

Cleanroom and Hood Certification Specialists Since 1978

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Ph: 800 851-9081 Fax: 781 647-3770 www.BandVTesting.com



ANSI/AIHA ASHRAE 110 TEST REPORT

Customer:	University of Vermont	Hood Location:	305C
Investigator:	Lee Diamond	Manufacturer:	TFI
Address:	Delehanty 667 Spear Street Burlington, VT 05405	Serial:	335
Test Performed by:	Mark Joyce	Date of Test:	06/30/2008
Test Number:	79391		

Test Procedures are performed in accordance with ANSI/AIHA Z9.5 American National Standard for Laboratory Ventilation and ANSI/ASHRAE 110 – 1995 Method of Testing Performance of Laboratory Fume Hoods.

Tracer Gas:	Sulfur Hexafluoride 99.8-99.9%
Pressure Gauge Reading:	30.00 psig
Gas Ejector:	ASHRAE Ejector with .025" critical orifice
Calibrated Flow Rate:	4.0 liters/minute
Detection Instrument:	iTi Qualitek, Inc. 200 S/N 2001831/97583, calibration due date 10/23/2008
Face Velocity	TSI-8386 SN 55060571, calibration due date 2/18/2009

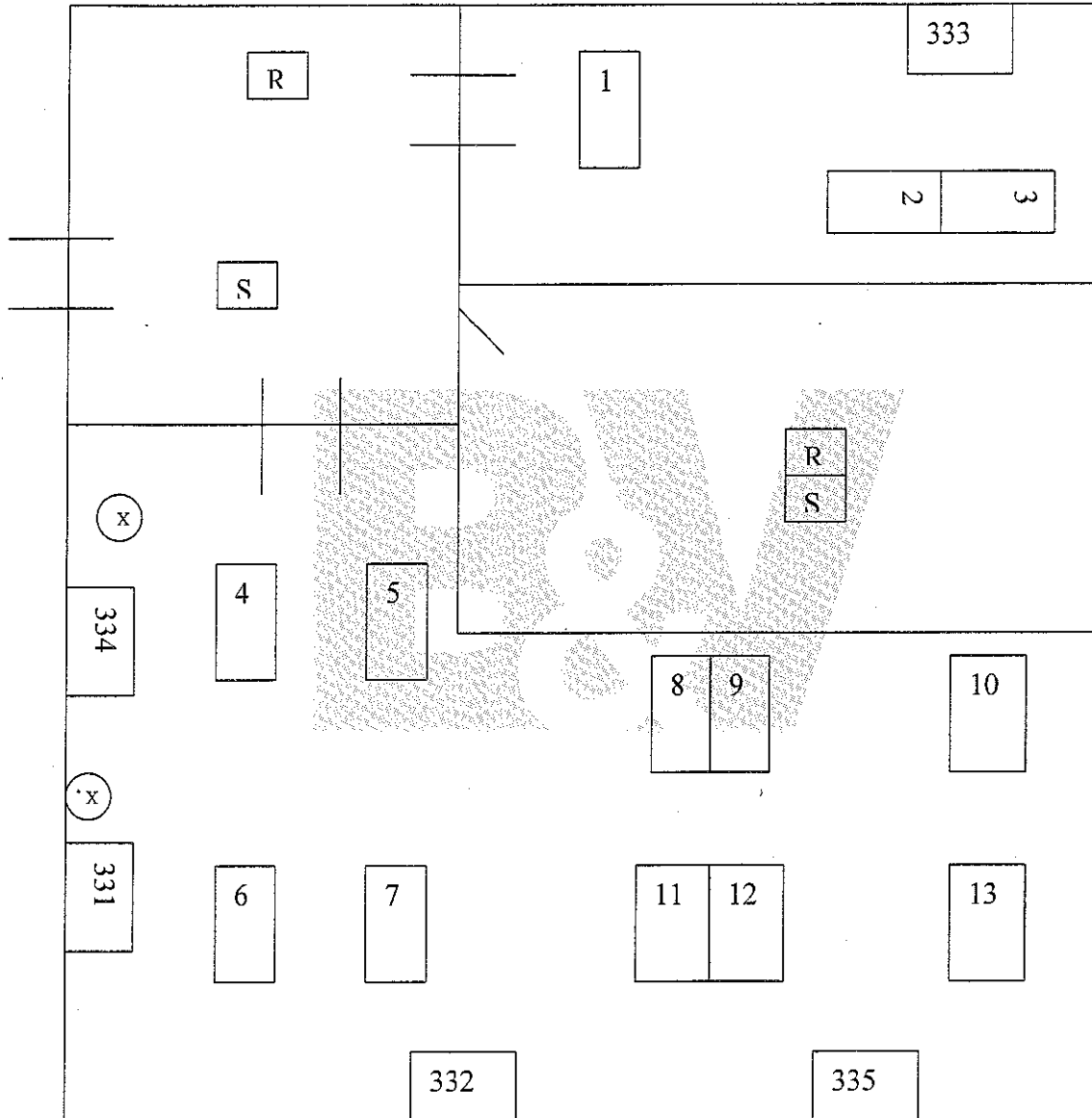
TEST AND HOOD CONDITIONS

Test Facility:	As Renovated	Sash Type:	Vertical
Hood Connected Model:	TFI Hood	Sash Stops:	N/A
Hood Size:	6'	Baffle Position:	N/A
Condition of Testing Performed:	As Installed		
Amount of Material Storage in Hood:	0%		

PRELIMINARY DATA-ROOM CONDITIONS

Note location and number of hoods, supply and return air diffusers, doors.

Test Lab Schematic



LOCAL FLOW VISUALIZATION CHALLENGE

Bottom bypass foil:	X	Good	Fair	Poor
Face edge containment (parallel to face and 6" behind face):	X	Good	Fair	Poor
Rear of hood (in 8" diameter of circle):	X	Good	Fair	Poor

LARGE VOLUME VISUALIZATION CHALLENGE

Center work surface release: X Good Fair Poor **Clearance Time:** 10 Seconds

DOWNFLOW FACE VELOCITY (results in linear feet per minute—lfm)

73	77	61	54	65	54	50	53	High:	78	Lfm
								Low:	50	Lfm
78	75	60	51	67	63	68	65	Average:	65	Lfm
								Downflow Area:	15.5 x 47 = 5.06	ft ²
70	71	63	60	66	66	66	72	Hood Airflow Volume:	325	Cfm

INFLOW FACE VELOCITY (results in linear feet per minute—lfm)

98	106	108	94	106	101	High:	108	Lfm
						Low:	94	Lfm
						Average:	102	Lfm
						Access Opening:	10 x 62 = 4.31	ft ²
						Hood Airflow Volume:	440	Cfm

HEPA FILTER INTEGRITY TEST:

Pass Fail

Instrumentation Model: TDA-2G Serial: 11881 Calibration Due: 3/10/2009

Upstream Aerosol Challenge 83 mg/l Downstream Penetration .002%
(Aerosol penetration shall not exceed .005% to pass)

PARTICULATE MONITORING: Particle Size = .5 microns (particles per cubic meter)

Pass Fail

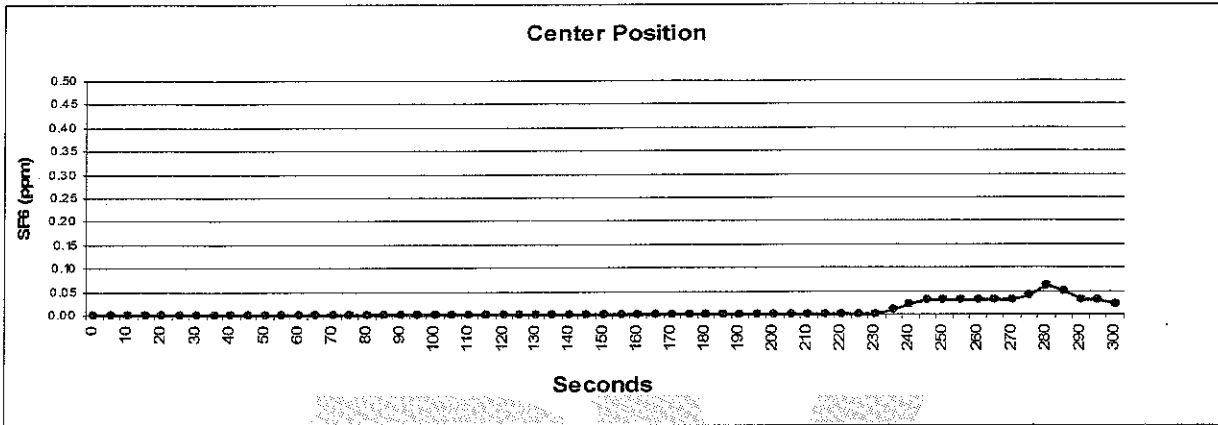
Instrumentation Model: 210 Serial: 36881-0997-287 Calibration Due: 4/7/2009

70	0	35
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TRACER GAS TESTING:

Center Position Data:

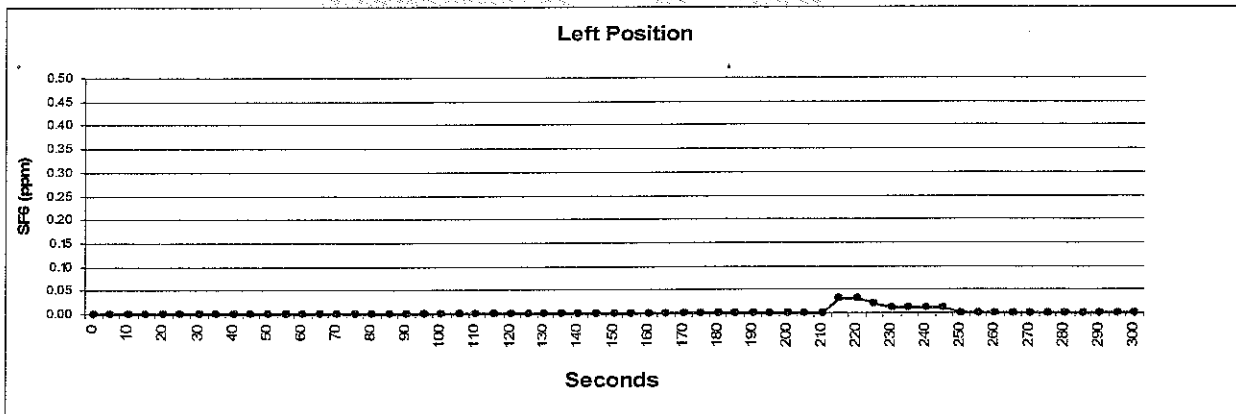
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Center Reading: 0.01 ppm

Left Position Data:

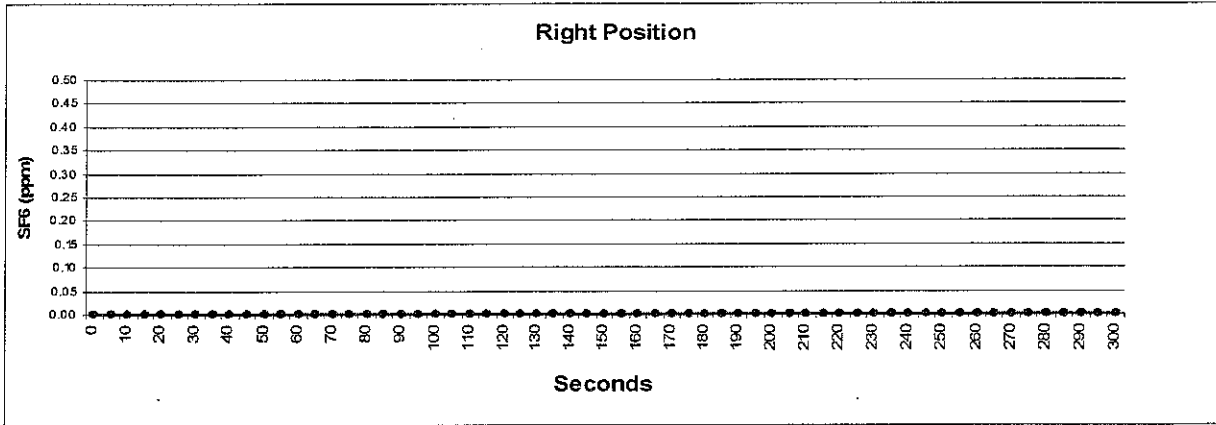
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Left Reading: 0.00 ppm

Right Position Data:

With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

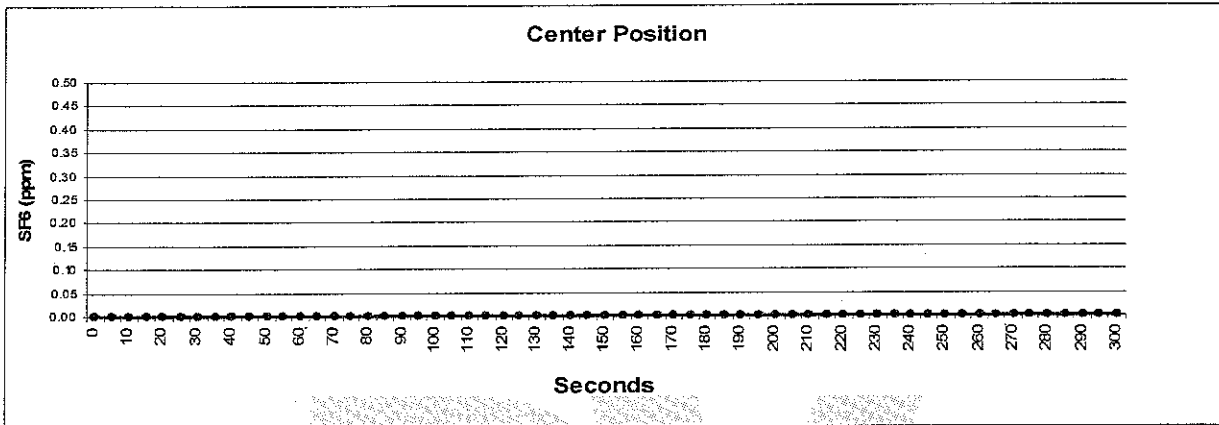
OVERALL RATING: 4.0 AI 0.003 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.

TRACER GAS TESTING: Sash at 12"

Center Position Data:

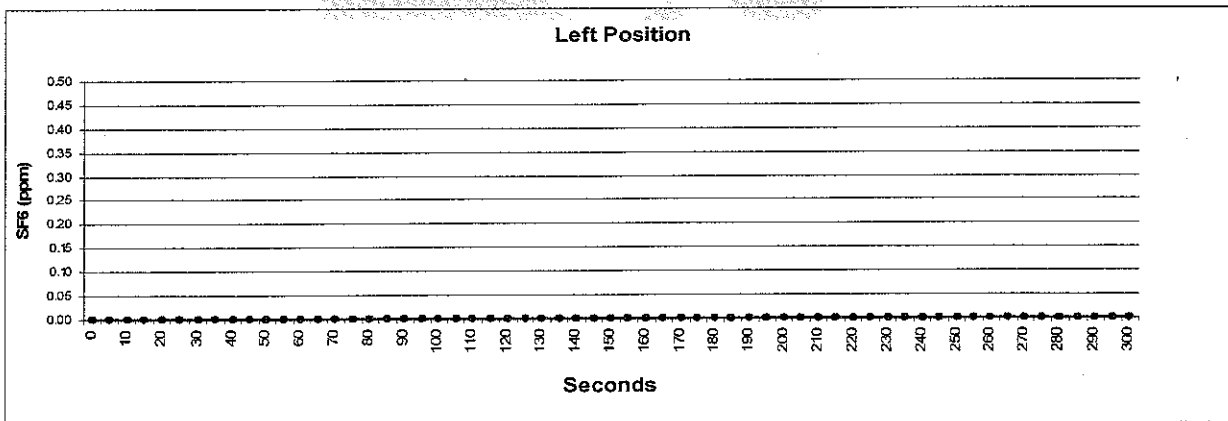
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

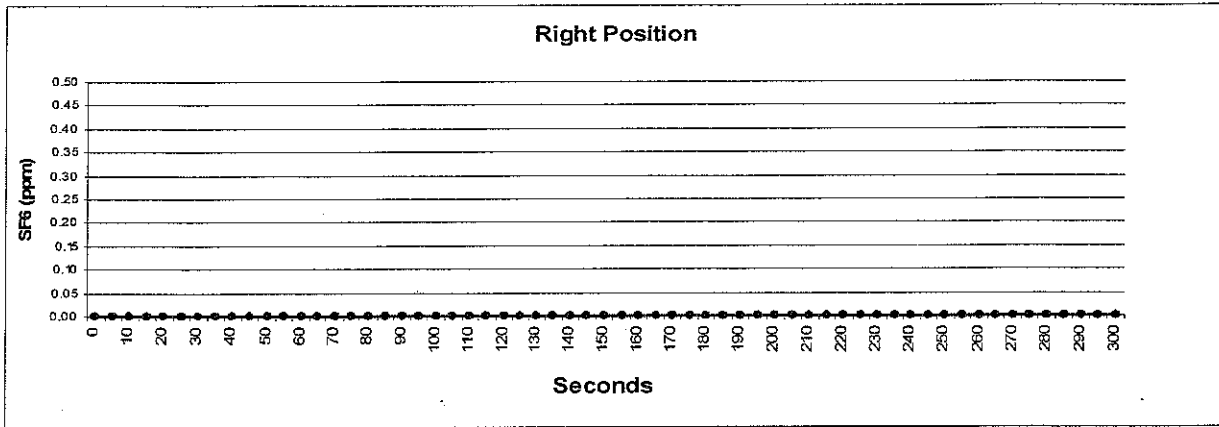
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Left Reading: 0.00 ppm

Right Position Data:

With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

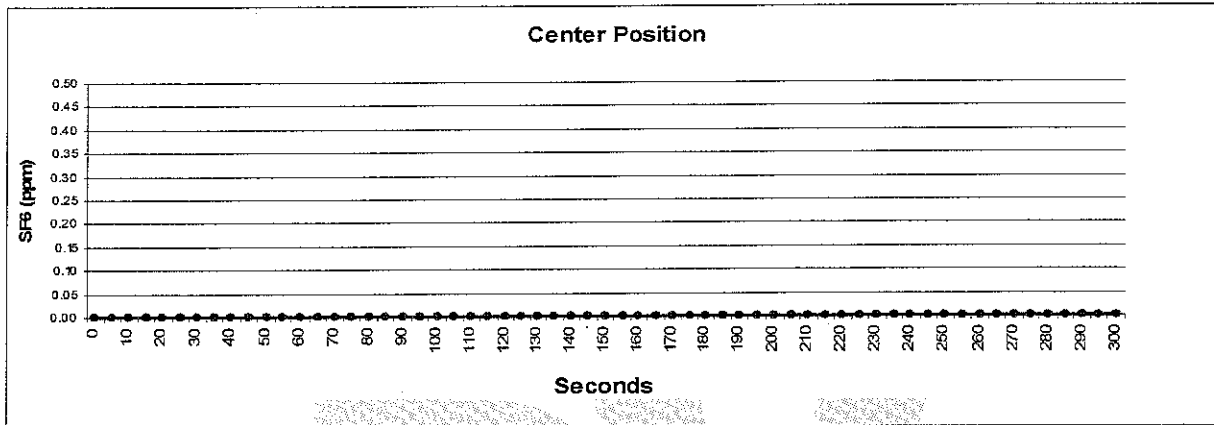
OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.

TRACER GAS TESTING: Sash at 15"

Center Position Data:

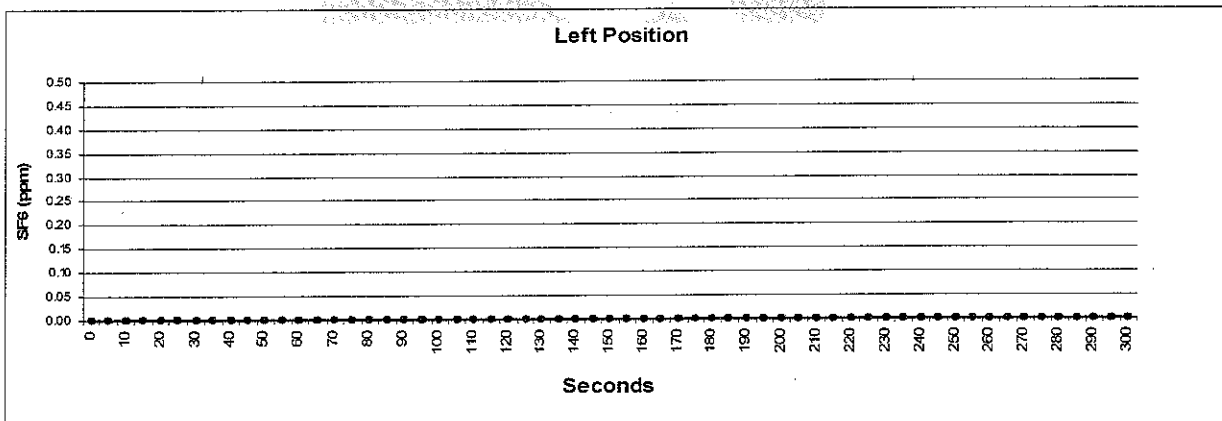
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

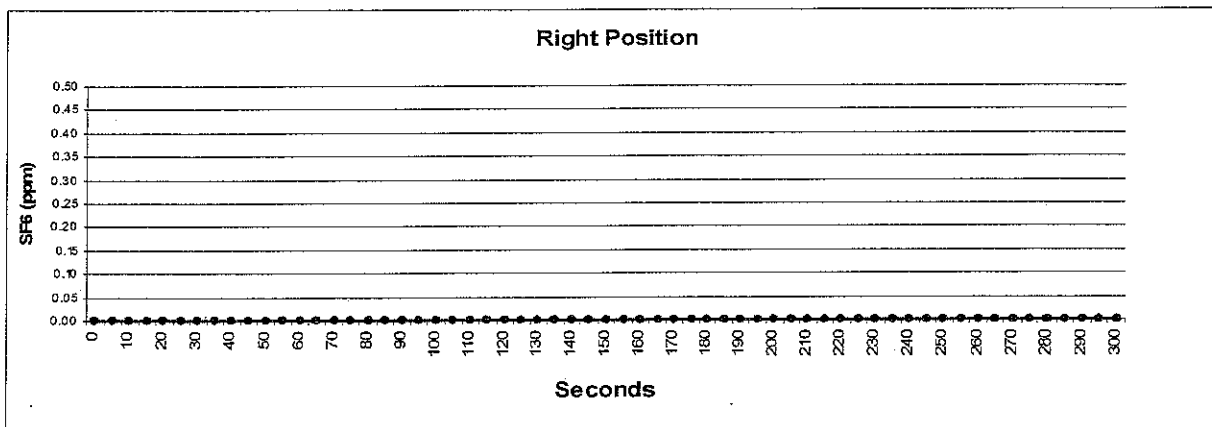
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Left Reading: 0.00 ppm

Right Position Data:

With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

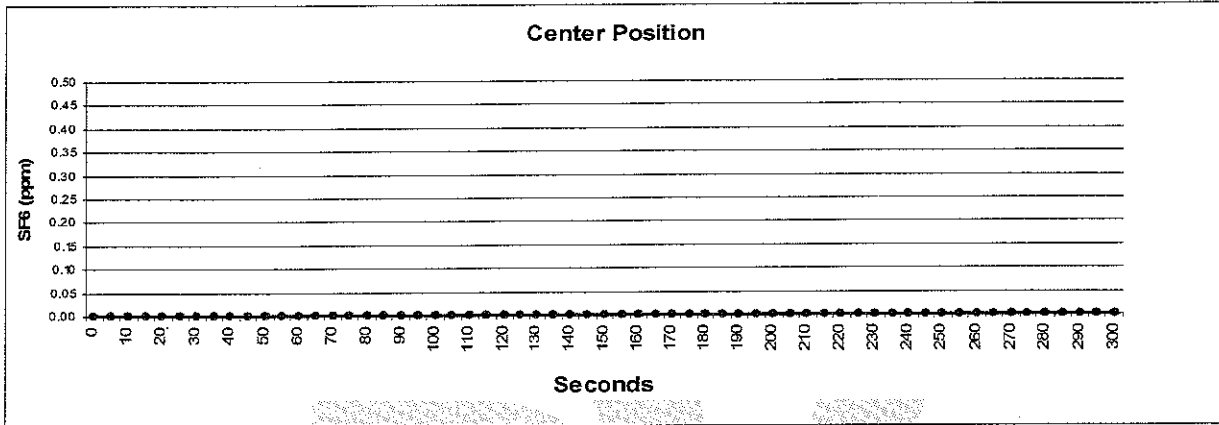
OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.

TRACER GAS TESTING: Sash at 18"

Center Position Data:

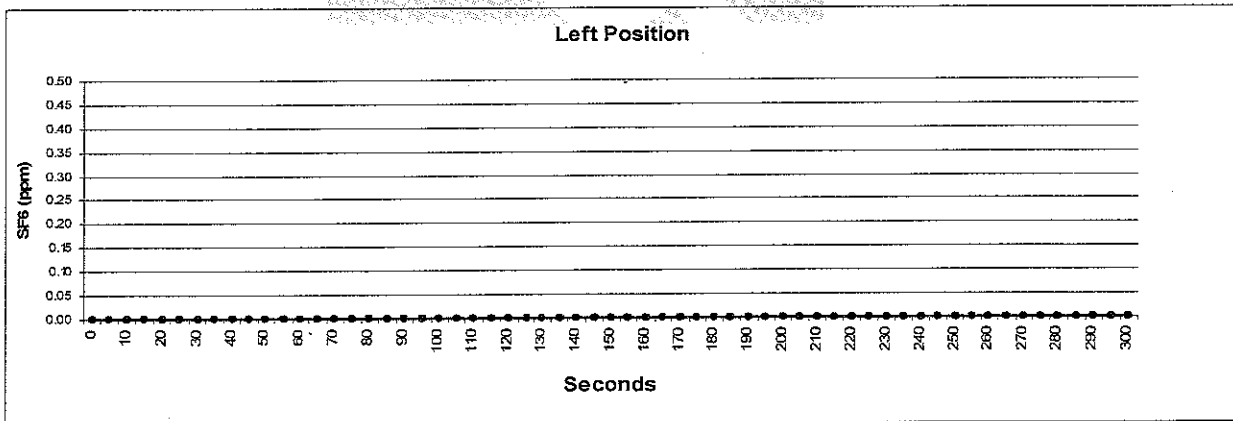
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

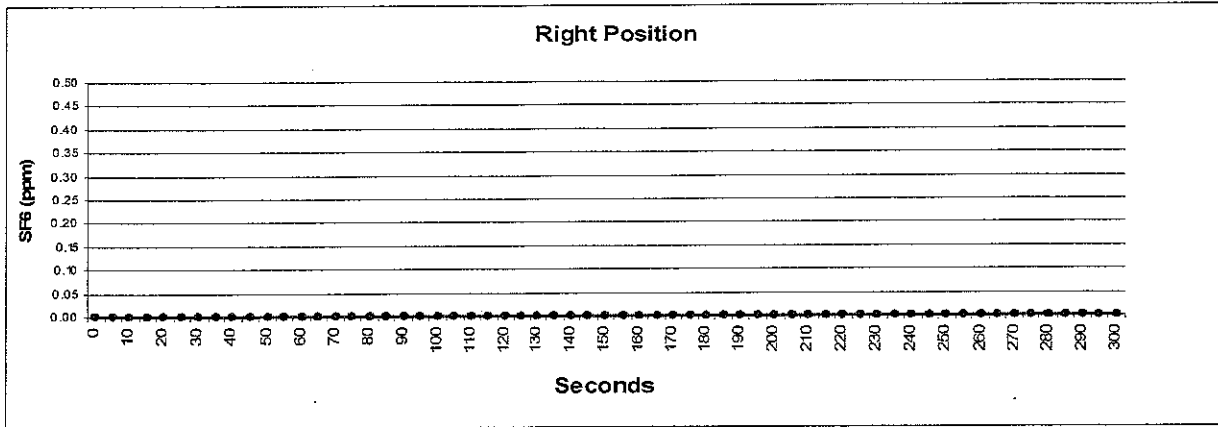
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Left Reading: 0.00 ppm

Right Position Data:

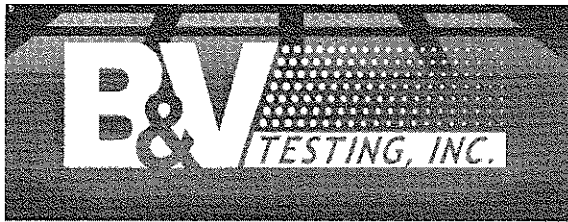
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.



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ANSI/AIHA ASHRAE 110 TEST REPORT

Customer: University of Vermont
Investigator: Lee Diamond
Address: Delehanty
667 Spear Street
Burlington, VT 05405
Test Performed by: Mark Joyce
Test Number: 79213

Hood Location: 305C
Manufacturer: TFI
Serial: 331
Date of Test: 06/30/2008

Test Procedures are performed in accordance with ANSI/AIHA Z9.5 *American National Standard for Laboratory Ventilation* and ANSI/ASHRAE 110 – 1995 *Method of Testing Performance of Laboratory Fume Hoods*.

Tracer Gas: Sulfur Hexafluoride 99.8-99.9%
Pressure Gauge Reading: 30.00 psig
Gas Ejector: ASHRAE Ejector with .025" critical orifice
Calibrated Flow Rate: 4.0 liters/minute
Detection Instrument: iTi Qualitek, Inc. 200 S/N 2001831/97583, calibration due date 10/23/2008
Face Velocity: TSI-8386 SN 55060571, calibration due date 2/18/2009

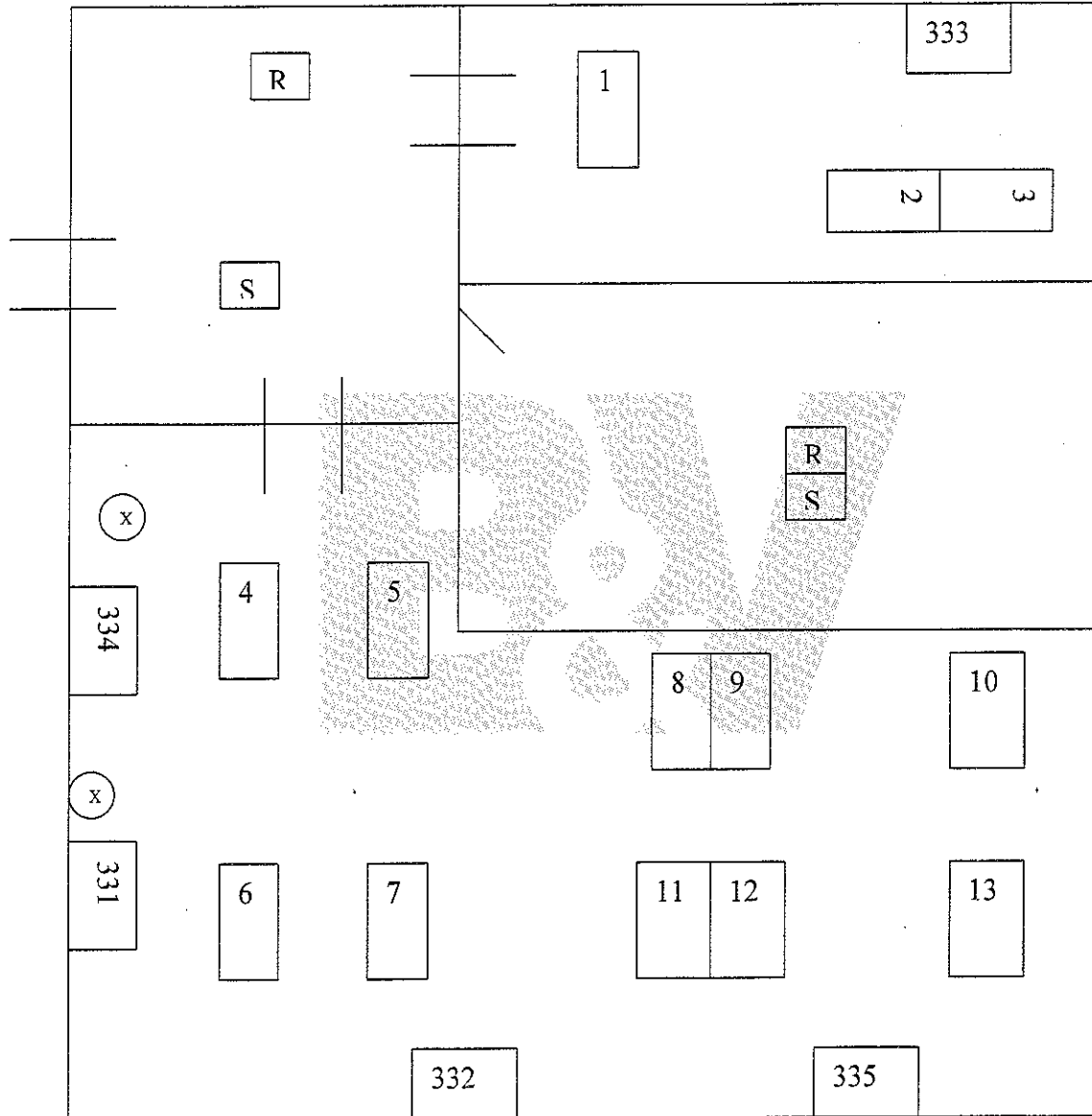
TEST AND HOOD CONDITIONS

Test Facility: As Renovated
Hood Connected Model: TFI Hood
Hood Size: 5'
Condition of Testing Performed: As Installed
Amount of Material Storage in Hood: 0%

Sash Type: Vertical
Sash Stops: N/A
Baffle Position: N/A

PRELIMINARY DATA-ROOM CONDITIONS

Note location and number of hoods, supply and return air diffusers, doors.
Test Lab Schematic



LOCAL FLOW VISUALIZATION CHALLENGE

Bottom bypass foil:	X	Good	Fair	Poor
Face edge containment (parallel to face and 6" behind face):	X	Good	Fair	Poor
Rear of hood (in 8" diameter of circle):	X	Good	Fair	Poor

LARGE VOLUME VISUALIZATION CHALLENGE

Center work surface release: X Good Fair Poor **Clearance Time:** 12 Seconds

DOWNFLOW FACE VELOCITY (results in linear feet per minute—lfm)

68	63	65	64	67	High:	72	Lfm
					Low:	50	Lfm
72	53	55	70	63	Average:	61	Lfm
					Downflow Area:	15.5 x 28 = 301	ft ²
54	50	53	57	67	Hood Airflow Volume:	185	Cfm

INFLOW FACE VELOCITY (results in linear feet per minute—lfm)

116	110	103	95	99	High:	116	Lfm
					Low:	95	Lfm
					Average:	105	Lfm
					Access Opening:	10 x 50 = 3.47	ft ²
					Hood Airflow Volume:	363	Cfm

HEPA FILTER INTEGRITY TEST:

Pass Fail

Instrumentation Model: TDA-2G Serial: 11881 Calibration Due: 3/10/2009

Upstream Aerosol Challenge 100 mg/l Downstream Penetration .001 %
(Aerosol penetration shall not exceed .005% to pass)

PARTICULATE MONITORING: Particle Size = .5 microns (particles per cubic meter)

Pass Fail

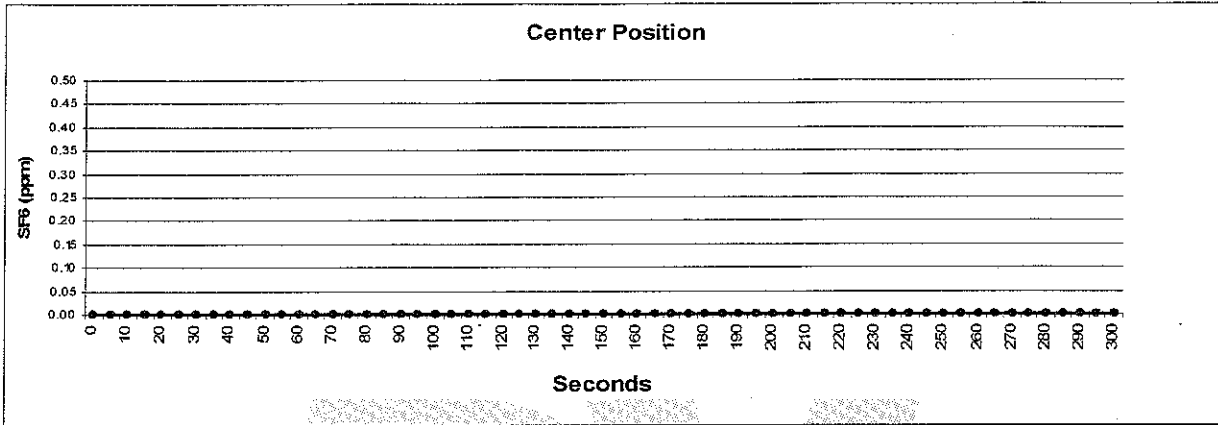
Instrumentation Model: 210 Serial: 36881-0997-287 Calibration Due: 4/7/2009

106	106	70
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TRACER GAS TESTING:

Center Position Data:

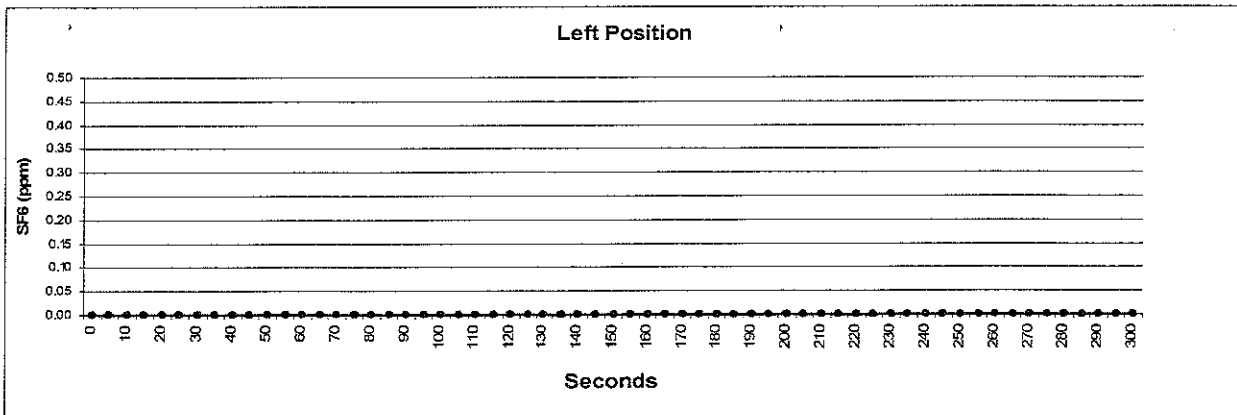
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

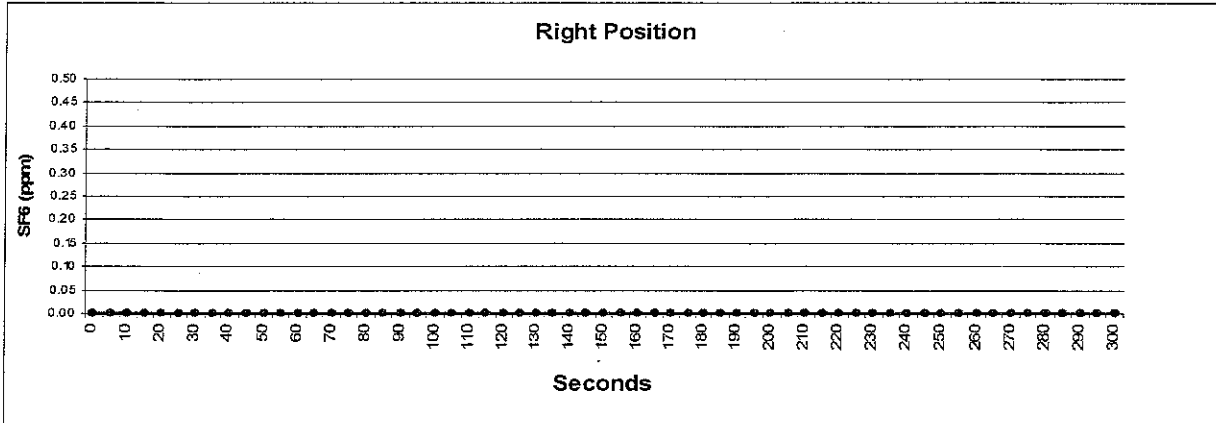
With gas ejector 7" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane. *Gas ejector at 6" would be below work surface.*



Average Left Reading: 0.00 ppm

Right Position Data:

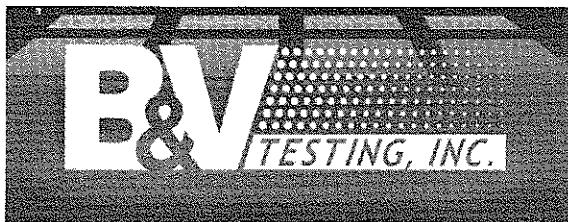
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

OVERALL RATING: 4.0 AI 0.000 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.



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ANSI/AIHA ASHRAE 110 TEST REPORT

Customer:	University of Vermont	Hood Location:	305C
Investigator:	Lee Diamond	Manufacturer:	TFI
Address:	Delehanty 667 Spear Street Burlington, VT 05405	Serial:	334
Test Performed by:	Mark Joyce	Date of Test:	06/30/2008
Test Number:	79381		

Test Procedures are performed in accordance with ANSI/AIHA Z9.5 American National Standard for Laboratory Ventilation and ANSI/ASHRAE 110 – 1995 Method of Testing Performance of Laboratory Fume Hoods.

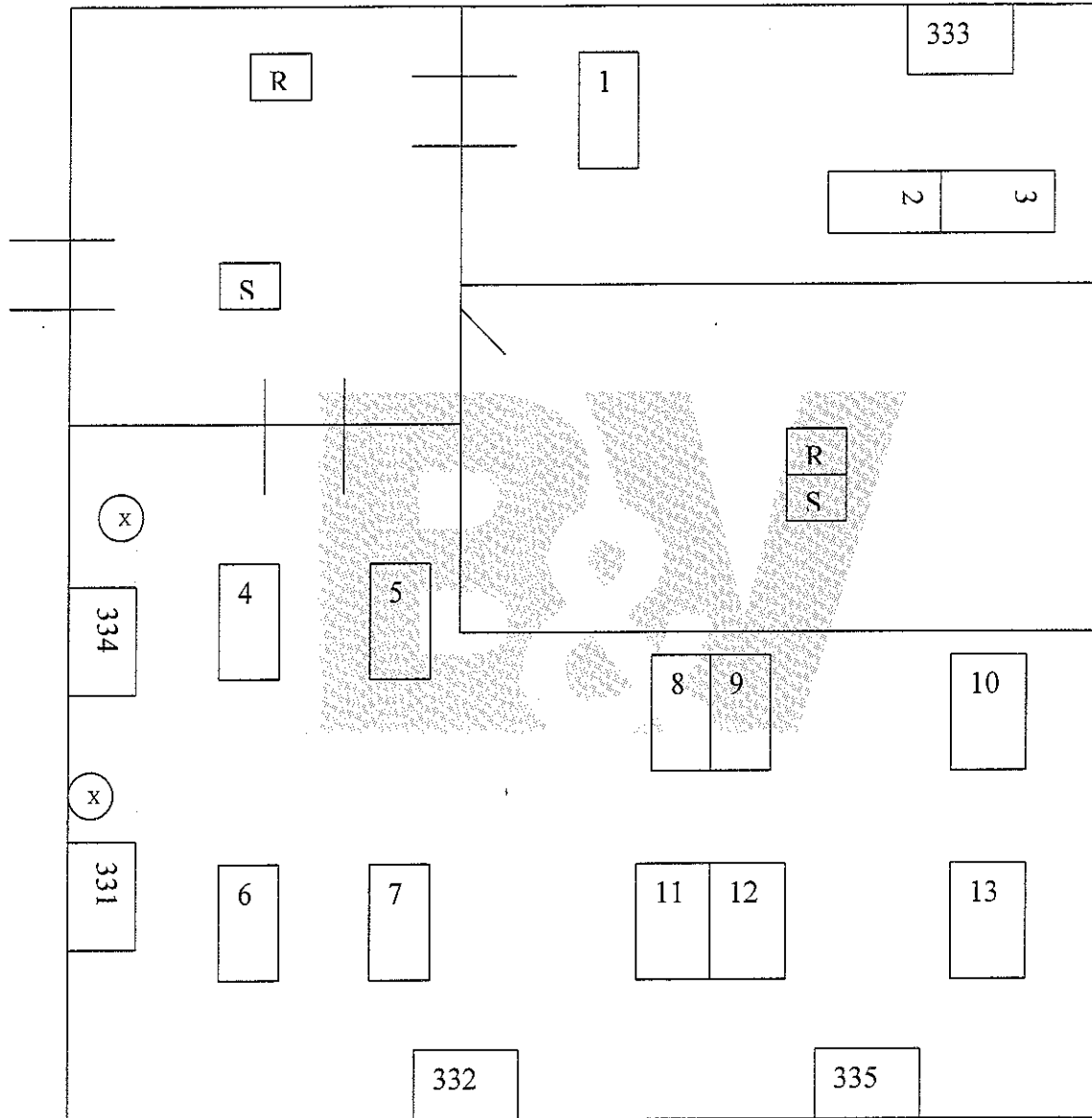
Tracer Gas:	Sulfur Hexafluoride 99.8-99.9%
Pressure Gauge Reading:	30.00 psig
Gas Ejector:	ASHRAE Ejector with .025" critical orifice
Calibrated Flow Rate:	4.0 liters/minute
Detection Instrument:	iTi Qualitek, Inc. 200 S/N 2001831/97583, calibration due date 10/23/2008
Face Velocity	TSI-8386 SN 55060571, calibration due date 2/18/2009

TEST AND HOOD CONDITIONS

Test Facility:	As Renovated	Sash Type:	Vertical
Hood Connected Model:	TFI Hood	Sash Stops:	N/A
Hood Size:	6'	Baffle Position:	N/A
Condition of Testing Performed:	As Installed		
Amount of Material Storage in Hood:	0%		

PRELIMINARY DATA-ROOM CONDITIONS

Note location and number of hoods, supply and return air diffusers, doors.
Test Lab Schematic



LOCAL FLOW VISUALIZATION CHALLENGE

Bottom bypass foil: X Good Fair Poor
 Face edge containment (parallel to face and 6" behind face): X Good Fair Poor
 Rear of hood (in 8" diameter of circle): X Good Fair Poor

LARGE VOLUME VISUALIZATION CHALLENGE

Center work surface release: X Good Fair Poor **Clearance Time:** 8 Seconds

DOWNFLOW FACE VELOCITY (results in linear feet per minute—lfm)

50	56	61	59	52	53	61	66	High:	70	Lfm
								Low:	50	Lfm
57	55	53	56	51	56	54	68	Average:	58	Lfm
								Downflow Area:	15.5 x 47 = 5.06	ft ²
61	62	60	60	58	56	55	70	Hood Airflow Volume:	293	Cfm

INFLOW FACE VELOCITY (results in linear feet per minute—lfm)

128	120	122	130	116	109	High:	130	Lfm
						Low:	109	Lfm
						Average:	121	Lfm
						Access Opening:	10 x 62 = 4.31	ft ²
						Hood Airflow Volume:	522	Cfm

HEPA FILTER INTEGRITY TEST:

Pass Fail

Instrumentation Model: TDA-2G Serial: 11881 Calibration Due: 3/10/2009

Upstream Aerosol Challenge 92 mg/l Downstream Penetration .006 %
 (Aerosol penetration shall not exceed .005% to pass)

PARTICULATE MONITORING: Particle Size = .5 microns (particles per cubic meter)

Pass Fail

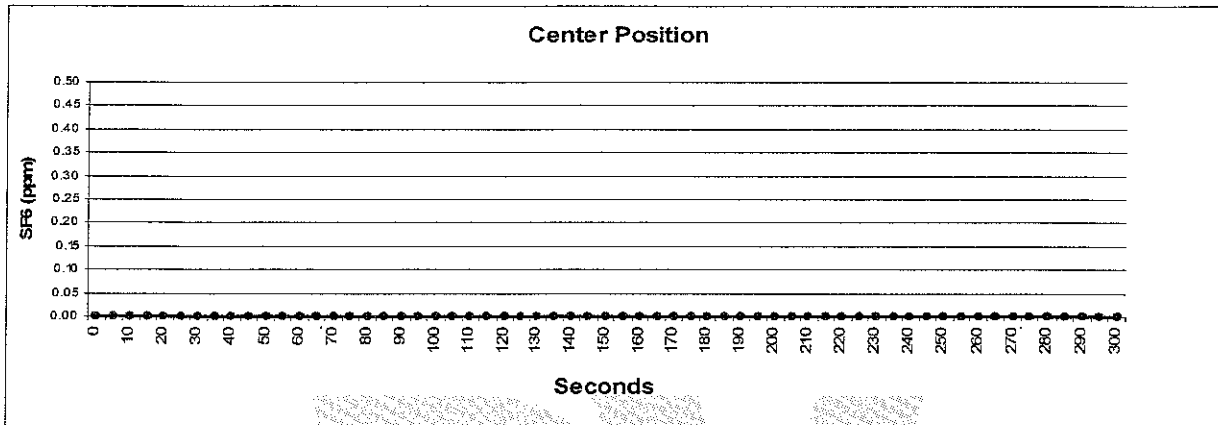
Instrumentation Model: 210 Serial: 36881-0997-287 Calibration Due: 4/7/2009

106	0	70
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TRACER GAS TESTING:

Center Position Data:

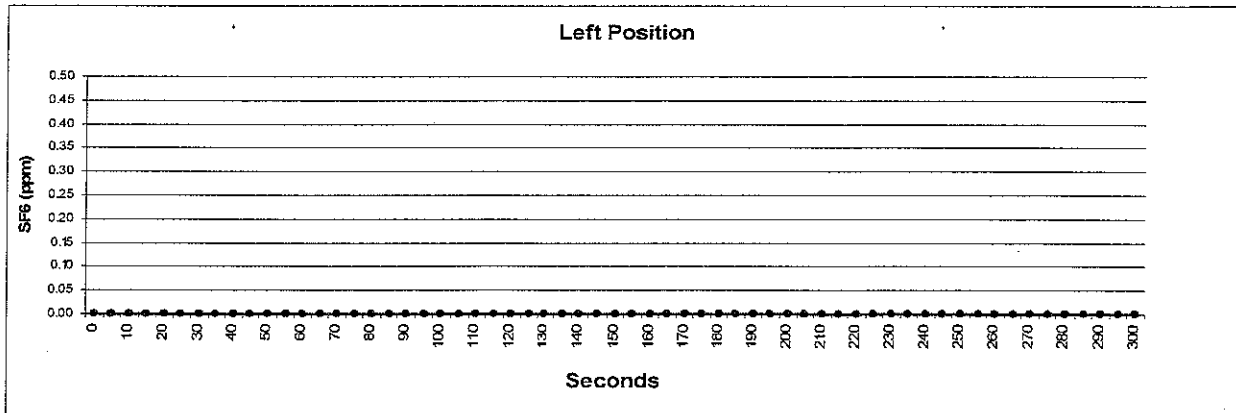
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

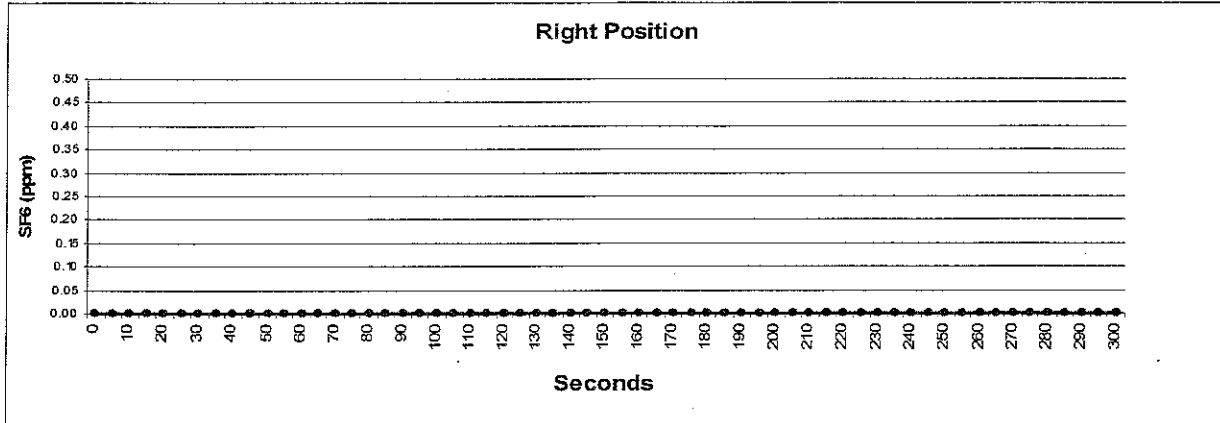
With gas ejector 7" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane. *Gas ejector at 6" would be below work surface.*



Average Left Reading: 0.00 ppm

Right Position Data:

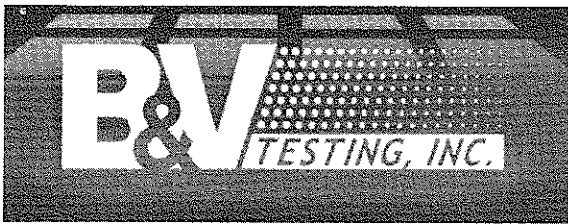
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.



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ANSI/AIHA ASHRAE 110 TEST REPORT

Customer:	University of Vermont	Hood Location:	305C
Investigator:	Lee Diamond	Manufacturer:	TFI
Address:	Delehanty 667 Spear Street Burlington, VT 05405	Serial:	332
Test Performed by:	Mark Joyce	Date of Test:	06/30/2008
Test Number:	79212		

Test Procedures are performed in accordance with ANSI/AIHA Z9.5 American National Standard for Laboratory Ventilation and ANSI/ASHRAE 110 – 1995 Method of Testing Performance of Laboratory Fume Hoods.

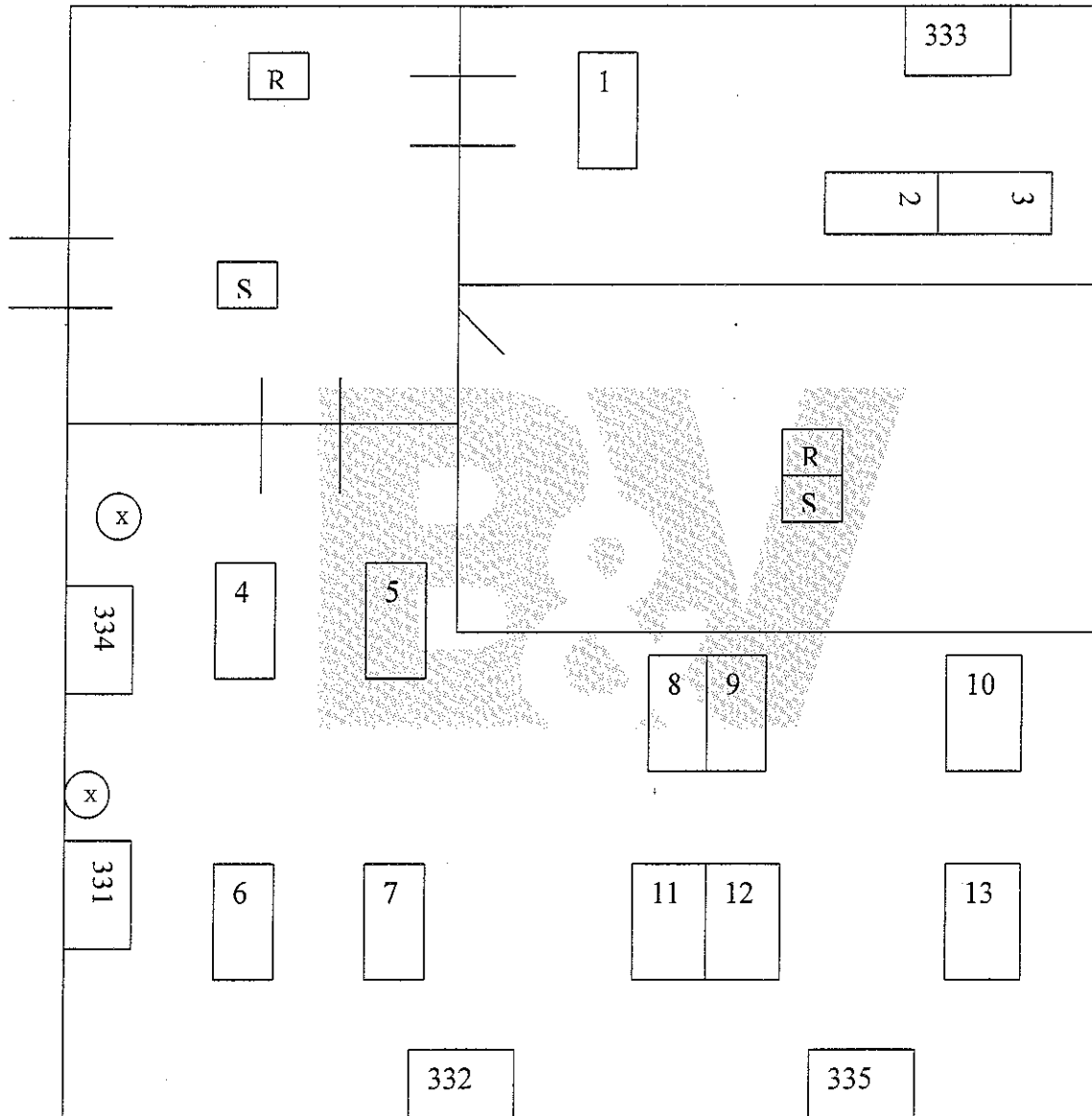
Tracer Gas:	Sulfur Hexafluoride 99.8-99.9%
Pressure Gauge Reading:	30.00 psig
Gas Ejector:	ASHRAE Ejector with .025" critical orifice
Calibrated Flow Rate:	4.0 liters/minute
Detection Instrument:	iTi Qualitek, Inc. 200 S/N 2001831/97583, calibration due date 10/23/2008
Face Velocity	TSI-8386 SN 55060571, calibration due date 2/18/2009

TEST AND HOOD CONDITIONS

Test Facility:	As Renovated	Sash Type:	Vertical
Hood Connected Model:	TFI Hood	Sash Stops:	N/A
Hood Size:	6'	Baffle Position:	N/A
Condition of Testing Performed:	As Installed		
Amount of Material Storage in Hood:	0%		

PRELIMINARY DATA-ROOM CONDITIONS

Note location and number of hoods, supply and return air diffusers, doors.
Test Lab Schematic



LOCAL FLOW VISUALIZATION CHALLENGE

Bottom bypass foil: X Good Fair Poor
 Face edge containment (parallel to face and 6" behind face): X Good Fair Poor
 Rear of hood (in 8" diameter of circle): X Good Fair Poor

LARGE VOLUME VISUALIZATION CHALLENGE

Center work surface release: X Good Fair Poor **Clearance Time:** 10 Seconds

DOWNFLOW FACE VELOCITY (results in linear feet per minute—lfm)

66	71	66	66	58	69	63	55	High:	75	Lfm
								Low:	55	Lfm
73	74	70	72	75	63	70	71	Average:	67	Lfm
								Downflow Area:	15.5 x 47 = 5.06	ft ²
70	71	66	64	61	55	73	70	Hood Airflow Volume:	340	Cfm

INFLOW FACE VELOCITY (results in linear feet per minute—lfm)

103	115	110	110	108	118	High:	118	Lfm
						Low:	103	Lfm
						Average:	111	Lfm
						Access Opening:	10 x 62 = 4.31	ft ²
						Hood Airflow Volume:	478	Cfm

HEPA FILTER INTEGRITY TEST:

Pass Fail

Instrumentation Model: TDA-2G Serial: 11881 Calibration Due: 3/10/2009

Upstream Aerosol Challenge 79 mg/l Downstream Penetration .002%
 (Aerosol penetration shall not exceed .005% to pass)

PARTICULATE MONITORING: Particle Size = .5 microns (particles per cubic meter)

Pass Fail

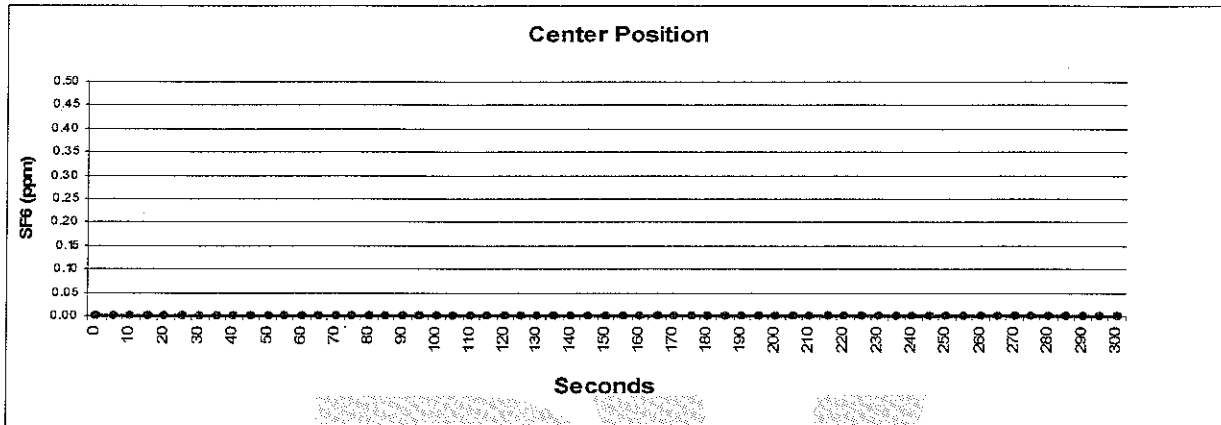
Instrumentation Model: 210 Serial: 36881-0997-287 Calibration Due: 4/7/2009

35	70	106
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TRACER GAS TESTING:

Center Position Data:

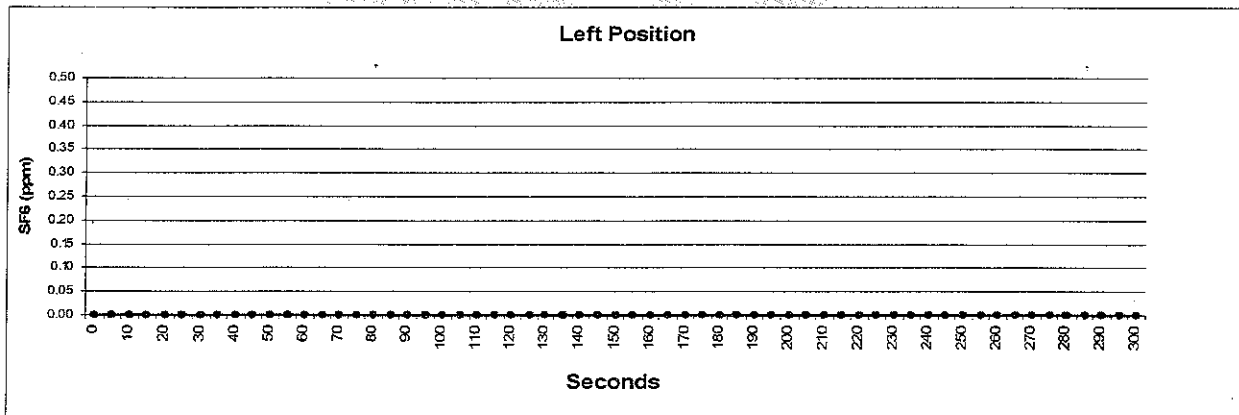
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

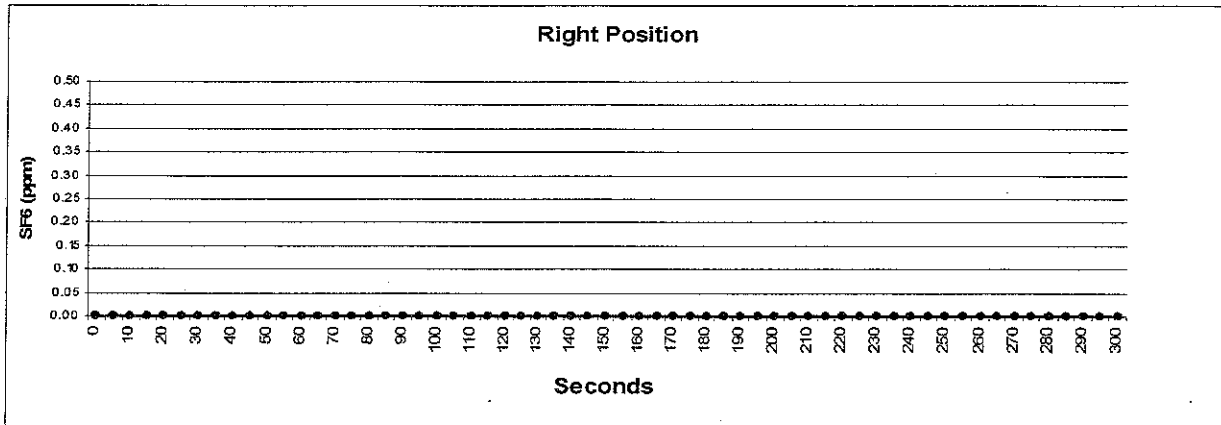
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannekin breathing zone 3" from sash plane.



Average Left Reading: 0.00 ppm

Right Position Data:

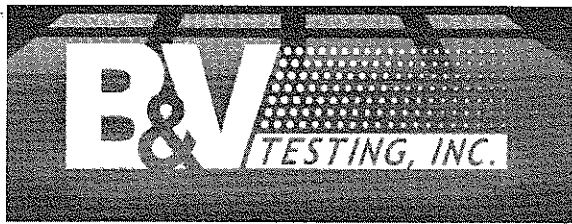
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.



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ANSI/AIHA ASHRAE 110 TEST REPORT

Customer:	University of Vermont	Hood Location:	305C
Investigator:	Lee Diamond	Manufacturer:	TFI
Address:	Delehanty 667 Spear Street Burlington, VT 05405	Serial:	333
Test Performed by:	Mark Joyce	Date of Test:	06/30/2008
Test Number:	79390		

Test Procedures are performed in accordance with ANSI/AIHA Z9.5 American National Standard for Laboratory Ventilation and ANSI/ASHRAE 110 – 1995 Method of Testing Performance of Laboratory Fume Hoods.

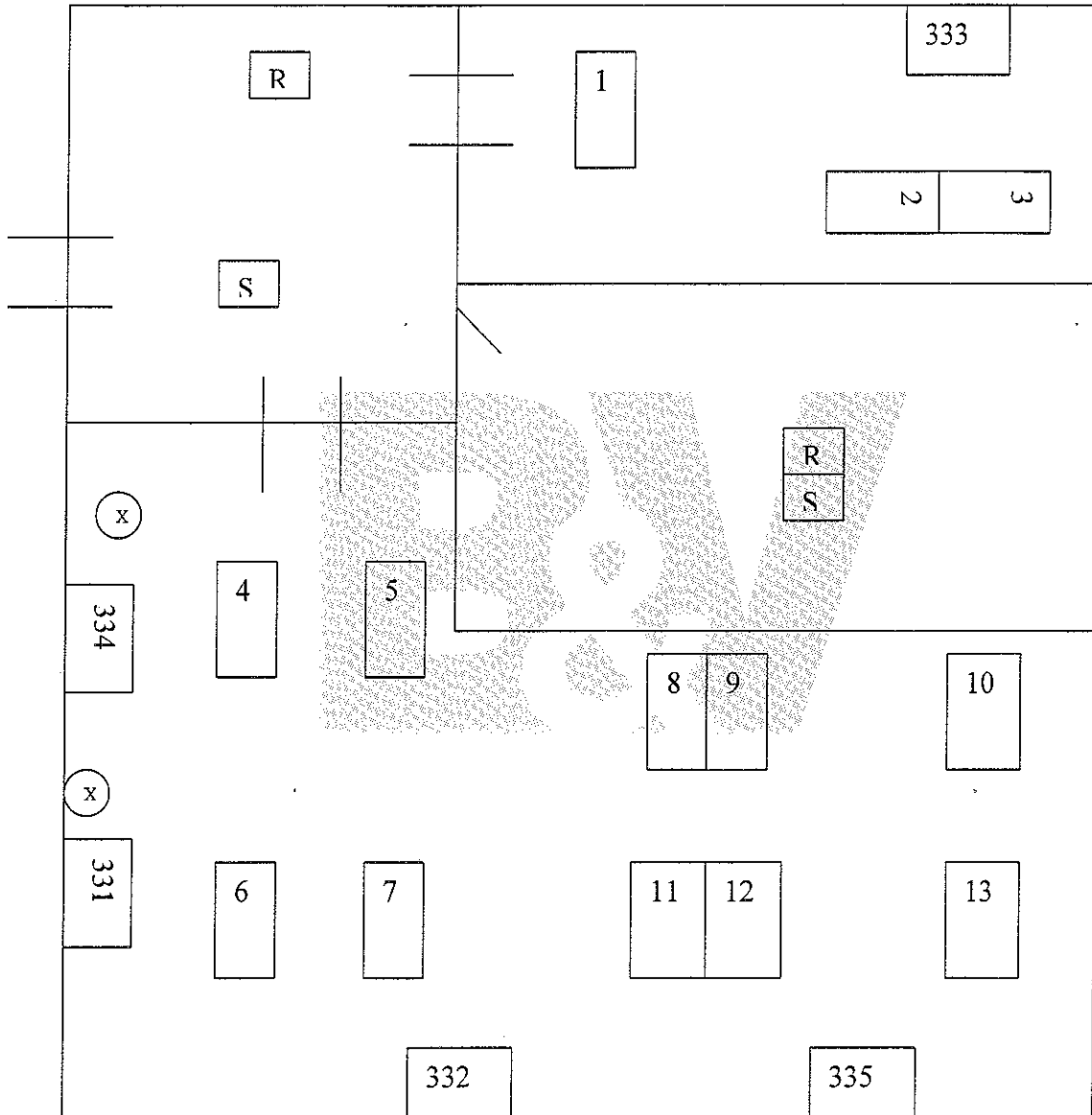
Tracer Gas:	Sulfur Hexafluoride 99.8-99.9%
Pressure Gauge Reading:	30.00 psig
Gas Ejector:	ASHRAE Ejector with .025" critical orifice
Calibrated Flow Rate:	4.0 liters/minute
Detection Instrument:	iTi Qualitek, Inc. 200 S/N 2001831/97583, calibration due date 10/23/2008
Face Velocity	TSI-8386 SN 55060571, calibration due date 2/18/2009

TEST AND HOOD CONDITIONS

Test Facility:	As Renovated	Sash Type:	Vertical
Hood Connected Model:	TFI Hood	Sash Stops:	N/A
Hood Size:	6'	Baffle Position:	N/A
Condition of Testing Performed:	As Installed		
Amount of Material Storage in Hood:	0%		

PRELIMINARY DATA-ROOM CONDITIONS

Note location and number of hoods, supply and return air diffusers, doors.
Test Lab Schematic



LOCAL FLOW VISUALIZATION CHALLENGE

Bottom bypass foil: X Good Fair Poor
 Face edge containment (parallel to face and 6" behind face): X Good Fair Poor
 Rear of hood (in 8" diameter of circle): X Good Fair Poor

LARGE VOLUME VISUALIZATION CHALLENGE

Center work surface release: X Good Fair Poor Clearance Time: 11 Seconds

DOWNFLOW FACE VELOCITY (results in linear feet per minute—lfm)

71	70	72	70	70	63	64	66	High:	74	Lfm
								Low:	54	Lfm
74	70	65	63	76	61	65	69	Average:	67	Lfm
								Downflow Area:	15.5 x 47 = 5.06	ft ²
70	68	66	66	63	64	71	54	Hood Airflow Volume:	340	Cfm

INFLOW FACE VELOCITY (results in linear feet per minute—lfm)

117	120	118	112	107	113	High:	120	Lfm
						Low:	107	Lfm
						Average:	115	Lfm
						Access Opening:	10 x 62 = 4.31	ft ²
						Hood Airflow Volume:	493	Cfm

HEPA FILTER INTEGRITY TEST:

Pass Fail

Instrumentation Model: TDA-2G Serial: 11881 Calibration Due: 3/10/2009

Upstream Aerosol Challenge 79 mg/l Downstream Penetration .007%
(Aerosol penetration shall not exceed .005% to pass)

PARTICULATE MONITORING: Particle Size = .5 microns (particles per cubic meter)

Pass Fail

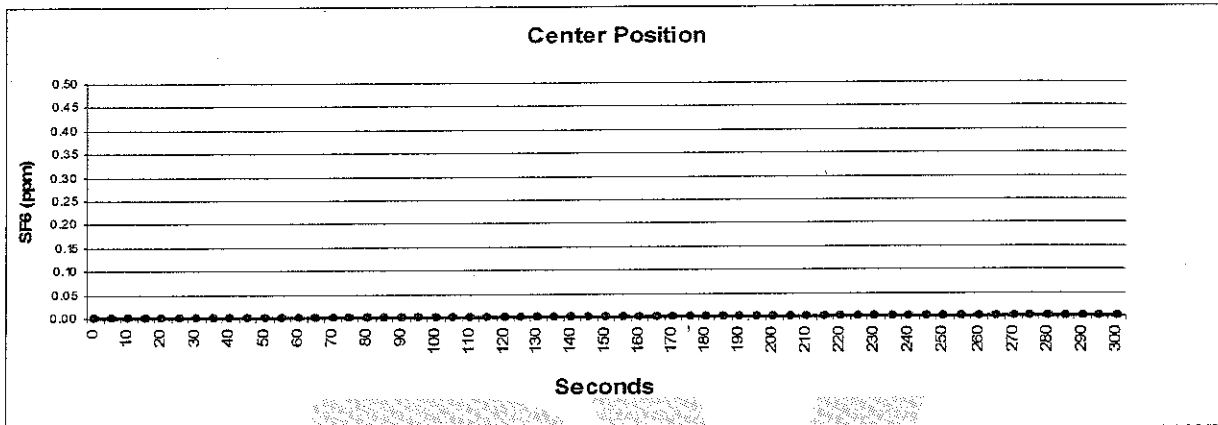
Instrumentation Model: 210 Serial: 36881-0997-287 Calibration Due: 4/7/2009

0	35	0
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TRACER GAS TESTING:

Center Position Data:

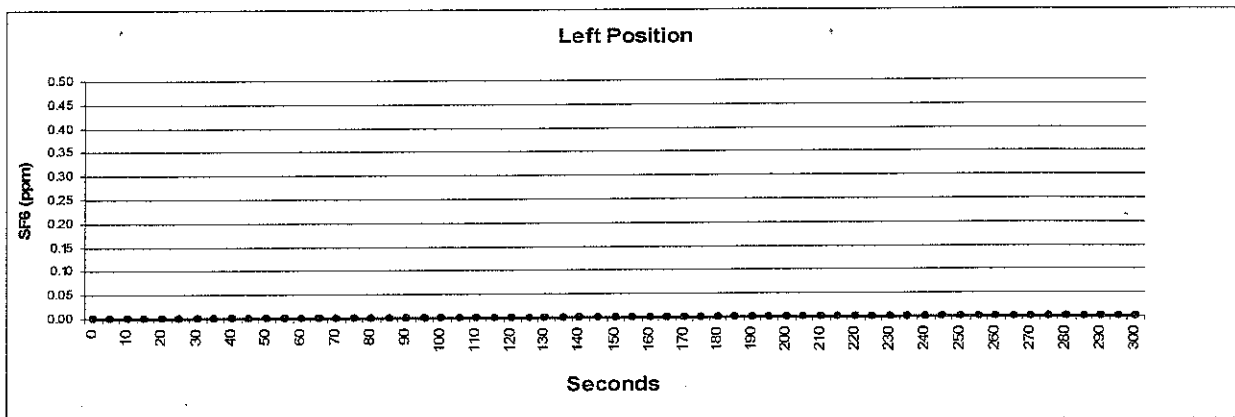
With gas ejector 6" from hood face and equidistant from inside walls. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Center Reading: 0.00 ppm

Left Position Data:

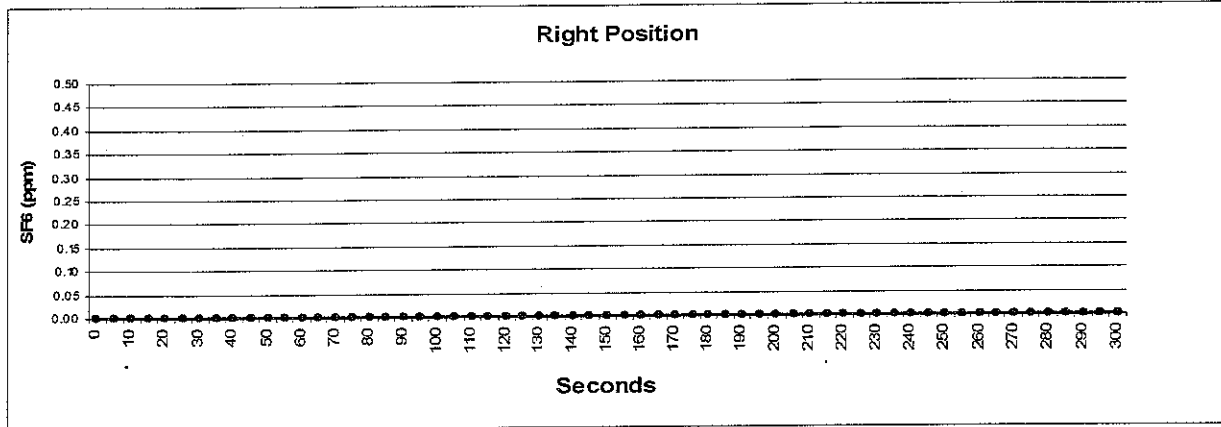
With gas ejector 7" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane. *Gas ejector at 6" would be below work surface.*



Average Left Reading: 0.00 ppm

Right Position Data:

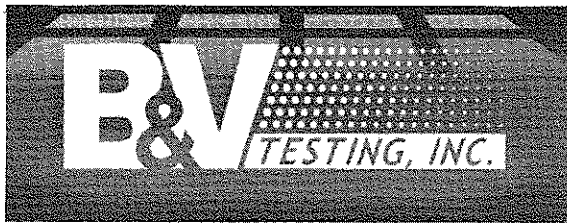
With gas ejector 6" from hood face and 12" from left wall. Sixty readings taken at 5 second intervals for 5 minutes in ppm with mannequin breathing zone 3" from sash plane.



Average Right Reading: 0.00 ppm

OVERALL RATING: 4.0 AI 0.00 ppm

Test results do conform to recommended tracer gas escape level acceptance criteria of 4.0 AI 0.10 ppm per ANSI/AIHA Z9.5.



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University of Vermont
Delehanty

June 30, 2008

As Found HEPA Leak Testing Data
Room 305

Room	HEPA ID	HEPA Filter Velocity (feet per minute)	HEPA Filter Velocity (feet per minute)	Average HEPA Velocity (feet per minute)	Downstream HEPA Particulate Monitoring (.5 microns)
305A	1	98	100	99	0
305A	2	102	103	103	0
305A	3	84	86	85	35
305C	4	96	92	94	35
305C	5	90	92	91	35
305C	6	85	90	88	0
305C	7	89	94	92	35
305C	8	86	85	86	35
305C	9	89	93	92	0
305C	10	97	94	96	0
305C	11	99	101	100	35
305C	12	112	96	104	0
305C	13	93	99	97	35

Schematic for HEPA filter location

