

Certificate No. 33624	Page 1 of 4 Pages
Customer: Lam Geotechnics Limited	
Address : 11/F, Centre Point, 181-185 Gloucester	r Road, Wanchai, Hong Kong.
Order No. : Q31494	Date of receipt : 30-May-13
Item Tested	
Description : Digital Sound Level Meter	
Manufacturer : B&K	
Model : Type 2236	Serial No. : 2100736
Test Conditions	
Date of Test: 3-Jun-13	Supply Voltage :
Ambient Temperature : (23 ± 3)°C	Relative Humidity : (50 ± 25) %
Test Specifications	
Calibration check.	
Ref. Document/Procedure : Z01.	
Test Results	
All results were within the IEC 651 Type 1, IEC 804 Typ	e 1 & IEC 1260 Class 1 specification.
The results are shown in the attached page(s).	

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S017	Multi-Function Generator	C127181	SCL-HKSAR
S024	Sound Level Calibrator	30620	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI). The test results apply to the above Unit-Under-Test only

Calibrated by :

Liam Wong

Approved by :

Dorothy Cheuk

Date: 3-Jun-13

This Certificate is issued by: Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong. Tel: 2425 8801 Fax: 2425 8646

The copyright of this certificate is owned by Hong Kong Calibration Ltd.. It may not be reproduced except in full.



Certificate No. 33624

Page 2 of 4 Pages

Results :

## 1. SPL Accuracy

	l	JUT Setting				
Range	Parameter			Applied Value (dB)	UUT Reading (dB)	
20 - 100 SPL	SPL dBA F		94.0	93.8		
		S		93.8		
	dBC	F		93.8		
	dBL	F		93.9		
	1 kHz	F		93.8		
40 - 120 SPL	SPL	120 SPL 0	dBA	F	94.0	93.9
		1 kHz	F		93.9	
	SPL	dBA	F	114.0	113.8	
			S		113.8	
		dBC	F	1	113.9	
		dBL	F	1	113.9	
		1 kHz	F		113.8	

IEC 651 Type 1 Spec. :  $\pm$  0.7 dB Uncertainty :  $\pm$  0.1 dB

 Level Stability : 0.0 dB IEC 651 Type 1 Spec. : ± 0.3 dB Uncertainty : ± 0.1 dB

## 3. Linearity

## 3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
140 114.0		113.9	0.0	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)		
110	84.0	83.9	0.0	1
100	74.0	73.9	0.0	1
100	64.0	63.9	0.0	
100	54.0	53.9	0.0	

Uncertainty :  $\pm 0.1 \text{ dB}$ 



## Certificate No. 33624

Page 3 of 4 Pages

## 3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)		
	95.0	94.9	0.0	± 0.2 dB

Uncertainty :  $\pm 0.1 \text{ dB}$ 

# 4. Frequency Weighting

A weighting

Frequency	uency Attenuation (dB) IEC 651 Type 1 Spe		
31.5 Hz	-39.6	- 39.4 dB, ± 1.5 dB	
63 Hz	-26.4	- 26.2 dB, ± 1.5 dB	
125 Hz	-16.3	- 16.1 dB, ± 1 dB	
250 Hz	-8.8	- $8.6 \text{ dB}, \pm 1 \text{ dB}$	
500 Hz	-3.3	- 3.2 dB, ± 1 dB	
1 kHz	0.0 (Ref)	$0 \text{ dB}, \pm 1 \text{ dB}$	
2 kHz	+1.2	$+ 1.2 \text{ dB}, \pm 1 \text{ dB}$	
4 kHz	+0.9	$+ 1.0 \text{ dB}, \pm 1 \text{ dB}$	
8 kHz	-1.2 - 1.1 dB, + 1.5 dB ~		
16 kHz	-6.8 - 6.6 dB, + 3 dB ~ -		

Uncertainty :  $\pm 0.1 \text{ dB}$ 

## 5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	-
1/10	40.0	39.9	± 0.5 dB
$1/10^{2}$	40.0	39.8	
$1/10^{3}$	40.0	39.7	± 1.0 dB
$1/10^{4}$	40.0	39.5	

Uncertainty :  $\pm 0.1 \text{ dB}$ 



Certificate No. 33624

Page 4 of 4 Pages

## 6. Filter Response

Filter S	Filter Setting		Attenuation (dB)		IEC 1260 Class 1 Spec.
125	Hz		-63.6		<- 61
250	Hz		-44.8		< - 42
500	Hz		-21.0		< - 17.5
707	Hz		-3.7		- 2~- 5
1	kHz (	Ref.)	0.0	(Ref.)	
1.414	kHz		-4.1		- 2~- 5
2	kHz		-21.4		< - 17.5
4	kHz		-45.0		< - 42
8	kHz		-63.9		<- 61

Uncertainty :  $\pm 0.2 \text{ dB}$ 

Remark : 1. UUT : Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. Atmospheric Pressure : 996 hPa
- 4. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.

----- END -----



Certificate No. 34228			Page 1 of 2 Pages		
Customer :	Lam Geotechnics Limited				
Address :	11/F, Centre Point, 181-185 (	Gloucester Road, War	nchai, Hong Kong.		
				:	21-Jun-13
Item Tested					
Description :	Sound Level Calibrator				
Manufacturer :					
	NC-73		Serial No.	: 1070	7358
Test Conditio	ons				
Date of Test :	25-Jun-13		Supply Voltage	. :	
Ambient Temp			<b>Relative Humic</b>	lity : (50 ±	: 25) %
Test Specific					
Calibration chec Ref. Document/	sk. Procedure : F21, Z02.				
Test Results	5				
	within the manufacturer's spe shown in the attached page(s				
Main Test equip	oment used:				
Equipment No.		Cert. No.		Traceabl	le to
S014	Spectrum Analyzer	30259			C & SCL-HKSAR
S024	Sound Level Calibrator	30620		NIM-PR	C & SCL-HKSAR
S041	Universal Counter	28347		SCL-HK	
S206	Sound Level Meter	30655		SCL-HK	SAR
will not include allo overloading, mis-h for any loss or dan	n this Calibration Certificate only relativance for the equipment long term andling, or the capability of any othe nage resulting from the use of the ec	drift, variations with environ r laboratory to repeat the m quipment.	neasurement. Hong Ko	lon and sho	on during tranoportation,
The test equipmen The test results ap	nt used for calibration are traceable t ply to the above Unit-Under-Test on	io international System of U	inits (51).		

by : <u>Min</u> Liam Wong

Calibrated by :

in

Approved by : \_\_\_\_\_\_\_\_ Dorothy Cheuk

Date: 25-Jun-13

This Certificate is issued by: Hong Kong Calibration Ltd. Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong. Tel: 2425 8801 Fax: 2425 8646

The copyright of this certificate is owned by Hong Kong Calibration Ltd.. It may not be reproduced except in full.



Certificate No. 34228

Page 2 of 2 Pages

Results :

## 1. Level Accuracy (at 1 kHz)

UUT Nominal Value	Measured Value	Mfr's Spec.
	93.88 dB	± 1 dB
94 dB	75.00 dD	

Uncertainty : ± 0.2 dB

#### 2. Frequency Accuracy

UUT Nominal Value	Measured Value	Mfr's Spec.
1 kHz	0.995 kHz	± 2 %

Uncertainty : ± 0.1 %

- **3.** Level Stability : 0.0 dB Uncertainty : ± 0.01 dB
- Total Harmonic Distortion : < 0.2 % Mfr's Spec. : < 3 % Uncertainty : ± 2.3 % of reading

# Remark : 1. UUT : Unit-Under-Test

- 2. The uncertainty claimed is for a confidence probability of not less than 95%.
- 3. The above measured values were the mean of 3 measurements.
- 4. Atmospheric Pressure : 999 hPa

----- END -----



TISCH ENVIROMENTAL, INC. 145 SOUTH MIAMI AVE. VILLAGE OF CLEVES, OH 45002 513.467.9000 877.263.7610 TOLL FREE 513.467.9009 FAX WWW.TISCH-ENV.COM

#### AIR POLLUTION MONITORING EQUIPMENT ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Ju Operator		Rootsmeter Orifice I.I		9438320 0005	Ta (K) - Pa (mm) -	300 759.46
PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1 2 3 4 5	NA NA NA NA NA	NA NA NA NA NA	1.00 1.00 1.00 1.00 1.00	1.3910 0.9830 0.8800 0.8380 0.6930	3.2 6.4 7.9 8.8 12.7	2.00 4.00 5.00 5.50 8.00

#### DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9884 0.9843 0.9822 0.9811 0.9760	0.7106 1.0013 1.1161 1.1708 1.4084	1.4090 1.9926 2.2278 2.3365 2.8180		0.9958 0.9916 0.9895 0.9884 0.9832	0.7159 1.0087 1.1244 1.1795 1.4188	0.8888 1.2570 1.4054 1.4740 1.7777
Qstd slop intercep coefficie y axis =	t (b) = ent (r) =	2.01968 -0.02746 0.99999 Pa/760)(298/3	 [a)]	Qa slop intercep coeffici y axis =	t (b) =	1.26469 -0.01732 0.99999 Fa/Pa)]

#### CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa] Qa = Va/Time

For subsequent flow rate calculations:

Qstd =  $1/m\{ [SQRT(H2O(Pa/760)(298/Ta))] - b \}$ Qa =  $1/m\{ [SQRT(H2O(Ta/Pa)] - b \}$ 



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	Calbration Date	:	18-Jan-14
Equipment no.	:	EL452	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		289		Kelvin	Pressure, P	a		1026	mmHg
	Orifice Transfer Standard Information								
Equipment No.		EL086		Slope, m <sub>c</sub>	2.019	68	Intercept, b	-0.0	2746
Last Calibration Date		15-Jul-1	3		(Hxl	P <sub>a</sub> / 101	3.3 x 298	$/T_{a})^{1/2}$	
Next Calibration Date		15-Jul-1	4		=	m <sub>c</sub> x	$Q_{std} + b_c$	;	
Calibration of RSP									
Calibration	Mar	nometer R	eading	c	) <sub>std</sub>	Continu	ious Flow	IC	
Point	H (inches of water)		(m <sup>3</sup>	/ min.)	Reco	rder, W	(W(P <sub>a</sub> /1013.3x29	8/T <sub>a</sub> ) <sup>1/2</sup> /35.31)	
	(up)	(down)	(difference)	X-	axis	(C	FM)	Y-ax	is
1	6.2	6.2	12.4	1.	7951		60	61.30	77
2	5.1	5.1	10.2	1.	6294		51	52.11	16
3	4.1	4.1	8.2	1.	4623		41	41.89	36
4	2.5	2.5	5.0	1.	1449	:	25	25.54	49
5	1.5	1.5	3.0	0.	8899		13	13.28	33
By Linear Regression of	Y on X								
	Slope, m	=	53.1	762	Inte	ercept, b =	= -3	34.7843	_
Correlation Co	pefficient*	=	0.99	992					
Calibration	Accepted	=	Yes/	No**					

**	Delete	as	appropriate.
----	--------	----	--------------

Remarks :					
Calibrated by	:	Henry	Checked by	:	Derek Lo
Date	:	18-Jan-14	Date	:	18-Jan-14



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA2a	Calbration Date	:	18-Jan-14
Equipment no.	:	EL449	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		289		Kelvin	elvin <b>Pressure, P</b> a 1026 mmHg				
	Orifice Transfer Standard Information								
Equipment No.		EL086		Slope, m <sub>c</sub>	2.019	68	Intercept, b	-0.02	746
Last Calibration Date		15-Jul-1	3		(Hxl	P <sub>a</sub> / 10	13.3 x 298	$/T_{a})^{1/2}$	
Next Calibration Date		15-Jul-14	4		=	m <sub>c</sub> x	$Q_{std} + b_{c}$	:	
			С	alibration	of RSP				
Calibration	Mar	nometer R	eading	C	Q <sub>std</sub>	Contin	uous Flow	IC	
Point	Н (	inches of	water)	(m <sup>3</sup>	/ min.)	Reco	order, W	(W(P <sub>a</sub> /1013.3x298	/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X	-axis	(0	CFM)	Y-axi	S
1	6.1	6.1	12.2	1.	7807		59	60.2859	
2	5.1	5.1	10.2	1.	6294		51	52.111	6
3	4.0	4.0	8.0	1.	4446		42	42.915	54
4	2.5	2.5	5.0	1.	1449		28	28.610	)3
5	1.4	1.4	2.8	0.	8602		16	16.348	37
By Linear Regression of	Y on X								
	Slope, m	=	47.6	578	Inte	ercept, b	= -2	25.3287	_
Correlation Co	pefficient*	=	0.99	993					
Calibration	Accepted	=	Yes/	No**	<u>.</u>				

** Delete as appropriate.	

Remarks :					
Calibrated by	:	Henry	Checked by	:	Derek Lo
Date	:	18-Jan-14	Date	:	18-Jan-14

## Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA3a	Calbration Date :	18-Dec-13
Equipment no.	:	EL333	Calbration Due Dat	18-Feb-14

#### CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		284		Kelvin <b>Pressure, P</b> a				1020	mmHg
Orifice Transfer Standard Information									
Equipment No.		EL086 Slope, m <sub>c</sub> 2.01968 Intercept, bc -0.02						-0.02746	
Last Calibration Date		15-Jul-1	3		(HxI	P <sub>a</sub> / 10	13.3 x 298	/T <sub>a</sub> ) <sup>1/2</sup>	2
Next Calibration Date		15-Jul-1	4		=	m <sub>c</sub> >	$\alpha Q_{std} + b_c$		
Calibration of RSP									
Calibration	Mar	nometer R	eading	G	l <sub>std</sub>	Contir	uous Flow		IC
Point	Н(	inches of	water)	(m <sup>3</sup>	<sup>3</sup> / min.) Recorder		order, W	(W(P <sub>a</sub> /1013	.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	x-	axis	(	CFM)		Y-axis
1	6.1	6.1	12.2	1.1	7910		62		63.7194
2	5.0	5.0	10.0	1.0	6227		52	Ę	53.4421
3	4.0	4.0	8.0	1.4	4529		42	2	13.1648
4	2.6	2.6	5.2	1.1	1740		25	2	25.6933
5	1.6	1.6	3.2	0.9	9239		12	1	12.3328
By Linear Regression of	Y on X								
	Slope, m	=	59.7	145	Int	ercept, b	= -4	43.5049	
Correlation Co	pefficient*	=	0.99	996					
Calibration	Accepted	=	Yes/	No**					

 $^{\ast}$  if Correlation Coefficient < 0.990, check and recalibration again.

\*\* Delete as appropriate.

Remarks :

Calibrated by	:	Henry	Checked by	 Derek Lo
Date	: _	18-Dec-13	Date :	 18-Dec-13





# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	СМАЗа	Calbration Date	:	20-Feb-14
Equipment no.	:	EL333	Calbration Due Dat	:	20-Apr-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		288		Kelvin	Pressure, P	а		1020 mmHg	
Orifice Transfer Standard Information									
Equipment No.		EL086		Slope, m <sub>c</sub>	2.019	68	Intercept, b	<b>c</b> -0.02746	
Last Calibration Date		15-Jul-1	3		(HxI	P <sub>a</sub> / 101	13.3 x 298	$/T_{a}$ ) <sup>1/2</sup>	
Next Calibration Date		15-Jul-1	4		=	m <sub>c</sub> x	$Q_{std} + b_{c}$		
Calibration of RSP									
Calibration	Mar	nometer R	eading	c	) <sub>std</sub>	Continu	uous Flow	IC	
Point	H (inches of water)		(m <sup>3</sup>	/ min.)	Reco	order, W	(W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.3	31)	
	(up)	(down)	(difference)	X-	axis	(C	CFM)	Y-axis	
1	6.1	6.1	12.2	1.	7786		62	63.2754	
2	5.0	5.0	10.0	1.	6115		52	53.0697	
3	4.0	4.0	8.0	1.	4428		41	41.8434	
4	2.5	2.5	5.0	1.	1435		25	25.5143	
5	1.6	1.6	3.2	0.	9175		13	13.2674	
By Linear Regression of	Y on X								
	Slope, m	=	58.0	066	Int	ercept, b	=	10.5854	
Correlation Coefficient* = 0.9992									
Calibration	Calibration Accepted = Yes/No**								

** Delete as appro	opriate.				
Remarks :					
Calibrated by	:	Henry	Checked by	:	Derek Lo
Date	:	20-Feb-14	Date	:	20-Feb-14



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	Calbration Date	:	18-Jan-14
Equipment no.	:	EL390	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		289		Kelvin	Pressure, P	a		1026	mmHg
Orifice Transfer Standard Information									
Equipment No.		EL086		Slope, m <sub>c</sub>	2.019	68	Intercept, b	<b>c</b> -0.02	746
Last Calibration Date		15-Jul-13	3		(Hxl	P <sub>a</sub> / 10	13.3 x 298	/T <sub>a</sub> ) <sup>1/2</sup>	
Next Calibration Date		15-Jul-14	4		=	m <sub>c</sub> x	$Q_{std} + b_{c}$		
Calibration of RSP									
Calibration	Mar	nometer Re	eading	C	Q <sub>std</sub>	Contin	uous Flow	IC	
Point	H (inches of water)		(m <sup>3</sup>	/ min.)	Reco	order, W	(W(P <sub>a</sub> /1013.3x298	/T <sub>a</sub> ) <sup>1/2</sup> /35.31)	
	(up)	(down)	(difference)	X-	axis	(0	CFM)	Y-axi	S
1	6.0	6.0	12.0	1.	7662		60	61.307	77
2	5.1	5.1	10.2	1.	6294		52	53.133	34
3	3.9	3.9	7.8	1.	4266		41	41.893	36
4	2.5	2.5	5.0	1.	1449		26	26.566	37
5	1.5	1.5	3.0	0.	8899		14	14.305	51
By Linear Regression of	Y on X								
	Slope, m	=	53.7	145	Inte	ercept, b	=	34.2208	_
Correlation Co	Correlation Coefficient* = 0.9994								
Calibration	Calibration Accepted = Yes/Ne**								

** Delete as appropriate.	
---------------------------	--

Remarks :					
Calibrated by	:	Henry	Checked by	:	Derek Lo
Date	:	18-Jan-14	– Date	:	18-Jan-14



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	СМА5а	Calbration Date	:	18-Jan-14
Equipment no.	:	EL380	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		289	)	Kelvin	Kelvin <b>Pressure, P</b> a 1026 mmHg			mmHg	
Orifice Transfer Standard Information									
Equipment No.		EL086		Slope, m <sub>c</sub>	2.019	68	Intercept, b	<b>c</b> -0.02	746
Last Calibration Date		15-Jul-1	3		(Hxl	P <sub>a</sub> / 101	13.3 x 298	/T <sub>a</sub> ) <sup>1/2</sup>	
Next Calibration Date		15-Jul-1	4		=	m <sub>c</sub> x	$Q_{std} + b_{c}$		
Calibration of RSP									
Calibration	Mar	nometer R	eading	C	Q <sub>std</sub>	Continu	uous Flow	IC	
Point	H (inches of water)		(m <sup>3</sup>	/ min.)	Reco	order, W	(W(P <sub>a</sub> /1013.3x298/	/T <sub>a</sub> ) <sup>1/2</sup> /35.31)	
	(up)	(down)	(difference)	X	-axis	(0	CFM)	Y-axis	\$
1	6.0	6.0	12.0	1.	7662		60	61.307	7
2	5.0	5.0	10.0	1.	6135		51	52.111	6
3	4.0	4.0	8.0	1.	4446		42	42.915	,4
4	2.5	2.5	5.0	1.	1449		26	26.566	7
5	1.5	1.5	3.0	0.	8899		13	13.283	,3
By Linear Regression of	Y on X								
	Slope, m	=	54.6	083	Inte	ercept, b	=	35.6736	_
Correlation Co	Correlation Coefficient* = 0.9998								
Calibration	Accepted	=	Yes/	No**					

**	Delete	e as	appropriate.	

Remarks :					
Calibrated by	:	Henry	Chec	ked by :	Derek Lo
Date	:	18-Jan-14	Date	:	18-Jan-14



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	MA1w	Calbration Date	:	18-Jan-14
Equipment no.	:	EL080	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition																
Temperature, T <sub>a</sub>		289	Kelvin <b>Pressure, P</b> a				1026	mmHg								
Orifice Transfer Standard Information																
Equipment No.	EL086			Slope, m <sub>c</sub>	n <sub>c</sub> 2.01968 Interce			-0.02	746							
Last Calibration Date		15-Jul-1	3		(Hxl	P <sub>a</sub> / 10	13.3 x 298	$/T_{a})^{1/2}$								
Next Calibration Date		15-Jul-14	4		=	m <sub>c</sub> x	$x Q_{std} + b_{c}$	:								
Calibration of RSP																
Calibration	Mar	nometer R	eading	C	ک <sub>std</sub>	Contin	uous Flow	IC								
Point	H (inches of water)			(m <sup>3</sup>	/ min.)	min.) Recorde		(W(P <sub>a</sub> /1013.3x298	/T <sub>a</sub> ) <sup>1/2</sup> /35.31)							
	(up)	(down)	(difference)	X-	-axis	((	CFM)	Y-axis	5							
1	6.1	6.1	12.2	1.	1.7807 59		59	60.285	9							
2	5.0	5.0	10.0	1.6135 51		51	52.111	6								
3	4.0	4.0	8.0	1.	1.4446 42		42	42.915	4							
4	2.5	2.5	5.0	1.	1449		27	27.588	5							
5	1.4	1.4	2.8	0.	8602		14	14.305	1							
By Linear Regression of Y on X																
	Slope, m	=	50.3	357	Int	ercept, b	= -2	29.4556	_							
Correlation Coefficient* = 0.999				997	<u>.</u>											
Calibration	Accepted	=	Yes/	No**												

** Delete as appropriate.	

Remarks :						
Calibrated by	:	Henry	Che	cked by	:	Derek Lo
Date	:	18-Jan-14	Date	Ð	:	18-Jan-14



# Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	MA1e	Calbration Date	:	18-Jan-14
Equipment no.	:	EL455	Calbration Due Dat	:	18-Mar-14

## CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition									
Temperature, T <sub>a</sub>		289	Kelvin <b>Pressure</b> , <b>P</b> <sub>a</sub>				1026	mmHg	
Orifice Transfer Standard Information									
Equipment No.	EL086			Slope, m <sub>c</sub>	n <sub>c</sub> 2.01968 Intercept, bc			-0.02	746
Last Calibration Date		15-Jul-1	3		(HxI	P <sub>a</sub> / 101	13.3 x 298	$/T_{a})^{1/2}$	
Next Calibration Date		15-Jul-1	4		=	m <sub>c</sub> x	$Q_{std} + b_{c}$	:	
			С	alibration	of RSP				
Calibration	Mar	nometer R	eading	C	Q <sub>std</sub>	Contin	uous Flow	IC	
Point	H (inches of water)			(m <sup>3</sup>	/ min.)	Reco	order, W	(W(P <sub>a</sub> /1013.3x298	/T <sub>a</sub> ) <sup>1/2</sup> /35.31)
	(up)	(down)	(difference)	X	X-axis (CF		CFM)	Y-axis	
1	6.1	6.1	12.2	1.	1.7807 6		60	61.307	7
2	5.0	5.0	10.0	1.6135 5		51	52.111	6	
3	4.1	4.1	8.2	1.	4623		43	43.937	2
4	2.5	2.5	5.0	1.	1.1449 29		29	29.632	:1
5	1.5	1.5	3.0	0.8899 16		16	16.348	7	
By Linear Regression of Y on X									
	Slope, m	=	49.7	270	Inte	ercept, b	= -2	27.8685	_
Correlation Coefficient* = 0.99			994						
Calibration Accepted = Yes/N			No**						

** Delete as appropriate.	

Remarks :					
Calibrated by	:	Henry	Checked by	:	Derek Lo
Date	:	18-Jan-14	Date	:	18-Jan-14