

HBI Healthy Buildings International, Inc.

Northeast Region

76 South Orange Avenue

Suite 107

South Orange, NJ 07079

Tel: (973) 394-1330

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Email: hbi@hbiamerica.com

Web Site: www.hbiamerica.com

IAQ Consulting Excellence Since 1980

EQ Credit 3.2: Construction IAQ Management Plan, Before Occupancy, Option B

OR Option B:

I, DEAN TYLER, declare that after construction ends and prior to occupancy, baseline IAQ testing, using protocols consistent with the U.S. Environmental Protection Agency "Compendium of Methods for the Determination of Air Pollutants in Indoor Air" and as additionally detailed in the CI Reference Guide, has been conducted and that all areas tested do not exceed the maximum allowable concentration limits as follows:

Contaminant	Maximum Concentration
Formaldehyde	50 parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total Volatile Organic Compounds (TVOC)	500 micrograms per cubic meter
* 4-Phenylcyclohexene (4-PCH)	6.5 micrograms per cubic meter
Carbon Monoxide (CO)	9 part per million and no greater than 2 parts per million above outdoor levels

☒ AND

I have attached a copy of the IAQ testing results for each area tested identifying the EPA testing method used.

AND/OR if alternative testing protocols are used

☐ I have attached a copy of the documentation and rationale demonstrating that the measured results meet the intent of the EPA testing methods.

AND I confirm that:

☒

All measurements were conducted
☒ prior to occupancy
☒ during normal occupied hours
☒ with the building ventilation system starting at the normal daily start time
☒ with the building ventilation system operated at the minimum outside air flow rate for the occupied mode throughout the duration of the air testing

☒

The building shall have all interior finishes installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Non-fixed furnishings such as workstations and partitions are required to be in place for the testing.

☒

For each portion of the building served by a separate ventilation system, the number of sampling points was not less than one per 25,000 ft², or for each contiguous floor area, whichever is larger, and included areas with the least ventilation and greatest presumed source strength.

☒

Air samples were collected between 4 feet and 7 feet from the floor to represent the breathing zone of occupants and over a minimum 4 hour period.

Points Documented

EQ Cr 3.2 Option B (1 point): Construction IAQ Management Plan, Before Occupancy

Name:

DEAN F. TYLER

Organization:

HEALTHY BUILDINGS INTL.

Role in project:

IAQ CONSULTANT

Signature:

[Signature]

Date:

9/17/08

LEED CI - File last modified: 23 May, 2005

GSA

Schedule
Contract GS-10F-0125K



Integrated IAQ, Engineering & Commissioning Services to meet the consulting requirements of the U.S. Green Building Council's LEED™ rating system

**ANALYTICS CORPORATION**

10329 Stony Run Lane
Ashland, Virginia 23005
804-365-3000 Phone
800-888-8061 Phone
804-365-3002 Fax
www.analyticscorp.com

Group No. M246-012
Account No. 29819025
Report Date: 09/03/08

DEAN TYLER
HEALTHY BUILDINGS INTERNATIONAL
SUITE 107
76 SOUTH ORANGE AVENUE
SOUTH ORANGE, NJ 07079

**** FINAL REPORT ****

Date Received: 09/02/08
Sample Type: 2 - Air Sample(s)
Project: 0808029N PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-001	#1- DUST	Samp Date: 08/29/08	PW PTFE(225-1709), 2UM, 37MM			
-	PM10 Part	2430 L	< 100 ug	100 ug	< 41 ug/M3	09/02/08
No field blank submitted with sample.						
-002	#1- HCHO	Samp Date: 08/29/08	DNPH-Silica Gel with O3 Scrubber			
-	HCHO-Front		0.792 ug	.4 ug		09/03/08
-	HCHO-Rear		ND	.4 ug		09/03/08
-	HCHO-Total	49.5 L	0.792 ug	.4 ug	0.013 ppm	09/03/08

Abbreviations: ug = micrograms, mg = milligrams, mg/M3 = milligrams per cubic meter of air, g = grams, ug/M3 = micrograms per cubic meter of air, L = liters, all Volumes given in liters, ppm = parts per million, ppb = parts per billion, Areas given in square feet; ND = Not Detected; ug/wp = ug/wipe; NVG = No Volume Given. NAG = No Area Given, LOQ = Limit of Quantitation.

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SOUTH ORANGE, NJ 07079

Final Report

Summary of Analytical Methods

Compound Name	Analytical Method	Abbreviation
Formaldehyde	NIOSH 2016	HCHO
PM10 Particulates	EPA IP-10A	PM10 Part

Notes

Results provided in this report relate only to the items tested.

Attached are the results we obtained on the analysis of your samples. Any Chains-of-Custody associated with this sample group are also enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical Air Volumes for passive monitors are calculated using the sampling time submitted and the manufacturer's listed sampling rate for each compound.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for that analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on the final page of this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our client services department (800-888-8061).


James A. Calpin, CIH
Laboratory Director

End of Report
Page 2

LABORATORY TEST REQUEST

ACCOUNT NUMBER, NAME AND ADDRESS
 Do you want to print a test (Y/N)? N
 HEALTHY BUILDINGS INTERNATIONAL
 SUITE 107
 76 SOUTH ORANGE AVENUE
 SOUTH ORANGE, NJ 07079
 Phone: 973-394-1330
 Fax: 1-973-394-1331
 PROJ#: 29819025



10329 Stony Run Lane
 Ashland, VA 23005
 (804) 365-3000
 TOLL FREE (800) 888-8061
 FAX (804) 365-3002

DATE SHIPPED 8/29/08	# OF SAMPLES 2	SAMPLE TYPE/MEDIA 2.0um PTC / HCHO - SEC 226-119	PROJECT NAME OR NUMBER 0808029N	
PURCHASE ORDER NO.		CONTACT DEAN TYLOR	TELEPHONE NUMBER	
TURN AROUND TIME <input type="checkbox"/> SAMEDAY <input checked="" type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> STANDARD <input type="checkbox"/> EXTRA CHARGE <input type="checkbox"/> CALL FOR AVAILABILITY		SPECIAL INSTRUCTIONS AND/OR UNUSUAL CONDITIONS:		<input type="checkbox"/> FAX RESULTS FAX NUMBER: <input checked="" type="checkbox"/> EMAIL RESULTS - EMAIL: DTYLOR@HBIANALYTICS.COM
FOR LABORATORY USE ONLY	SAMPLE # OR SAMPLE AREA	SAMPLE DATE	SAMPLE VOLUME/LITERS	ANALYSIS REQUESTED-PLEASE USE SEPARATE LABORATORY TEST REQUEST FOR EACH SAMPLE TYPE
	#1-DUST	8/29/08	2430L	PM10/GRANULOMETER/2.5/10A
	#1-HCHO	8/29/08	49.5L	HCHO / 2016

CHAIN OF CUSTODY RECORD

SAMPLES HAVE BEEN SEALED FOR TRANSPORT AND DELIVERED TO LABORATORY VIA:

DEAN TYLOR
 SIGN HERE TO INITIATE CHAIN OF CUSTODY

CARRIER

IF "ANALYTICS COURIER" SIGN HERE

8/29/08
 DATE

DATE/TIME	CONDITION OF SAMPLE	SAMPLES RECEIVED BY:		SAMPLES RELEASED BY:	
8/29/08	Dust	SIGNATURE(SAMPLE RECEIVING) Dean Tylor		SIGNATURE(SAMPLE RECEIVING)	
		SIGNATURE(SAMPLE ADMINISTRATION)		SIGNATURE(SAMPLE ADMINISTRATION)	
		SIGNATURE(LAB)		SIGNATURE(LAB)	
		SIGNATURE(LAB)		SIGNATURE(LAB)	

PLEASE RETAIN PART 3 FOR YOUR RECORDS

MARYLAND SPECTRAL SERVICES, INC.
1500 Caton Center Drive Baltimore, MD 21227

VOLATILE ORGANICS BY EPA GC/MS METHOD IP-1B

CLIENT SAMPLE ID: 0808029N-1 HBIBLK0903D1
13F-NE-PERIM
LAB SAMPLE ID: 08090201-1759 METHOD BLANK
SAMPLE DATE: 08/29/08
RECEIVED DATE: 09/02/08
ANALYSIS DATE: 09/03/08 09/03/08
FILE NAME: 090201 0903HBIBLK
INSTRUMENT ID: MSD MSD
MATRIX: AIR AIR
UNITS: ug/M³ ug/M³

VOLATILE COMPOUNDS

Benzene	1.0 U	1.0 U
Carbon Disulfide	1.0 U	1.0 U
Carbon Tetrachloride	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U
Chloroethane	2.1 U	2.0 U
Chloroform	1.0 U	1.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U
1,1-Dichloroethane	1.0 U	1.0 U
1,2-Dichloroethane	1.0 U	1.0 U
1,1-Dichloroethene	1.0 U	1.0 U
Ethylbenzene	1.5	1.0 U
Limonene	1.9	1.0 U
Naphthalene	2.1	1.0 U
4-Phenylcyclohexene	1.0 U	1.0 U
alpha-Pinene	1.0 U	1.0 U
Styrene	1.0 U	1.0 U
Tetrachloroethene	1.0 U	1.0 U
Toluene	11	1.0 U
1,1,1-Trichloroethane	1.0 U	1.0 U
Trichloroethene	1.0	1.0 U
112-Trichlorotrifluoroethane	1.0 U	1.0 U
1,2,4-Trimethylbenzene	1.2	1.0 U
1,3,5-Trimethylbenzene	1.0 U	1.0 U
Vinyl Chloride	2.1 U	2.0 U
Xylene (total)	7.8	1.0 U
Aliphatic Hydrocarbons	76	10 U
Total VOCs (BP 80-200)	122	10 U

B - Detected in lab blank U - Below reported quantitation level J - Estimated value



1055 Parsippany Blvd, Suite 102
Parsippany, NJ 07054
Phone 973.394.1330
FAX 973.394.1331
E-mail dttyler@hbiamerica.com

TVOC/4-Phenylcyclohexene SAMPLE COLLECTION & CHAIN OF CUSTODY FORM

Client: INLG Job #: 0808029N
Address: 230 PARK AVENUE Lab= MAXYUSO SPECTRA

[illegible]

Samples collected by: Dean Tron Signed: [Signature] Date: 8/29/08

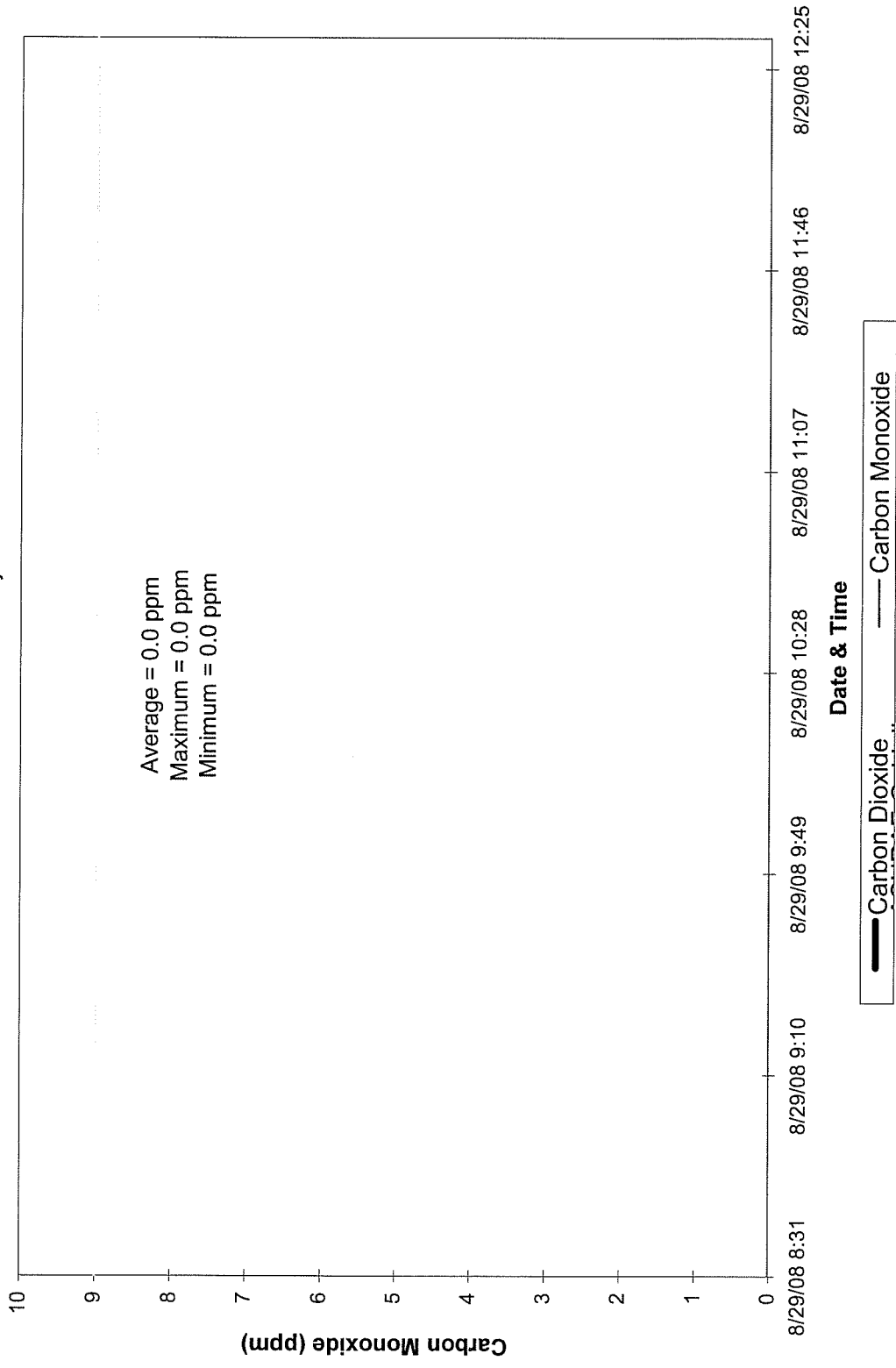
Transferred to HBI lab tech: _____ Signed: _____ Date: _____

Shipped via: FEDEX Date: 8/29/08

Name of Lab: Maryland Spectral Services Received at Lab by: William Brewington

Signed: [Signature] Date: 9/2/08

13F NE Perimeter Office, E. Steinike



LEED CI Version 2.0 Credit EQ-3.2 Field Work Sheet

(one sheet for each area tested)

Client: ING Clarion Realty Services

Job#: 0808029N

Building Address: 230 PARK AVENUE, 13 F

Job dates (period work performed): From 8/28 to 8/29/08 (3 Floors, Dance w STAGES)

Description of and size of area: NEW RENOVATION, 4 LARGE PERFORMER OFFICES
1 ONE CONFERENCE ROOM, ONE BREAK OUT ROOM, 4 ADJACENT ROOMS, 1 LARGE RECEPTION

Are all furnishings installed per LEED CI Standards: YES X NO

Briefly explain HVAC system and unit or units serving the area to be tested:

If possible Datalog for Carbon Monoxide with an electronic instrument per EPA Method IP-3C or record measurements approximately every 15 - 20 minutes for four hours.

Outdoor CO = 2.3 - at Start 0.0 at Finish 1.6 Avg. $\bar{X} = 1.6$
401 am

INDOOR

Instrument Model	Manufacturer	Serial#	Start Time/date	Stop Time/date	Max (ppm)	Min (ppm)	Avg (ppm)
QTRAK	TSI	50571	8/29/08 8:22 AM	8/29/08 12:23 PM	1	0	0

If necessary record CO measurements below: OUTDOOR

Time	ppm	Time	ppm	Time	ppm	Time	ppm
8:01	2.3	9:18	1.8	10:23	2.1	11:34	1.6
8:19	2.0	9:34	1.4	10:41	1.0	11:50	1.3
8:43	1.8	9:47	1.6	10:58	1.2	12:07	1.6
8:58	2.1	10:03	1.3	11:15	1.0	12:33	1.6

HBI Technician: DEAN TYLER
 Print name

[Signature]
 Signature



CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8551 TSI Serial No. 50571

Description Q-Trak Indoor Air Quality Meter

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Difference	-100%	Difference as a Percent of Tolerance	+100%
496 ppm	481 ppm	-3.02 %		* .	
1194 ppm	1214 ppm	1.68 %		. *	
3068 ppm	3030 ppm	-1.24 %		* .	
50.0°F (10.0°C)	49.8°F (9.9°C)	-0.2°F (-0.1°C)		* .	
104.0°F (40.0°C)	104.2°F (40.1°C)	0.2°F (0.1°C)		. *	
34.1 %rh	33.4 %rh	-0.7 %rh		* .	
73.2 %rh	72.0 %rh	-1.2 %rh		* .	
55.1 %rh	53.7 %rh	-1.4 %rh		* .	
18.7 %rh	18.7 %rh	0.0 %rh		* .	
36 ppm	37 ppm	1 ppm		. *	
102 ppm	101 ppm	-1 ppm		* .	

<u>Tolerance</u>	<u>Calibration Environment</u>
CO ₂ : ±3% of reading ±50ppm	Ambient Temperature: 73.4 °F (23.0 °C)
Temperature: ±1.0°F (±0.6°C)	Barometric Pressure: 726.5 mmHg
Humidity: ±3.0% rh	
CO: ±3% of reading or ±3ppm, whichever is greater	

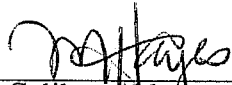
TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. Furthermore, all test and calibration data supplied by TSI has been obtained using standards whose accuracies are traceable to the National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. Calibration procedures for this instrument comply with MIL-STD-45662A with an exception of the humidity calibration standard which has a calibration accuracy ratio of 2:1 with respect to the accuracy specifications of the instrument.

Applicable Test Report

Barometric Pressure
Temperature (-8-32°C)
(25-55°C)
Dew Point

Date Last Verified

05-04-07
01-23-07
01-23-07
09-29-06


Calibrated by

TSI Incorporated

☒ Final
Function Check

APR 11, 2008
Calibration Date

Mailing Address: P.O. Box 64394 St. Paul, MN 55164 USA
Shipping Address: 500 Cardigan Road St. Paul, MN 55126 USA
Phone: (800) 926-8378 or (651) 490-2760 Fax: (651) 490-2704



AS FOUND STATUS

TSI Model 8551 TSI Serial No. 50571

Description Q-Trak Indoor Air Quality Meter

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Difference	Difference as a Percent of Tolerance		
			-100%	0	+100%
496 ppm	638 ppm	28.63 %		.	*
1194 ppm	1255 ppm	5.11 %		.	*
3003 ppm	2978 ppm	-0.83 %		* .	
50.0°F (10.0°C)	50.2°F (10.1°C)	0.2°F (0.1°C)		. *	
72.6 %rh	72.4 %rh	-0.2 %rh		* .	
18.5 %rh	19.0 %rh	0.5 %rh		. *	
36 ppm	*27 ppm	-9 ppm		.	
102 ppm	76 ppm	-26 ppm		.	
Tolerance			Calibration Environment		
CO ₂ : ±3% of reading ±50ppm			Ambient Temperature: 73.4 °F (23.0 °C)		
Temperature: ±1.0°F (±0.6°C)			Barometric Pressure: 739.9 mmHg		
Humidity: ±3.0% rh					
CO: ±3% of reading or ±3ppm, whichever is greater					

Applicable Test Report

Barometric Pressure
Temperature (-8-32°C)
(25-55°C)
Dew Point

Date Last Verified

05-04-07
01-23-07
01-23-07
09-29-06

Tested by

TSI Incorporated

APR 9, 2008

Test Date

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Shipping Address: 500 Cardigan Road St. Paul, MN 55126 USA
Phone: (800) 926-8378 or (651) 490-2760 Fax: (651) 490-2704



CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8762

TSI Serial No. 54060147

Description IAQ Meter with CO2 and CO

Calibration Standard Multi-Gas Calibration Bench #127

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Difference	Error Compared to Tolerance		
			Limit-	0	Limit+
5009 PPM	5026 PPM	0.3 %		.*	
3000 PPM	3006 PPM	0.2 %		.*	
1000 PPM	1004 PPM	4 PPM		.*	
500 PPM	473 PPM	-27 PPM	*	.	
0 PPM	-12 PPM	-12 PPM		*.	
140.0°F	140.0°F	0.0°F		*	
41.0°F	41.4°F	0.4°F		.	*
15.0 %rh	16.0 %rh	1.0 %rh		.	*
30.0 %rh	30.8 %rh	0.8 %rh		.	*
50.0 %rh	51.0 %rh	1.0 %rh		.	*
70.0 %rh	70.8 %rh	0.8 %rh		.	*
90.0 %rh	90.3 %rh	0.3 %rh		.*	
0.0 PPM	1.3 PPM	1.3 PPM		.	*
100.0 PPM	99.1 PPM	-0.9 %	*	.	

Tolerance Limits:

CO2: 50PPM or 3% of reading

rh: ± 3%rh

Temp: ± 1°F

CO: 3PPM or 3% of reading

TSI Incorporated does hereby certify that the above described instrument conforms to the original manufacturers specifications (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technology within the limitations of NISTs calibration services or have been derived from accepted values of natural physical constants or have been derived by the ratio type of self calibration techniques. The calibration ratio for this instrument is at least 6.7:1 for barometric pressure and 3:1 for differential pressure. TSIs calibration system meets ISO-9001:2000 and complies with ISO 10012:2003, Quality Assurance Requirements for Measuring Equipment. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Applicable Test Report

Report Number

Date Last Verified

DC Voltage	E001550	10-10-07
Barometric Pressure	E001992	10-29-07
Pure Nitrogen	NI34380	02-04-08
CO2 1000 PPM in N2	CC174496	05-15-07
CO2 5000 PPM in N2	0301SA08	03-07-07
Temperature 0 C	E000822	10-11-07
Temperature 60 C	E001806	10-11-07
Humidity	E002008	10-02-07
CO 200 PPM in N2	EB0006918	03-18-08

Calibrated by

☒ Final
Function Check

Apr 15, 2008
Calibration Date

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 800-874-2811 651-490-2874 FAX: 651-490-2121 www.tsi.com



CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8762 TSI Serial No. 54060147

Description IAQ Meter with CO2 and CO

Calibration Standard Multi-Gas Calibration Bench #127

CALIBRATION VERIFICATION RESULTS

Calibration Standard	Instrument Output	Difference	Error Compared to Tolerance		
			Limit-	0	Limit+
5009 PPM	5680 PPM	13.4 %		.	X
3000 PPM	3290 PPM	9.7 %		.	X
1000 PPM	934 PPM	-66 PPM	X	.	
500 PPM	356 PPM	-144 PPM	X	.	
0 PPM	-9 PPM	-9 PPM		* .	
140.0°F	140.0°F	0.0°F		*	
41.0°F	41.2°F	0.2°F		. *	
10.0 %rh	10.4 %rh	0.4 %rh		. *	
30.0 %rh	29.6 %rh	-0.4 %rh		* .	
50.0 %rh	49.7 %rh	-0.3 %rh		* .	
70.0 %rh	69.7 %rh	-0.3 %rh		* .	
90.0 %rh	90.0 %rh	0.0 %rh		*	
0.2 PPM	0.0 PPM	-0.2 PPM		* .	
100.0 PPM	72.3 PPM	-27.7 %	X	.	

***** AS FOUND DATA *****
(INITIAL CALIBRATION CHECK)

Tolerance Limits:

CO2: 50PPM or 3% of reading
rh: ± 3%rh
Temp: ± 1°F
CO: 3PPM or 3% of reading

TSI Incorporated does hereby certify that the above described instrument conforms to the original manufacturers specifications (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the National Institute of Standards and Technology within the limitations of NISTs calibration services or have been derived from accepted values of natural physical constants or have been derived by the ratio type of self calibration techniques. The calibration ratio for this instrument is at least 6.7:1 for barometric pressure and 3:1 for differential pressure. TSI's calibration system meets ISO-9001:2000 and complies with ISO 10012:2003, Quality Assurance Requirements for Measuring Equipment. This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the calibration organization issuing this report.

Applicable Test Report

Report Number

Date Last Verified

DC Voltage	E001550	10-10-07
Barometric Pressure	E001992	10-29-07
Pure Nitrogen	NI34380	02-04-08
CO2 1000 PPM in N2	CC174496	05-15-07
CO2 5000 PPM in N2	0301SA08	03-07-08
Temperature 0 C	E000822	10-11-07
Temperature 60 C	E001806	10-11-07
Humidity	E002008	10-02-07
CO 200 PPM in N2	EB0006918	03-18-08

Calibrated by

Final
Function Check

Apr 9, 2008
Calibration Date

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