031	0.991	50	
0.020	8.036	532.9	532.4	104.64	100.15	1.036	1.007	60	
0.023	8.422	532.9	532.6	98.12	94.19	1.043	1.017	70	
0.020	7.898	533.1	532.7	102.61	98.68	1.034	1.010	80	
0.020	7.867	532.9	532.5	102.03	93.90	1.032	0.965	90	
0.021	8.051	533.1	532.6	99.53	104.60	1.033	1.103	100	
	0.000	533.3	532.9	94.91	103.39	0.988	1.093	110	
0.021	8.026	000.0	002.0	01.01			A STATE OF STREET	A NOTE OF A STREET OF STREET	
and the first of the second of the second of the	8.026	533.2	532.8	96.70	94.61	1.008	1.002	120	

16 1. Mary

	Intertek Testing Sen	vices				******
	SFBA EPA ADJUST	ED EMISSION	RESULTS			
		1				
Manufacturer:	SBI			RESULTS	3	
	lel: XTD 1.1					
Da	te: 10/21/11		Average Adju	usted Emiss	lons Rate:	4.38
R	un:  4		Average Unac			2.88
Project	#:: G100527551			Burn Rate (I	Dry kg/hr):	1093
est Duration (Minut	es): 130		1 1		underen i	
Test Duration (Hou	rs): 2.17					
			BAROMETRIC F	ARASSA AREAS FOR		AN TON COMMERCIA
				/	\verage:	29.66
TEMPERATURE	10×10×20×20×20×20×20×10×10×10×10×10×10×10×10×10×10×10×10×10				Start	29.65
	DGM #1:	0.9913			End:	29.67
	DGM #2:	0.9920				
lyour who are	Mpi cp		DRY GAS METER V	******	Clast	900 000
VOLUMES SA	(表記者) 1.實施等等數据數据數据的學者數字與作品的學生之數學可可可可可可可可可。	49.000		DGM #1	Final: Initial:	898.337
	DGM #1: DGM #2:	13.238			mittal:	884.946
	DGM #2:	13,447		DGM #2	Final:	836,998
TOTAL TUNNE	L VOLUME (scf):	18510	**********	DOM #Z	Initial:	823,365
TO AL TONN	LE VOLONIE (801).	10010			minutes.	023,300
SAMPLE RAT	os		TEMPERATURE	S (DEG.	RANKIN	*******
	mple Train 1:	1398.3	The state of the s		OGM #1:	532.63
	nple Train 2:	1376.5			OGM #2:	532.25
	The train z.	·		1	Cariti Armi.	
TOTAL EMISS	IONS		CALIBRATION F	ACTORS		
Sample Tr		6.43		A STANDARD BANKS AND A STANDARD BANKS	OGM #1:	1.006
Sample Tr		6.06		I	OGM #2:	1.003
T I	I Ave			1		
EMISSION RA	TES		TUNNEL FLOW	RATE:		142.4
Sample Trai	n 1 (g/hr);	2,97	PARTIC	CULATE (	CATCH (	mg)
Sample Trail	n 2 (g/hr):	2.80		Sample	Train 1:	
	Ave	9: 2.88		- 1	Filters	3.8
	MISSION RATES				Probe	0.8
Sample Trai		4.49		· · · · · · · · · · · · · · · · · · ·	Total	4.6
Sample Trail	n 2 (g/hr):	4,27		Sample		
	Ave	THE COLL STREET, STREET, STREET,			Filters	3.5
	DEVIATION:	2.49%			Probe	0.9
					Total	4.4
		, L, ,, ,			m - a	
	reater than 7.5% due to		catch			
	on rates shall not differ b		/C = 0\		1	**********
of the weighted	average emission rate I	mit (4.7 or 7.5)	(59-3)			*********
Una the fall						
Use the followi	19.				******	*,11
		5.33%		·····	975 ES	2001000000
Cotobullacuita	4	5.33%				
Catalytic units						
Catalytic units 7.5% of 4.1 g/h	f.			1	1000-000	
7.5% of 4.1 g/r		2.049/				
	nits	2.91%			-1000 744 	

16-1. Morg

REPORT	DATA		4.14 (0.00 (0.00 (0.00 (0.00)))		ARE BUT AREA HAR		*****
REPORT	DATA						
	Client:	epi			*********	0.0000000000000000000000000000000000000	
	Run:		**********				
	Carried and Science of the	10/21/11	·			icetianne cena	
	Charles and Albanda and Albanda and	G100527551			***********		
	Comment Land of the wife of the land	XTD 1.1	4 + 5 4 + 4 + 7 + 7			\$11770 D D D D D D D D D D D D D D D D D D	
Eugl Maietura	Committee of the section of the	19.59166667				*********	
Fuel Moisture	and the state of t					11-3 (4.1) 14 (4.4) (4.5) (5.6)	
Stack Static (r		0.1			**********		
	meter:	29.66					
Average Roo	m Temp:	84.34					
					****	R:10 4 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	
	N. S. C.		A 70 (A 10 (A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(				
			n 1- pa sa m m m m m m m				
Change in stove	e temp:	-79.5					
Burn f	A SECTION OF PERSONS AND ADDRESS OF THE PERSON.	1.934				N(1)   11   11   12   13   14   14   14   14   14   14   14	
djusted Emissio	AND RESIDENCE OF SHIPLE	4.381			caratrante		
	em 1:	4.490					
	em 2:	4.272		db=(r===================================		×1100000000000	
	ation:	2.49%		ļ			
Filte	r 1:	80.33					
Filte	At the street on the late of the street of	82.07					
Tu	nnel:	143.53					
	DGM 1:	72.63					
	DGM 2:	72.25					
Water C	ollected:						
Room	Temp	Bar Pressure		Relative Hu	ımidity	Air Velo	ocity
Before	After	Before	After	Before	After	Before I	Afte
83	85	29.65	29.67	38	39	0	0
Delta H A	verage						
DGM#1:	0				41.04.11.04.4104.45	*********	
1 1 10 2100146 1 1							

16 f. Mory \_\_\_\_

VERSION 1.2

2/5/2010

### E&E Tunnel Traverse Worksheet

	TUNNEL VELOCITY	TUNNEL TEMP	SQUARE ROOT	Static Pressure:	
A CENTER	0.023	135	0.1500		
B CENTER	0.020	157	0.1414		
A1	0.020	132	0.1414	PITOT	
A2	0.020	133	0.1414	CONSTANT:	0.9549
A3	0.020	134	0.1414		
A4	0.018	128	0.1323		
B1	0.020	155	0.1414		
B2	0.020	156	0.1414		
B3	0.020	156	0.1414		
B4	0.018	151	0.1323		
<b>AVERAGE</b>	0.01975	143.72	0.1391		

Tunnel Diameter (in): Tunnel Area (ft2) Tunnel Static Pressure 0.349066 -0.1

14. Marg

- o Holiday Weather
- o Marine Forecast
- o Park Report
- o School Day Forecast
- o Ski Report
- o Stargazing
- · Health & Environment
  - o Aches & Pains
  - o Air Quality
  - o Bug Report o Climate Change
  - o Flu Report
  - o Forest Fire Watch
  - o Going Green
  - o Pollen Report
  - o Under the Weather
  - o UV Report
- Site Search
- C Location Search

Search content with key GO

## Last 24 Hours: Québec, QC

Change »
Local Time: Friday, October 21, 2011, 1:32 pm EDY |
Local TV: Vidéotron 21

16-1 Morg

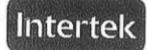


#### ObservationsUpdated: Friday October 21 2011,13:00 EDT

	Sky	(°C)	Dew Point	Feels Like	Wind (km/h)	Relative Humidity (%)	Pressure (kPa)	Visibility (km)	Ceiling (ft)
FRI 13:00	进	10	8		SW 24	87	100.49-	48	2500
FRI 12:00	1	11	8		SW 22	82	100.48—	40	1700
FRI 11:00	的	10	8		SW 19	87	100.48	40	1300
FRI 10:00		9	8		SW 22	93	100.45▲	40	1400

	0000								
FRI 09:00	(0000	9	8	*	SW 20	93	100.41	40	5200
FRI 08:00	0000	9	8		SW 17	93	100.34	40	10000
FRI 07:00		9	8		SW 15	93	100.26	32	7200
FRI 06:00		9	9		SW 13	100	100.12-	24	9000
FRI 05:00		9	8		SW 13	93	100.12	24	9000
FRI 04:00		9	7	**	SW 15	87	100.08▲	24	2100
FRI 03:00	ول	9	8		W 4	93	100.06	16	1900
FRI 02:00	للك	9	8		87	93	100.03	16	700
FRI 01:00	0000	9	8	*	SW 6	93	99.95▲	16	2600
	0000	9	8	•	W 9	93	99.91	6.4	2500
THU 23:00 (	1 34	9	9	٠	E 9	100	99.76▲	6.4	1500
THU 22:00 G	000	9	8		E 22	93	99.75-	16	2200
THU 21:00 C	15	9	8		E 19	93	99.75₩	16	2800
THU 20:00	5	9	8	*	E 19	93	99.79▼	16	2200
THU 19:00	2000	8	8		E 28	100	99.85—	8.0	700
THU 18:00 (		8	8		E 37	100	99.85▼	6.4	800
THU 17:00 0		8	8		E 15	100	100.01	13	900
THU 16:00 0	000	9	7		E 46	87	99.83▼	13	900
THU 15:00 (6	000	3	7	٠	E 43	93	99.93▼	13	700

http://www.theweathernetwork.com/index.php?product=obs24h&placecode=caqc0441&ref=qlin... 10/21/2011



#### Run Notes EPA Methods 28 and 5G-3

Prolim: 0.95 € 5.27

AT = 33

PROJECT /	TEST INFORMATION
Project Number:	G100527551
Manufacturer:	
Model:	XTD 1.1
Sample ID Number:	PRT MI 0121353-001
Test Date:	OCTOBER 24, 2011
Test Run Number:	5
Date tunnel cleaned:	
Purpose of Test	HOTELLASTICH HAT

Coal Bal Range = 2.2-2.4

	Appliance Inf	ormation
Appliance Type:	2	1 - Catalytic 2 - Non-Catalytic 3 - Pellet 4 - Hydronic
Firebox Volume, ft3:	1.55	N/A for pellet type
Convection Blower	2	1 - No Fan 2 - Optional Accessory 3 - Standard Equipment

16 1. Morg

	Test Settings	
Primary Air:	Vic"	
Secondary Air:	Fixed	
Control Board:	HA	
Blower/Fan:	OFF	

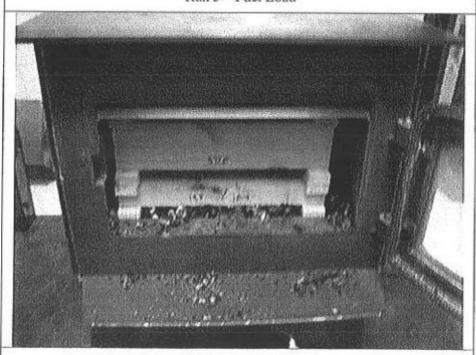
Time	Activity	
0	3:45AH; The primary air was not at 3/18".	
45	COME WAS STIRRED.	
1:03R		
1:412	COAL BED WAS LEVELIED FOR 30 MC.	

	Start-Up Procedure
Loading of fuel, sec. :	55 ac.
Fuel-loading door:	Son closed at 35 me. So records
Primary air:	tally aga, 5 min. Ablustly closed at 3/16" at 5 min
Secondary air;	Hot adjustable
Control board:	NA O
Blower / fan:	OTT

and the second second	Other Notes	
		1,100



Run 5 - Fuel Load



Run 5 - Newly loaded stove

16 1. Morg

# Intertek

#### **TEST FUEL DATA EPA METHOD 5G-3**

Project Number: G100527551

Manufacturer: S.B.I.

Model: XTD 1.1

Sample ID Number:
Test Date:

Test Run Number:

MOISTURE HETER BLOCK

12.0% = 12.0% 22,0% = 22,0% EQ. HR. 19701

13.7 13.3 20.3 20.8 13.7 20.2 21.6 23.1 23.4 20.3 21.5 20.3

Eq. ID No.:	581-214	Time:	8:20	Temp., °F:	74.4
Plece No.	Length, In.	Welght, Lb.	Mol	sture, %, Dr	y Basis
1	12-	1.25	130	19.0	19.2
2	12	1.25	121	19.7	18.8
3	15	1.75	24.3	20.6	22.0
4	15	1.70	20.4	-+B.7-	Tou. 2.11.
5	10	1.10	23.5	231	133
6	10	1.10	23.7	21.7	20.3
7 .	10	1.10	23,4	21.5	23.1
8	10	1.12	21.5	13.3	23.1
9	1000000				
10		36.4	110		
11				FORES	
12					
Total W	elght	10.35	Avera	ge, %db	

Co ID No.				PROPERTIE		
Eq. ID No.:	2B1-2			3:22	Temp., °F:	74.1
Plece No.	Length,	Welg	ht, Lb.	Mole	ture, %, Dry	Doele
11000110.	ln.	2x4	4x4	IVIOIS	ture, 70, Dry	Dasis
1	14.25	1.55		20,0	13.7	13.4
2	14.25	1.35	To said	22.1	21.6	21.1
3	14.25		3.65	15.5	13.0	19.9
4	14.25		3.75	15.3	18.7	19.9
5		DW STR	Think the	as flowers.	3112	
6	2.5	351116	053333			
7		(0.8210.81)	10 15 DAT	15 10 10	THE LEED	
8	3 1916	ax rest			729	
Totals	3	3.5	7.4			
% of We	lght	32.1	67.9			
Total weight,	wet, lb.	10.9	ATU A	Average M	loisture, dry	20,02
Total weight,	dry, kg	4.17	2_	Average M	olsture, wet	16.68

10-25-2011



#### **Supplemental Data** EPA Methods 5G and 28

Project Number G100527651 Manufacturer S.B.I.

Model XTD 1.1

Sample ID Number
Test Date OCTOBER 24, 2010
Test Run Number 5 - TAN CONTRACTION

Sampling Start Time 44.33

Sampling Stop Time 15.53

Air Velocity (ft/sec)

Initial: <50

Final: 450

Barometric Pressure (in/Hg)

Initial: 30,08

Final: 29.92

Post - leak Check (cfm @ in/Hg) Train A: 0.ad+ @ 5

Train B: 0.0015@5

Date: 10-25 - 11 Englneer Signature:

Flue	Room	Tunnel	Unit	Unit	Unit	Unit	Unit	Scale			
Gas	Temp	Dry Bulb	Тор	Bottom	Back	L.Side	Right	weight	Draft	F	Time
687	88	179	888	561	674	589	598	7.87			C
418	06	118	728	556	677	599	609	6.51			10
407	87	117	710	537	648	009	607	5.39			20
390	89	110	669	515	619	610	619	4.40			30
359	88	106	629	493	809	622	630	3.74			40
332	89	104	591	476	587	623	628	3.24			20
287	98	16	520	461	546	598	598	3.09			909
283	83	111	462	449	509	563	566	2.88			70
242	84	93	416	437	477	530	537	2.80			80
232	84	92	388	425	448	501	508	2.70			90
225	85	91	370	415	431	479	485	2.56			100

16.1. Marg

DATA LOGGER WAS SET TO RECORD ON 10-MINUTE INTERVALS, AND WAS UNABLE TO RECORD FINAL PRE-BURN PATA WHICH OCCURED BETWEEN INTERVALS.

FINAL SCALE WEIGHT WAS NOTED TO BE 2.55 B. TEMPERATURES ARE REPRESENTED ON FIRST LINE OF SAMPLING DATA.

14/Mags, ETL 2-28-12

				VERSION	1.2	2/5/2010							
Manufacturer	SBI			- Section & Con-	1						*******		114
TO 1	XTD 1.1			1-1-0111-0								79	
	10/25/2011		***************************************	1.14491 119		110,000	6 8 8 9 1 5 F	- 1010110	111	(19019)			
	5-Fan Confirmatio	0		117 111111	0.000000	1111-115		040411411	100000000000000000000000000000000000000	10,110,000	107 111110		
	G100527651		ni rema	7.466		in vinces			and the second				
TO SERVE OF THE SE	Participation and the second	10000000			distance)				-		****		1000
Test Duration:	290	-		Will									
	Lancing Control	Start	End	mariner -	10.00000		000 000	************	**********	110000000000000000000000000000000000000			
	Barometer (in.Hg):	30,08	29.92	a minutes					4				
The second second second second				diam'r.		Marie Co.							
	Dry Bulb (F):	85	84										
	Humidity (%):	30	34										
				***********								S	
			9140 mm 11									1000	14.025
Moisture content o	f wood (wet basis):	16.6782	er-man lian	an include									
	Average	1.05	3,93	15.62		84.90	95.11	437.15	348.70	460.23	466.87	474.40	911.6
	The sections of		•								*	•	
Elapsed		-			Flue	Room	Tunnel	Unit	Unit	Unit	Unit	Unit	DOM 1
Time	A THE RESERVE OF THE PARTY OF T	co	CO2	02	Gas	Temp	Dry Bulb	Тор	Back	R.Side	L.Side	Battom	Reading
	Annual rate over the present	1.12	2.35	17.05	256.7	85.0	99.0	356.9	410.2	427.2	459.9	475.6	898.38
	Sent business arrest	0.58	2.08	13.67	270.0	83.9	97.2	436.0	397.3	412.0	449.1	450.6	899.35
	9.62	0.63	2.17	18.26	233.0	83.8	93.6	369.9	383.9	351.0	413.7	421.0	900.35
30	8.26	0.52	9.09	10.71	382.0	84,5	103.7	560,1	358.1	388.3	403.4	417,4	901.37
40	6.06	0,62	9.37	11,10	402.0	87.8	108.3	658.6	356.4	435.7	434.8	452.1	902.40
60	5.76	0.60	8.82	11.27	389.5	87.0	105.7	671.4	349.0	495.0	469.5	490.8	903,42
60	4.74	0.52	6.23	12.00	300.6	84.9	105.1	643.8	344.9	592.2	512.5	511.6	904.44
70	3.67	0.47	7.61	12.35	351.3	84.6	102.1	625.0	342.0	507.1	646.4	626.6	905.48
80	3,16	0.36	7.26	13,10	335.7	84.0	100.0	603.7	341.0	505.1	665.1	540.7	905.51
90	2.63	0.39	7.01	13.72	327.5	83.9	99.6	581.7	343.7	601.8	572.2	853.2	907.65
500	2.11	0.52	5.73	14.38	305.0	84.1	98.6	651.4	340.0	593.5	572.2	559.8	908.54
110	1.84	0.93	4.07	15.37	282.0	82.3	65.8	493.3	348,1	565,6	662.8	653.0	909.62
120	1.70	0.84	4.16	15,47	268.3	64.6	04.7	461.3	350.3	533.5	660.2	540.6	910.60
130	1.49	1.19	3.37	15.97	256.0	83.8	93.6	434.0	352.0	502.0	637.6	529.4	911.60
140	EACH TO THE STREET STREET	1.21	3.21	10.22	247.4	83.9	92.2	414.9	350.5	491.6	620.7	510.1	912.72
150	1.21	1.37	2.05	15.26	240.0	84.8	91.4	399.6	348,0	479.7	505.2	509.1	913.73
160	THE RESERVE ASSESSMENT OF THE PARTY OF	1.47	2.51	10.46	234.4	84.6	90.8	385.2	348.5	467.1	489.6	800.0	914.76
170	and the section and the section is become	1.77	1,48	17.19	223.5	86.3	91.5	307.1	343.7	430.6	472.3	460.9	915.00
180	0.78	1.52	1,60	17.41	213.6	66.3	90.6	346.1	339.7	415.3	451.2	469.0	915.84
190	0.70	1.42	1.60	17.28	208.0	85.2	89.6	333.0	335.8	414.0	431.8	452.8	917,87
200	0.64	1.35	1,69	17.22	204.8	0.08	90.1	3242	332.2	414.3	410.6	438.9	918.89
210	050	1,40	1.78	17.37	200,8	86.2	90.4	316.1	329,3	408.7	404,1	427.8	919.80
220	0.48	1,38	1.66	17.58	197,4	85.7	89.8	308.0	326.6	398.3	391.9	417.9	920.91
230	0.40	1,53	1.57	17.69	193.3	85.6	89.5	300.8	323.5	386.2	380.1	407.6	921.94
240	036	1,65	10,000,00	St. 1 - 0/100172	169.5	84.8	88.5	293.1	320.6				
260	0.45		1.40	17,86	THE PERSON NAMED IN			The second section is	THE PERSONS	376.5	369.2	397.6	922.97
THE R. P. LEWIS CO., LANSING, MICH. 49-1409-1-120-1-1-120-1-1-1-1	THE RESERVE OF THE RESERVE OF THE PARTY OF T	1,66	1.22	18,12	186.0	84.5	85.2	285.1	316,8	370.4	359.0	366.2	023.99
260	0.00	1,53	1.60	17.89	185.8	84.0	68.1	280.3	312.3	351.7	351.5	375.6	925.01

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	. (1				******							*******
Manufacturer:	eni				*********						*********	
OUT THE COLUMN TWO DESIGNATIONS AND RES	XTD 1.1				ing all pr							
	10/26/11	*****		********	***********							
		Lossoffore				******			***********	*********		
	5 Fan Conf	<b>建建筑管理技术的企业</b> 社会	********		********	*********	*********					
Project #;	G10052755	21		2-11-14-6	****				***********	* > 1 / 1 / 1 / 1 / 1		
		********		***********								
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	12121-1-1-1	**********		***************************************			*********					********
				**********								
							***********					
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***************************************			****(1:*)**									
				*******				-34 42 44				
72.91	72.92	75.38	850.11	72.65	72.61	76.30	0.02	-0.051	0.00	437.09		
		********				11.12	3 1 7 7 7 7 10 10 10 10 10		Visual	THE PART SHEET ST.	Change in	
DGM 1	DGM 1	Filter 1	DGM 2	DGM 2	DGM 2	Filter 2	*******	Chimney	Smoke	Stove	Surface	
Inlet T	Outlet T	Temp	Reading	Inlet T	Outlet T	Temp	Velocity	Draft	Observed	Temp	Temp.	
71.2	71.2	71.5	838.904	70.8	70.8	72.2	0.020	-0.055		428.0	0	
71.6	71.3	74.2	837.908	71.0	71.0	74.6	0.020	-0.058		429.2	1.22	
71.8	71.6	74.7	838,673	71.3	71.2	75.4	0.020	NAMES OF STREET		388.2	-39.76	
71.9	71.7	75,6	839.951	71.4	71.4	76.0	0.019	-0.080	and an all the states of the s	427.5	-0.5	
72.1	71.0	76.0	841.002	71.6	71.6	76.8	0.019	-0.064		467.5	39.56	
72.1	72.0	76.3	842.003	71.8	71.7	77.3	0.019	-0.072		495.1	67.18	
72,3	72.1	76.3	843,022	71.9	71.8	77.6	0.019	-0.069		509.0	81.02	
72.4	72.3	78.4	844.043	72.0	72.0	77.7	0.019	-0.066		525.4	97.46	
72.6	72.5	76.3	845.070	72.3	72.3	77.5	0.019	-0.065		529.3	101.34	
72.8	72.7	76.3	846.093	72.4	72.5	77.5	0.019	-0.064		530.5	102.56	
72.8	72.8	75.8	847.014	72,6	72.5	77.4	0.019	-0.055		524.7	96.74	
73.1	73.0	75.9	847.953	72.7	72.8	77.2	0.019	-0.061		504.5	76.58	
73.3	73.2	76.0	848.993	72.9	72.9	77.0	0.019	-0.055		487.8	59.82	407-11-17
73.2	73.3	75.7	850.016	73.0	73.0	76.8	0.019	-0.050		471.3	43.32	
73.3	73.4	75.5	851.015	73.1	73.1	76.5	0.019	-0.050		459.2	31.2	
73.4	73,5	75.2	852,072	73.2	73.2	76,3	0.019	-0.049		448.5	20.54	
73.4	73.5	75.2	853.120	73.3	73.2	76.2	0.019	-0.047		437.7	9.72	
73.5	73.6	75.1	854.148	73.3	73.2	76.2	0.019	-0.044		420.1	-7.84	
73.6	73.6	75.3	855.175	73.3	73,3	76.2	0.020	-0.042		404.3	-23.7	
73.5	73.7	75.3	856.210	73,4	73.3	76.2	0.020	-0.044		393.8	-34.16	
73.6	73.7	75.3	857.245	73,4	73.3	76.1	0.019	-0.040		385.2	-42.72	
73.5	73.7	75.2	858.274	73.4	73.3	76.0	0.020	-0.038		377.2	-50.76	
73.6	73.7	75.2	859.300	73.4	73,3	76.0	0.020	-0.036		368.5	-59.42	
73.5	73.7	76.1	860,357	73.6	73.4	76.0	0.019	-0.035		359.7	-68.28	****
73.6	73.8	75.2	861.425	73.6	73.6	76.0	0.019	-0.032		351,4	-76.56	********
73.5	73.7	75.1	882.404	73.6	73.4	76.9	0.019	-0.032		343.5	-84,46	
73.6	73.7	74.9	883.371	73.5	73.4	75.8	0.019	-0.032		334.3	-93.68	-93.6

16 f. Morgan

		Manuel		ioni					*********
		Manufa	ARREST STATE	SBI					
			lodel:	XTD 1.1					
			Date:	10/25/11				********	
		************	Run:	5-Fan Con					
				G1005275	****************				
	7710	Test Dura			260				
	Total Gas V				261624	Pi	tot Factor	0.82	
	Total Gas V				28,372			0.99 standar	
	Average Baro		DOMESTIC AND ADDRESS OF THE PARTY.	Ļ	30		0.84 or C	al. Factor for	S-Type
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	**********	lar Weigl	************	28.56				
	Callbrotion Fa	***********	orrection:		0.950960349		**********	***********	
	Calibration Fa		计图 医大龙管 电电阻 医二十二		1.0060				********
******	Calibration Fa	ictor (DGN	#2):	(4) 1/0:	1.0030		********		
			*********	(1) VS:	0.0302			***********	
				(2) VS:	0.0305			Filter	Filter
Elapsed	DGM 1	DGM 1	DGM 1	DGM 2	DGM 2	DGM 2	Turnel	Face	Face
Time	Reading	Inlet T	Outlet T	Reading	Inlet T	Outlet T	Tunnel Dry Bulb	Velocity DGM 1	Velocity DGM 2
0	898.361	71.2	71.2		70.76	70.75	99.04	DGM 1	DGM 2
10	899,359	71.5	71.3	THE RESERVE AND ASSESSED.	71.02	70.97	97.24	8.62	8.6
20	900.358	71.8	71.5	CONTRACTOR AND A CONTRACTOR	71.3	71.24	93.5	8.62	8.3
30	901.371	71.9	71.7	terraneous arabida esculuida de	71.41	71.36	103.7	8.74	9.2
40	902.404	72.1	71.9		71.62	71.63	108.3	8.91	9.0
50	903.422	72.1	72.0		71.77	71.71	105.7	8.78	8.6
60	904.447	72.3	72.1	THE PERSON NAMED BY	71.87	71.84	105.1	8.84	8.7
70	905.483	72.4	72.3		72.04	71.95	102.1	8.93	8.7
80	906.519	72.6	72.5	to mean new constants.	72.26	72.25	99.96	8.93	8.8
90	907.551	72.8	72.7	Commerce of the contract of th	72.43	72.45	99.78	8.89	8.79
100	908.590	72.8	72.8	CONTRACTOR SERVICE	72,56	72.52	98.62	8.95	7.9
110	909.629	73.1	73.0	INTERNETED STATES OF	72.74	72.77	95.75	8.94	8.00
120	910.653	73.3	73.2	************	72,89	72.92	94.66	8.81	8.93
130	911.684	73.2	73.3	850.016	72.98	72.99	93.64	8.87	8.7
140	912.720	73.3	73.4		73.1	73.08	92.19	8.91	8.57
150	913.733	73.4	73.5	COMPRESSED AND ADDRESS.	73.18	73.19	91.38	8.72	9.0
160	914.768	73.4	73.5	CORRESPONDENCES.	73.25	73.23	90.79	8.90	8.9
170	915.803	73.5	CONTRACTOR STATE	854.148	73.29	73.24	91.5	8.90	8.8
180	916.840	73.5	73.6	855.175	73.34	73.29	90.59	8.92	8.8
190	917.872	73.5	73.7	856.210	73.38	73.32	89.61	8.88	8.8
200	918.890	73.6	73.7	857.245	73.38	73.34	90.11	8.76	8.8
210	919.880	73.5	73.7	858.274	73.39	73.3	90.44	8.51	8.83
220	920.911	73.5	73.7	859.300	73.43	73.33	89.83	8.87	8.80
230	921.945	73.5	73.7	860.357	73.46	73.41	89.52	8.89	9.0
240	922.970	73.6	73.8	861.425	73.6	73.5	88.54	8.81	9.16
250	923.992	73.5	73.7	862.404	73.46	73.35	88.19	8.79	8.40
260	925.015	73.6		863.371	73.54	73.43	88.08	8.80	8.29

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	Proportio	nal Rate	Calculatio	ns	(EPA Formu	llas from P	R5G)		
	Stack are	l	0.34907		Man	ufacturer:	SBI		
Wood	moisture (		16.6782	CONTRACTOR OF STREET	ividi		XTD 1.1		****
	Veight (lbs		10.0702		1		10/25/11		
	ate (Dry k		0.951				5-Fan Co	nfirmation	******
	1	j/.		***********	Pi	oject No.:		************	******
Final Ter	nperature	(DGM #1	Degrees	Rankin:	532.916	0,001110	0100027	001	
Final Ter	nperature	(DGM #2)	Degrees	Rankin	532.626				
		perature [			555.106			*********	******
		city (feet p			7.436032				*******
		Tunnel F			142.53				
*********									
		Average	Average	**********		*******			
**********	********	Inlot+	Inlot+	**********					
		Outlet	Outlet	100.03	100.02	#1	#2		
Tunnel	Tunnel	Temp.	Temp.	*******		dDGM	dDGM		
Velocity	Velocity	Meter 1	Motor 2			Vol.Std.	Vol.Std.		
Delta-P	Ft/Sec	Dog. R	Dog. R	PR1	PR2	(ft3)	(ft3)	Time	
0.020	7.520	531.2	530.8					0	
0.020	7.508	531.4	531.0	97.07	98.18	1.000	1.002	10	
0.020	7.483	531.7	531.3	96.80	94.38	1.000	0.966	20	
0.019	7.454	531.8	531.4	100.33	107.54	1.014	1.077	30	
CONSTRUCTION OF	7.484	532.0	531.6	102.68	105.23	1.034	1.049	40	
0.019	7.467	532.1	531.7	100.94	99.97	1.019	0.999	50	
0.019	7.463	532.2	531.9	101.56	101.69	1.025	1.017	60	
0.019	7.443	532.3	532.0	102.35	101.59	1.036	1.019	70	
0.019	7.429	532.6	532.3	102.11	101.95	1.036	1.024	80	
0.019	7.428	532.8	532.4	101.67	101.50	1.031	1.020	90	
0.019	7.420	532.8	532.5	102.24	91.27	1.038	0.918	100	*******
0.019	7.401	533.1	532.8	101.92	92.77	1.038	0.936	110	UT#17734
0.019	7.394	533.2	532.9	100.33	102.62	1.022	1.036	120	
0.019	7.387	533.2	533.0	100.92	100.84	1.029	1.019	130	
0.019	7.372	533.4	533.1	101.25	98.32	1.034	0.995	140	
0.019	7.368	533.5	533.2	98.92	103.94	1.011	1.052	150	
0.019	COLUMN TRANSPORT	1.6.7.76.4.8 at Wall of the 12.7.1.1.1	533.2	101.00	102,99	1.033	1.043	160	
0.020	7.373	533.5 533.6	533.3	101.06	101.08	1.033	1.023	170	
0.020	7.552	533.6	533.3	98.60	98.34	1.035	1.022	180	
0.019	7.364	533.6	533.4	98.03	99.01	1.030	1.030	190	
0.020	7.557	533.6	533.3	99.26 94.11	98.51	1.016	1.030	200	
0.020	7.553	533.6	533.4			0.988	1.024	210	
0.019	7.360	533.6	533.4	97.96 100.76	98.16	1.029	1.021	220	
0.019	7.353	533.7	533.6	99.78	103.71	1.032	1.052	230	
0.019	7.351	533.6	533.4	99.48	95.95	1.022	THE PROPERTY AND ADDRESS OF	240	
0.019	7.350	533.6	533.5	99.56	94.75	1.020	0.974	250 260	

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		Intertek Testing Service	es				
		SFBA EPA ADJUSTE	D EMISSION I	RESULTS			
	*******	OF BA EFA AUGUSTE	EWISSICIA	LEGULIO	***********	149777143174	
Manufacturer:		SBI			RESULT	S	
	Model:	XTD 1.1			TLOOL.	Y	
		10/25/11	*******	VERTICA (A	Average Adjusted Em	ission Rate:	6.42
		5-Fan Confirmation	**************	CONTRACTOR CONTRACTOR	verage Unadjusted En	<b>可食的食食用食物食物食物食物</b>	317/3
Pro	lect #::	G100527551	×=====================================		网络美国阿拉克斯特 化二甲基甲基 医二甲基 医克尔斯 医克尔斯氏 医克克斯氏	(Dry kg/hr):	0,95
Test Duration (M	*********	260	************		I I	(Lary ingrant)	
Test Duration (					************		
T 1	and the fact						
		(*************************************			***********************	1	
				BARO	METRIC PRESSUI	ŔĔ	*************
		***************************************			***************************************	Average:	3
TEMPERATU	RE FACT	TORS				Start:	30.0
	www.no.kee	DGM #1:	0.9908			End:	29.92
		DGM #2:	0.9913				
				DRY GA	S METER VALUES		
VOLUMES	SAMPL	**********************************			DGM #1	Final:	925.01
		DGM#1:	26.638			Initial:	898.36
		DGM #2:	26.386				100000000000000000000000000000000000000
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			DGM #2	Final:	863.37
TOTAL TU	NNEL V	OLUME (scf):	37059			Initial:	836.90
	, www.	) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				L	**********
SAMPLE R	week a version of			TEMPE	RATURES (DEG.	PRESENTATION	**
		Train 1:	1391.2			DGM #1:	532.92
	Sample	Train 2:	1404.5			DGM #2:	532.63
TOTAL EMI	POLON	0		CALIDI	DATION FACTOR	Į	
	R. H. A. T. S. S. S. S. S. S. S.		16.14	CALIBI	RATION FACTORS		4.000
Sample Sample			16.15	*******		DGM #1: DGM #2:	1.006
Gample	Highi 2	4.9/- Ave:	*************			DGM #Z:	1.003
EMISSION	PATES		16.14	TUNING	L FLOW RATE:		140 5
Sample T			3.72	LOMA	PARTICULATE	CATCH	142.5
Sample T			3.72			e Train 1:	19)
	TOTAL A	Ave:	3.73			Filters	9.5
ADJUSTED	EMISS	ION RATES				Probe	2.1
Sample T	*********		5.42			Total	11.6
Sample T			5.42		Sampl	e Train 2:	
	1	Ave:	5.42			Filtors	9.9
	DEV	IATION:	0.03%			Probe	1.6
	I	Self-field				Total	11.5
	**********					1.777	
If deviation I	s greate	er than 7.5% due to low	particulate ca	ntch			
		ates shall not differ by 7				111111111111	
		rage emission rate limit		5g-3)	(		
Use the folio	wing:				I		
Catalytic uni			0.09%				
7.5% of 4.1	g/hr						
Non catalytic			0.05%				
7.5% of 7.5	g/hr					5/18 G 14 A 3	

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PEDOD	DATA		*******					
REPOR	DATA							1
	Officer	loni.						
Client:		SBI						
		5-Fan Confirmation						
	Date:	10/25/11						1
Pro		G100527551					***	.l
	Free word was a major of	XTD 1.1	*********					Į
Fuel Moisture		20.01666667						1
Stack Static (r		0.0775				1		1
and the second of the second o	meter:	30						1
Average Roo	n Temp:	84.90			1			1
								1
	************							
					La constantino			
Change in stove	e temp:	-93.68						1
						1		1
	********					l		1
Burn I		0.951						1
djusted Emissio		5.422						
	em 1:	5.420						1
	em 2:	5.424			1			
CONTRACTOR OF STREET	ation:	0.03%						1
Filte	water was a si	75.36						1
Filte	**********	76.30						
Tu	nnel:	95,11						
	DGM 1:	72.92	Visiting the					1
	DGM 2:	72.63		1	1			1
Water Co	ollected:		111/10/10/10			1		-
					1	1		
Room	Temp	Bar Pressure		Relative Hu	umidity	Air Veld	ocity	1
Before	After	Before	After	Before	After	Before	After	
85	84	30.08	29.92	30	34	0	0	
Delta H A	verage							
DGM#1:	0	***************************************						1
A secondarile 111	0	*************		.1	1	t		1

16/1. Morg



# Weather Forecast: Québec, QC

Current Weather Mon. Oct 24, 2011, 16:00 EDT Jean-Lesage Intl Airport



12°C
A few clouds

Feels Like : -Wind : E 24km/h Sunrise : 7:15 Sunset : 17:43 Relative Humidity : 58% Pressure : 101.34 kPa ▼ Visibility : 32.0 km Celling : unlimited

Short Term Forecast Updated: Mon, Oct 24, 2011, 15:26 EDT

	Monday Evening	Monday Overnight	Tuesday Morning	Tuesday Afternoon	Tuesday Evening	
	Con	0000	capaco	and a	0	
1	Isolated showers	Light rain	Cloudy with showers	Cloudy with showers	Variable cloudiness	
Temp.	8.C	7°C	6€	9%	579	
Wind	SE 15km/h	SW 20km/h	SW 25km/h	W 25km/h	W 25km/h	
Relative Humidity	76%	93%	100%	81%	81%	
P.O.P.	40%	90%	40%	40%	20%	
Rain	close to 1mm	close to 5mm	less than 1mm	less than 1mm		

Long Term Forecast Updated: Monday, October 24, 2011, 15:26 EDT

	Tuesday Oct 25	Wednesday Oct 26	Thursday Oct 27	Friday Oct 28	Saturday Oct 29	Sunday Oct 30
Conditions 6am - 6pm	and o	300		通	138	D
	Cloudy with showers	Cloudy periods	Variable cloudiness	Variable cloudiness	Isolated showers	Variable cloudiness
P.O.P.	40%	20%	20%	30%	40%	20%
High	9°C	8°C	5°C	5℃	5°C	5°C
Low	4°C	10	-1°C	-1°C	-20	0°C
Wind	SW 25 km/h	W 20 km/h	W 15 km/h	W 20 km/h	SW 10 km/h	W 15 km/h

14-10-11