

HBI Healthy Buildings International, Inc.

Northeast Region

76 South Orange Avenue

Suite 107

South Orange, NJ 07079

Tel: (973) 394-1330

Fax: (973) 394-1331

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, CLEC

Organization:

HEALTHY BUILDINGS INTERNATIONAL

Role in project:

IAQ CONSULTANT

Signature:

[Signature]

Date:

10/31/08

LEED v2 - Final Modified: 23 May, 2005



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

GSA

Schedule
Contract GS-10F-0125K

HCHO NIOSH 2016 SAMPLE COLLECTION & CHAIN OF CUSTODY FORM

Client: ING Job #: 0810019N

Address: 230 Park Avenue
Lab= ANALYTICS

[illegible]

Samples collected by: *Dequ Tyner* Signed: *EF77h* Date: *10/23/08*

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

Shipped via: _____ Date: _____

Name of Lab: _____ Received at Lab by: _____

Signed: _____ Date: _____



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

Client: *ING* Job #: *0810019N*

Address: 230 Park Avenue
Lab= Analytics

Samples collected by: Dean Tyler Signed: EFT Date: 10/23/08

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

Shipped via: _____ Date: _____

Name of Lab: _____ Received at Lab by: _____

Signed: _____ Date: _____

Dean Tyler

From: seed2@saturn.analyticscorp.com
Sent: Monday, October 27, 2008 7:24 PM
To: dtyler@hbiamerica.com
Subject: SAMPLEDATA

Group No. M298-028
Account No. 29819025
Report Date: 10/27/08

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

**** FINAL REPORT ****

Date Received: 10/24/08
Sample Type: 2 - Air Sample(s)
Project: 0810019N PO Number:

Analytical Results

Lab	Parameter	Volume	Amount	LOQ	Concentration	Analysis
-001	#062108-33 #1	Samp Date: 10/23/08		PW PTFE (225-1709), 2UM, 37MM		
-	PM10 Part	2440 L	< 100 ug	100 ug	< 41 ug/M3	10/24/08
No field blank submitted with sample.						
-002	#2498000004 #1	Samp Date: 10/23/08		DNPH-Silica Gel with O3 Scrubber		
-	HCHO-Front		< 0.40 ug	.4 ug		10/24/08
-	HCHO-Rear		ND	.4 ug		10/24/08
-	HCHO-Total	50.51 L	< 0.40 ug	.4 ug	< 0.006 ppm	10/24/08

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.

LABORATORY TEST REQUEST

ACCOUNT NUMBER, NAME AND ADDRESS
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 10/23	# OF SAMPLES 2	SAMPLE TYPE/MEDIA HCHO / PM-10 ANALYST	PROJECT NAME OR NUMBER 0810019N	
PURCHASE ORDER NO.		CONTACT DEAN TYLER	TELEPHONE NUMBER 973.394.1330	
TURN AROUND TIME ☐ SAMEDAY ☒ 1 DAY ☐ CALL FOR AVAILABILITY		SPECIAL INSTRUCTIONS AND/OR UNUSUAL CONDITIONS:		☐ FAX RESULTS FAX NUMBER: ☒ EMAIL RESULTS - EMAIL: DTYLER@HBI-AMERICA.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
	#062108-33 #9	10/23/08	2440L	PM-10 - GRAVIMETRIC
	#2498000004 #9	10/23/08	50.51L	HCHO

CHAIN OF CUSTODY RECORD

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

SIGN HERE TO INITIATE CHAIN OF CUSTODY

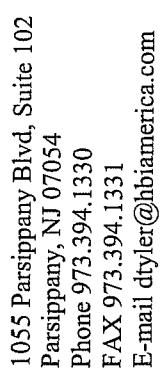
CARRIER

IF "ANALYTICS COURIER" SIGN HERE

DATE

DATE/TIME	CONDITION OF SAMPLE	SAMPLES RECEIVED BY:	SAMPLES RELEASED BY:
		SIGNATURE(SAMPLE RECEIVING)	SIGNATURE(SAMPLE RECEIVING)
		SIGNATURE(SAMPLE ADMINISTRATION)	SIGNATURE(SAMPLE ADMINISTRATION)
		SIGNATURE(LAB)	SIGNATURE(LAB)
		SIGNATURE(LAB)	SIGNATURE(LAB)

PLEASE RETAIN PART 3 FOR YOUR RECORDS



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

Lab= Mercury Spectral Services

Samples collected by: Dan Turner Signed: [Signature] Date: 10/23/08

Signed: _____

Date:

Date:

Received at Lab by:

Date:

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

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

CLIENT SAMPLE ID: 0810019N-1 HBIBLK1024
15F-NE-PERIM
LAB SAMPLE ID: 08102419-0178 METHOD BLANK
SAMPLE DATE: 10/23/08
RECEIVED DATE: 10/24/08
ANALYSIS DATE: 10/24/08 10/24/08
FILE NAME: 102419 1024HBIBLK
INSTRUMENT ID: MSD MSD
MATRIX: AIR AIR
UNITS: ug/M³ ug/M³

VOLATILE COMPOUNDS

Benzene	1.9 U	1.5 U
Carbon Disulfide	1.9 U	1.5 U
Carbon Tetrachloride	1.9 U	1.5 U
Chlorobenzene	4.2	1.5 U
Chloroethane	3.7 U	3.0 U
Chloroform	1.9 U	1.5 U
1,4-Dichlorobenzene	1.9 U	1.5 U
1,1-Dichloroethane	1.9 U	1.5 U
1,2-Dichloroethane	1.9 U	1.5 U
1,1-Dichloroethene	1.9 U	1.5 U
Ethylbenzene	3.2	1.5 U
Limonene	1.9 U	1.5 U
Naphthalene	1.9 U	1.5 U
4-Phenylcyclohexene	1.9 U	1.5 U
alpha-Pinene	1.9 U	1.5 U
Styrene	1.9 U	1.5 U
Tetrachloroethene	1.9 U	1.5 U
Toluene	22	1.5 U
1,1,1-Trichloroethane	1.9 U	1.5 U
Trichloroethene	7.8	1.5 U
112-Trichlorotrifluoroethane	1.9 U	1.5 U
1,2,4-Trimethylbenzene	1.9 U	1.5 U
1,3,5-Trimethylbenzene	1.9 U	1.5 U
Vinyl Chloride	3.7 U	3.0 U
Xylene (total)	14	1.5 U
Aliphatic Hydrocarbons	63	15 U
Total VOCs (BP 80-200)	124	15 U

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



HBI

Healthy Buildings International, Inc.

LEED CI Version 2.0 Credit EQ-3.2 Field Work Sheet

(one sheet for each area tested)

Client: INGJob#: 0810019NBuilding Address: 230 PARK AVENUEJob dates (period work performed): From 10/23 to 10/23Description of and size of area: 16,000 ft², ELEVATOR PERIMETER OFFICES,
SMALL COPY/BREAK ROOM, LUTHERAN CURB AREAAre all furnishings installed per LEED CI Standards: YES X NO

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

FAN 3 SERVES PERIMETER UNITS, OUTDOOR AIR DAMPERS OPEN 15-20%
FAN 15 SERVES LUTHERAN ZONE, OUTDOOR AIR DAMPERS OPEN 10-15%

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.

→ IARCalc SN# 01050438
Outdoor CO = 1.6 - at Start 1.7 at Finish 1.2 Avg. (SEE ATTACHED SHEET)

Indoor CO - IARCalc SN# 54060147

Instrument Model	Manufacturer	Serial#	Start Time/date	Stop Time/date	Max (ppm)	Min (ppm)	Avg (ppm)
IARCalc	TSI	54060147	10/23 1:18	10/23 5:18	0.0	0.0	0.0

If necessary record CO measurements below:

Time	ppm	Time	ppm	Time	ppm	Time	ppm

HBI Technician: DEAN TYLER

Print name

Signature



HBI

Healthy Buildings International, Inc.

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

Carbon Monoxide Testing:

→ IAQCALL SN 01050438

Time	Location:	Location:	Location:	Location:	Location:
	OUTDOOR				
12:53	1.6				
1:09	1.3				
1:23	1.2				
1:38	1.2				
1:51	1.3				
1:59	1.0				
2:12	1.8				
2:32	1.7				
2:42	1.3				
2:56	0.9				
3:09	1.0				
3:21	1.0				
3:27	1.1				
3:43	1.3				
3:55	1.2				
4:09	1.3				
4:19	1.0				
4:31	1.0				
4:44	0.9				
5:01	1.8				
5:35	1.7				

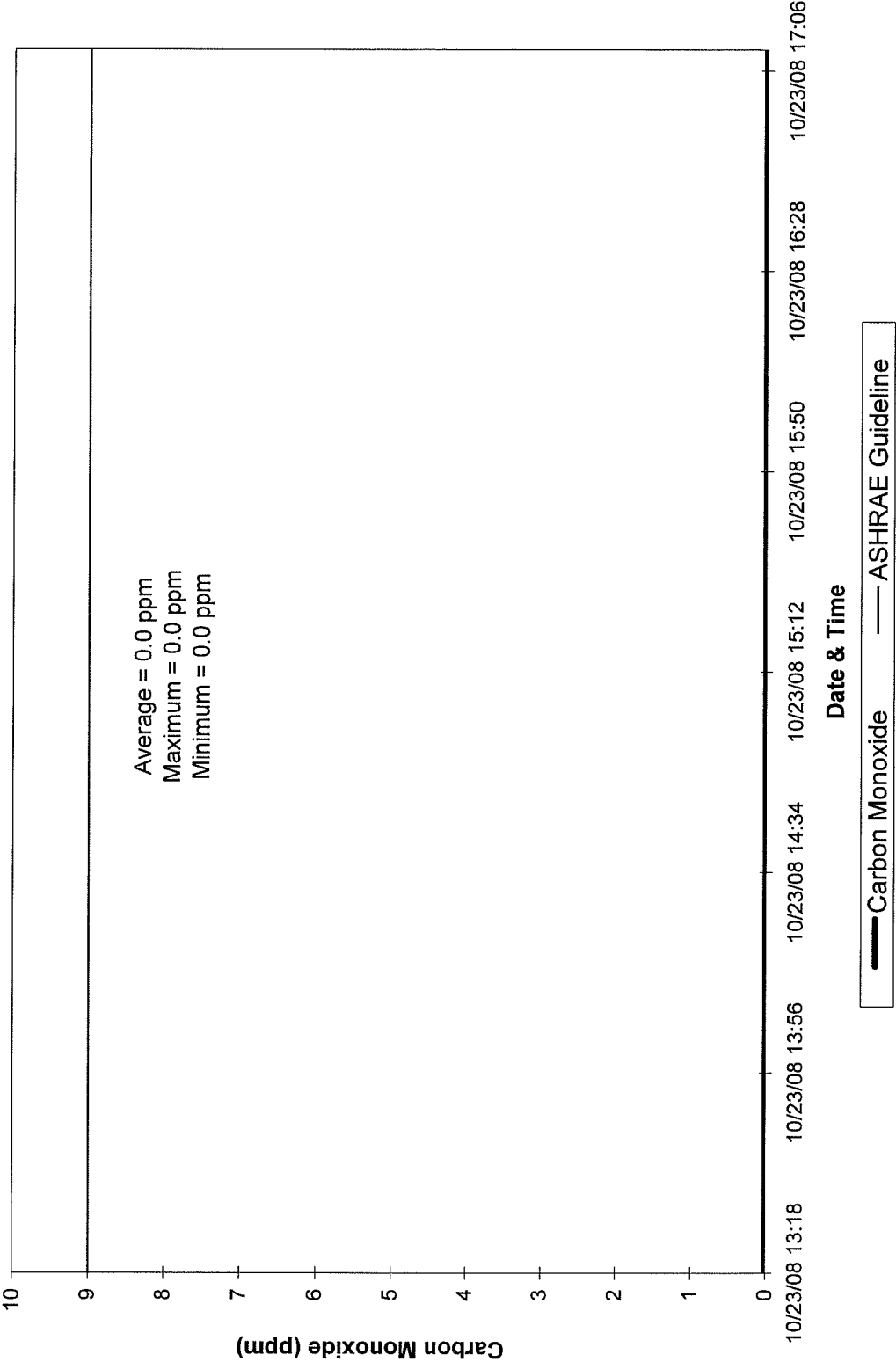
HBI Technician Name:

Drew Trice

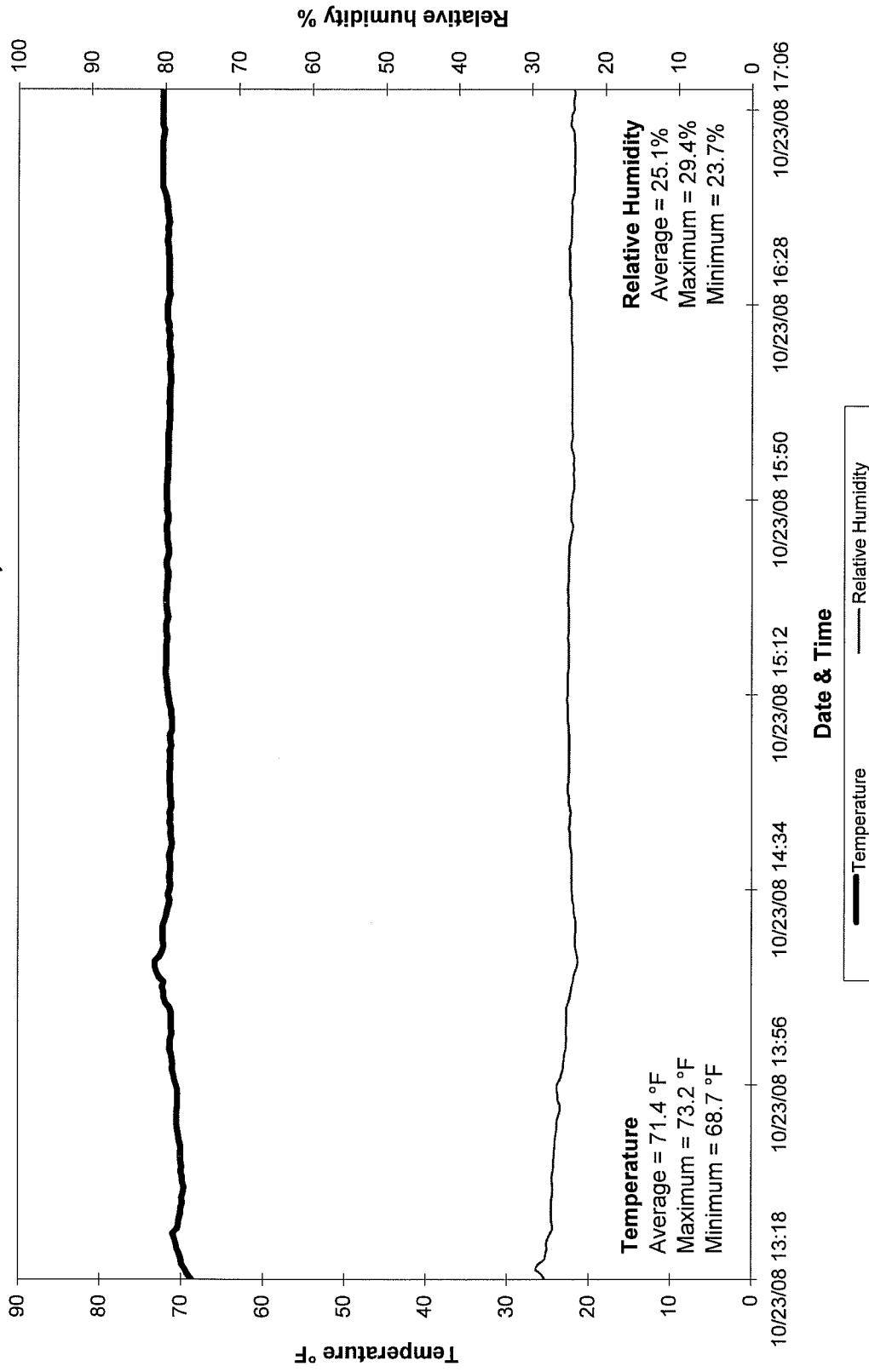
Signed:

[Signature]

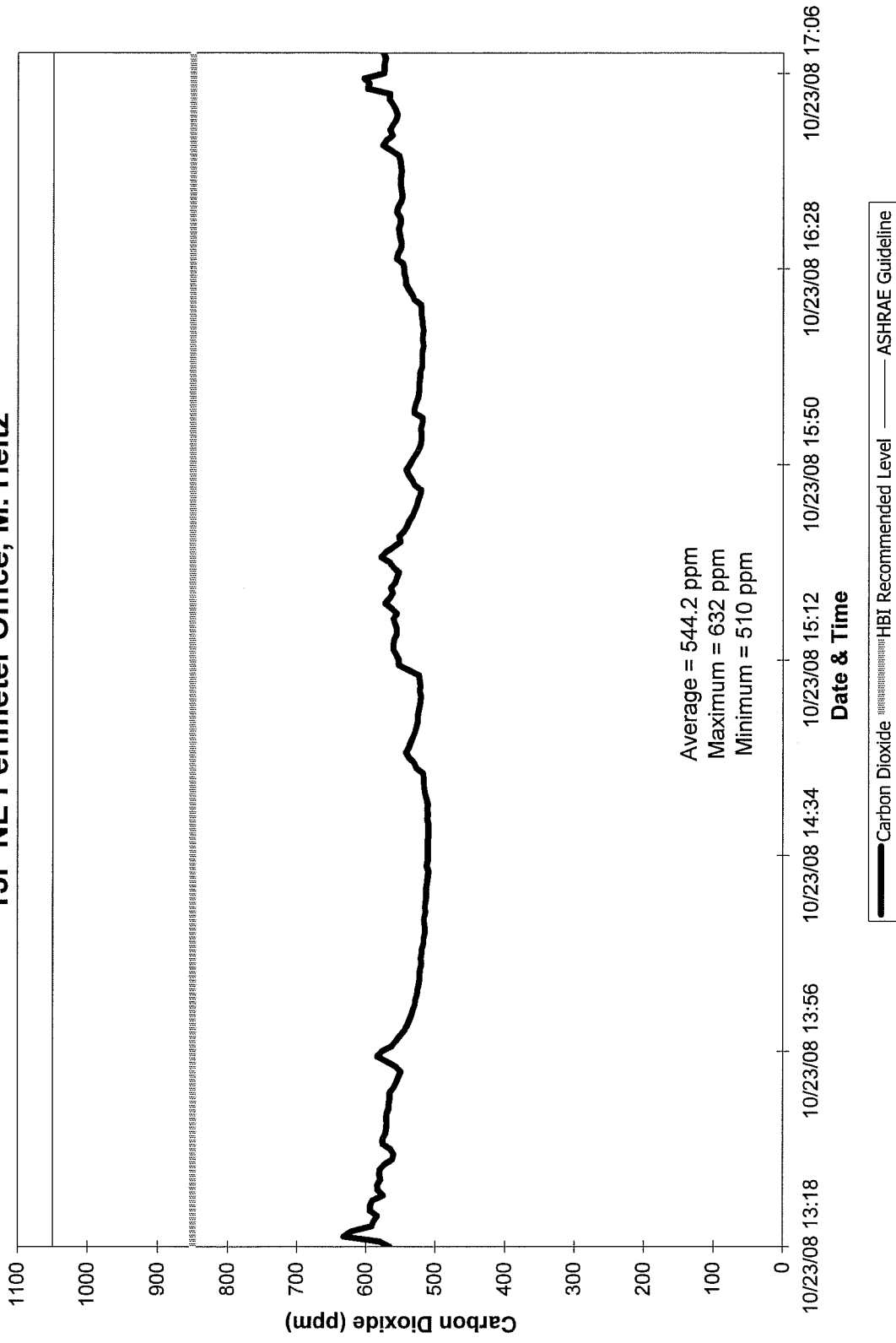
15F NE Perimeter Office, M. Heitz



15F NE Perimeter Office, M. Heitz



15F NE Perimeter Office, M. Heitz





CERTIFICATE OF CALIBRATION AND TESTING

TSI Model 8762

TSI Serial No. 01050438

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+
5051 PPM	5053 PPM	0.0 %	*
3000 PPM	2979 PPM	-0.7 %	* .
1000 PPM	997 PPM	-3 PPM	*.
500 PPM	470 PPM	-30 PPM	* .
0 PPM	-10 PPM	-10 PPM	* .
140.0°F	139.8°F	-0.2°F	* .
41.0°F	41.4°F	0.4°F	. *
15.0 %rh	15.0 %rh	0.0 %rh	*
30.0 %rh	30.0 %rh	0.0 %rh	*
50.0 %rh	50.6 %rh	0.6 %rh	. *
70.0 %rh	70.4 %rh	0.4 %rh	. *
90.0 %rh	89.9 %rh	-0.1 %rh	*.
0.0 PPM	0.7 PPM	0.7 PPM	. *
100.0 PPM	98.6 PPM	-1.4 %	* .
			. . .

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	04-25-08
Pure Nitrogen	N13V380	05-15-08
CO2 1000 PPM in N2	EB0009831	03-06-08
CO2 5000 PPM in N2	CC100371	05-01-08
Temperature 0 C	E000822	10-11-07
Temperature 60 C	E001806	10-11-07
Humidity	E002008	10-02-07
CO 200 PPM in N2	EB0000880	03-18-08

M. Hayes
Calibrated by

☒ Final
Function Check

Jun 18, 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	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 NIST's 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
Barometric Pressure
Pure Nitrogen
CO2 1000 PPM in N2
CO2 5000 PPM in N2
Temperature 0 C
Temperature 60 C
Humidity
CO 200 PPM in N2

E001550
E001992
NI34380
CC174496
0301SA08
E000822
E001806
E002008
EB0006918

10-10-07
10-29-07
02-04-08
05-15-07
03-07-07
10-11-07
10-11-07
10-02-07
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