Station	Sheung Wun Yiu	(AM1A)		Operator:	Gary	Choi	
Cal. Date:	21-May-13			Next Due Date:	21-Jı	ul-13	_
Equipment No.:	A-001-53T			Serial No.	216	-	
			Ambien	t Condition			9-59
Temperatu	re Ta (K)	302		Pa (mmHg)		752.9	
Tomporata	10, 10 (1)	332	7,10000.01	(3)			
		(	Orifice Transfer S	Standard Information			
Serial	l No:	843	Slope, mc	1.99238	Interce		-0.0035
Last Calibra	ation Date:	06-Dec-12			= [DH x (Pa/760) x		
Next Calibra	ation Date:	06-Dec-13		Qstd = {[DH x (	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc	
EG SETS			Calibration	of TSP Sampler			-
		0	rfice		HVS	S Flow Recorder	
Resistance Plate No.  DH (orifice), in. of water  [DH x (Pa/i		60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X -	Flow Recorder Reading (CFM)	Continuous Flow Reading IC (CF		
18	8.9		2.95	1.48	46.0	45.48	3
13	6.3		2.48	1.25	38.0	37.57	,
10	4.6		2.12	1.07	30.0	29.66	5
7	3.5		1.85	0.93	26.0	25.71	
5	2.3	1	1.50	0.75	20.0	19.77	7
Slope , mw = Correlation Coe		0.9 check and recalib	9970 orate.	Intercept, bw =	-7.5	475	
			Set Point	Calculation			-
From the TSP Fie	eld Calibration Cu	rve, take Qstd = 1		Galculation			
		e "Y" value accord	ling to	x [(Pa/760) x (298/	Ta)] <sup>1/2</sup>		
Therefore, Set Po	oint; IC = ( mw x 0	Qstd + bw ) x [( 76	60 / Pa ) x ( Ta / 29	98)] <sup>1/2</sup> =		39.38	¢ :
Remarks:							
QC Reviewer:	YWF	w	Signature:	7		Date: 27.M	my 13

Cal. Date:		(AM1A)		Operator:	Gary		-
	19-Jul-13			Next Due Date:	19-Se		
Equipment No.:	A-001-53T			Serial No.	102	116	
			Ambient	Condition			
Temperatu	re, Ta (K)	301	Pressure,	Pa (mmHg)		753.2	
			3 'f' - T 5 - 0	to a dead late as atta			
Serial	No:	843	Slope, mc	1.99238	Interce	ent ho	-0.0035
Last Calibra		6-Dec-12	Glope, me		= [DH x (Pa/760) x		0.0000
Next Calibra		6-Dec-13			Pa/760) x (298/Ta)]		
		4			, , , , , , ,	1029•1.50	
				of TSP Sampler			
		. 0	rfice		HVS	Flow Recorder	
Resistance Plate No.  DH (orifice), in. of water  [DH x (Pa/760) x (298/Ta)] <sup>1//</sup>		60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Reco Reading IC (CFM) Y-		
18	8.8		2.94	1.48	45.0	44.57	7
13	6.3 2.49			1.25	38.0	37.64	
10	4.5		2.10	1.06	31.0	30.71	
7	3.5		1.85	0.93	26.0	25.75	5
5	2.2		1.47	0.74	21.0	20.80	)
Slope , mw =	33.0773 fficient* =	- 0.9	9963	Intercept, bw =	-4.1	832	-
Slope , mw = Correlation Coe	33.0773			Intercept, bw =	-4.1	832	
Slope , mw = Correlation Coe *If Correlation Co	33.0773 fficient* = pefficient < 0.990,	check and recalil	orate.  Set Point	Intercept, bw =	-4.1	832	
Slope , mw = Correlation Coe *If Correlation Co	33.0773 fficient* =	check and recalil	orate.  Set Point	-	-4.1	832	
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fig.	33.0773 fficient* = pefficient < 0.990,	check and recalil	Set Point 1.30m³/min	-	-4.1	832	-
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fig.	33.0773  fficient* = pefficient < 0.990,	rve, take Qstd =	Set Point 1.30m³/min ding to	Calculation		832	
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fig.	33.0773  fficient* = pefficient < 0.990,	rve, take Qstd =	Set Point 1.30m³/min ding to	-		832	
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to  x Qstd + bw = IC	Calculation  × [(Pa/760) × (298/7			
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to	Calculation  × [(Pa/760) × (298/7		39.19	
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to  x Qstd + bw = IC	Calculation  × [(Pa/760) × (298/7			
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to  x Qstd + bw = IC	Calculation  × [(Pa/760) × (298/7	Ta)] <sup>1/2</sup>		
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to  x Qstd + bw = IC	Calculation  × [(Pa/760) × (298/7	Ta)] <sup>1/2</sup>		-
Slope , mw = Correlation Coe *If Correlation Co From the TSP Fie From the Regres Therefore, Set Po	33.0773  fficient* = pefficient < 0.990,  eld Calibration Cu sion Equation, the	rve, take Qstd =	Set Point 1.30m³/min ding to  x Qstd + bw = IC	Calculation  × [(Pa/760) × (298/7	Ta)] <sup>1/2</sup>		

		Village (AM2)		-0		Ving Ho	
Station         Shan Tong New Village (AM2)         Operator:           Cal. Date:         25-Jun-13         Next Due Date:           Equipment No.:         A-001-29T         Serial No.							
Equipment No.:						-0	
			Ambient	Condition			
Temperatu	re, Ta (K)	303	Pressure,	Pa (mmHg)		753.7	
		(		tandard Information	**		
Serial	No:	988	Slope, mc	1.94727		ept, bc	0.0233
Last Calibra	ation Date:	20-May-13			= [DH x (Pa/760) x		
Next Calibra	ation Date:	20-May-14		Qstd = {[DH x (I	Pa/760) x (298/Ta)]	1 <sup>1/2</sup> -bc} / mc	
			Calibration	of TSP Sampler			
		0	rfice		HV	S Flow Recorder	
Resistance	DH (orifice)			Qstd (m³/min) X	Flow Recorder	Continuous Flov	Recorder
Plate No. DH (orifice), in. of water [DH x (Pa/760) x (298/Ta)] <sup>1</sup>		50) x (298/Ta)] <sup>1/2</sup>	axis	Reading (CFM)	Reading IC (CFI		
18	8.8	1	2.93	1.49	46.0	45.43	) 1
13	6.9	1 2	2.59	1.32	40.0	39.50	
10	5.3		2.27	1.16	33.0	32.59	
7	3.9		1.95	0.99	27.0	26.67	
5	2.5	1	1.56	0.79	21.0	20.74	k)
By Linear Regre Slope , mw = Correlation Coe	ssion of Y on X 35.7719 fficient* =	- 0.9	966	Intercept, bw =	-8.1	1372	
If Correlation Co	efficient < 0.990,	check and recalib	orate.				
			Set Point	Calculation			
rom the TSP Fie	eld Calibration Cu	rve, take Qstd = 1	1.30m³/min				
rom the Regress	sion Equation, the	"Y" value accord	ling to				
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/1	Γa)] <sup>1/2</sup>		
				410			
		)std + hw ) x [/ 76	60 / Pa ) x ( Ta / 29	98)]1/2=		38.85	
Therefore, Set Po	oint; IC = ( mw x 0	sold . Dir j x [[ re					
Therefore, Set Po	oint; IC = ( mw x C	sold · bw / x [( re					
Therefore, Set Po	oint; IC = ( mw x C						
	oint; IC = ( mw x C	2010 · DW / X [[ 10					
	oint; IC = ( mw x C	Store Bury All 10					
Therefore, Set Po	oint; IC = ( mw x C	Sid Sin y A ( ) C					

Station	Riverain Bayside	e (AM3)		Operator:	Choi V	Ving Ho	
Cal. Date:	25-Jun-13			Next Due Date:	25-A	ug-13	
Equipment No.:	A-001-69T			Serial No.	7	16	
			Ambient	t Condition			
Temperatu	ire, Ta (K)	303	Pressure,	Pa (mmHg)		753.7	
1000	, (. )						
			Orifice Transfer S	tandard Informatio			
Seria	l No:	988	Slope, mc	1.94727		ept, bc	0.02332
Last Calibra	ation Date:	20-May-13			= [DH x (Pa/760) x		
Next Calibr	ation Date:	20-May-14		Qstd = {[DH x (	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc	
			Calibration	of TSP Sampler			
		0	rfice	or ror oumpier	HV	S Flow Recorder	
Resistance Plate No.  DH (orifice), in. of water  [DH x (Pa/760) x (298/Ta)] <sup>1</sup>		60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X -	Flow Recorder Reading (CFM)	Continuous Flow Reading IC (CFI		
18	8.8		2.93	1.49	45.0	44.44	
13 7.4 2.69		2.69	1.37	40.0	39.50		
10	5.6	1	2.34	1.19	34.0	33.58	8
7	4.4		2.07	1.05	29.0	28.64	
5	3.0		1.71	0.87	23.0	22.71	
Slope , mw = Correlation Coe	and a second	-	9 <b>989</b> orate.	Intercept, bw =	-7.4	4843	
			Set Point	Calculation			
From the TSP Fi	eld Calibration Cu	urve, take Qstd = 1		Galculation			
		e "Y" value accord	ling to	x [(Pa/760) x (298/	Га)] <sup>1/2</sup>		
Therefore, Set P	oint; IC = ( mw x	Qstd + bw ) x [( 76	60 / Pa ) x ( Ta / 29	98 )] <sup>1/2</sup> =		37.93	
Remarks:							
Remarks:  OC Reviewer:	US CH	ANI	Signature:	<b>P</b> 1		Date: 26/8	6/1

	168 Shek Kwu Lu	ing Village (AM4A	A)	Operator:	Gary	Choi
Cal. Date:	21-May-13			Next Due Date:	21-Ju	ıl-13
Equipment No.:		273				
			Amabiana	Condition		
Ŧ	T- (IO	202		Condition		752.9
Temperatu	re, Ta (K)	302	Pressure, I	ra (mmng)		752.9
		0	Orifice Transfer S	tandard Informatio	n	
Serial	No:	843	Slope, mc	1.99238	Interce	
Last Calibra	ation Date:	06-Dec-12			= [DH x (Pa/760) x	
Next Calibra	ation Date:	06-Dec-13		Qstd = {[DH x (I	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc
			Calibratian	f TCD Campler		
		0	rfice	of TSP Sampler	HVS	S Flow Recorder
Resistance Plate No.	DH (orifice), in. of water		60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X -	Flow Recorder Reading (CFM)	Continuous Flow Recorde Reading IC (CFM) Y-axis
18	9.0		2.97	1.49	46.0	45.48
13	7.5		2.71	1.36	40.0	39.55
10	5.1		2.23	1.12	34.0	33.62
7	3.4		1.82	0.92	28.0	27.68
				The second second	00.0	24.75
5	2.3		1.50	0.75	22.0	21.75
By Linear Regre Slope , mw = Correlation Coe	ession of Y on X 30.7373 fficient* =	- 0.9	9929	0.75	-1.0	
By Linear Regre Slope , mw = Correlation Coe	ession of Y on X 30.7373	- 0.9	9 <b>929</b> orate.	Intercept, bw =		
By Linear Regre Slope , mw = Correlation Coe *If Correlation Co	assion of Y on X 30.7373 afficient* = pefficient < 0.990,	0.9 check and recalib	9929 orate. Set Point			
By Linear Regre Slope , mw = Correlation Coe If Correlation Co	assion of Y on X 30.7373  fficient* = pefficient < 0.990,	check and recalib	9929 orate. Set Point 1.30m³/min	Intercept, bw =		
By Linear Regre Slope , mw = Correlation Coe *If Correlation Co	assion of Y on X 30.7373 afficient* = pefficient < 0.990,	check and recalit.	Set Point 1.30m³/min ding to	Intercept, bw =	-1.0	

Station	168 Shek Kwu Lu	ng Village (AM4	A)	Operator:	Gary			
al. Date:	19-Jul-13			Next Due Date: Serial No.	19-Se			
Equipment No.:	A-001-70T			102	10273			
		-945	Ambient	Condition				
Temperatu	re, Ta (K)	301	Pressure, l	Pa (mmHg)		753.2		
			Orifice Transfer S	tandard Informatio	n			
Serial	No:	843	Slope, mc	1.99238	Interce	ept. bc	-0.0035	
Last Calibra		6-Dec-12	Giope, inc		= [DH x (Pa/760) x			
Next Calibra		6-Dec-13			Pa/760) x (298/Ta)]			
				of TSP Sampler	7000			
20.00.00		(	Orfice		HVS	S Flow Recorder		
Resistance Plate No.  DH (orifice), in. of water  [DH x (Pa/760) x (298/Ta		60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Reading IC (CF			
18 9.1		2.99		1.50	46.0	45.56		
13					41.0	40.61		
10	5.1		2.24	1.12	34.0	33.68	3	
7	3.5	1.85		0.93	29.0	28.73		
5	2.4		1.53	0.77	23.0	22.78	3	
By Linear Regre Slope , mw = Correlation Coe	ssion of Y on X 30.1022		9961	Intercept, bw =	-0.0	572	. (*)	
	pefficient < 0.990,			-				
			Set Point	Calculation				
From the TSP Fig	eld Calibration Cu	rve, take Qstd =						
	sion Equation, the							
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/	Ta)] <sup>1/2</sup>			
	T. A. S	5-5-6-2-10-6-2		1-1/2		22.2		
Therefore, Set Po	oint; IC = ( mw x (	Qstd + bw ) x [( 7	760 / Pa ) x ( Ta / 2	98 )]"==	11	39.45	-	
Remarks:								
Acillains.								
	-							
OC Reviewer	INS CHA	21	Signature:	P 1		Date: 22/	7/1	



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

		Rootsmeter Orifice I.I		0438320 0988	Ta (K) - Pa (mm) -	297 751.84
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	1.3900 0.9720 0.8670 0.8270 0.6800	3.2 6.4 7.9 8.7 12.6	2.00 4.00 5.00 5.50 8.00

#### DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	2042000004	Va	(x axis) Qa	(y axis)
0.9884 0.9842 0.9821 0.9811 0.9759	0.7110 1.0125 1.1327 1.1863 1.4352	1.4090 1.9926 2.2278 2.3365 2.8179		0.9957 0.9915 0.9894 0.9884 0.9832	0.7163 1.0201 1.1412 1.1952 1.4459	0.8889 1.2570 1.4054 1.4740 1.7777
Qstd slo intercep coeffici	t (b) = ent (r) =	1.94727 0.02332 0.99998 		Qa slop intercep coeffici	t (b) =	1.21935 0.01471 0.99998

#### 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 =  $1/m\{[SQRT H2O(Ta/Pa)] - b\}$ 

Type:	facturer/Brand:			Laser D	ust Mon	itor		
Mode				LD-3				
	ment No.:			A.005.07	a			
	tivity Adjustment	Scale Setti	ng:	557 CP				
Opera	ator:			Mike She	ek (MSKI	M)		
Standa	rd Equipment							
Equip	ment:	Puni	rocht & D	stochnick	TEOM®			
Venue			erport (Pui			ahaal)		
Model	•		s 1400AB		illuary 3	criodij		
Serial		Cont		0AB2198	20803			
Contai	,,,,,	Sens		00C1436		K <sub>o</sub> : 12500	)	
Last C	Calibration Date*:		ay 2013	00014000	3000	N <sub>0</sub>		
*Remar	ks: Recommend	ed interval	for hardwa	re calibra	tion is 1	vear		
	tion Result					· ear		
21				(35-10. 50)	7	127-1-8		
	ivity Adjustment ivity Adjustment					557 CF		
Hour	Date (dd-mm-yy)	Tir	me	Amb		Concentration <sup>1</sup> (mg/m <sup>3</sup> )	Total Count <sup>2</sup>	Count/ Minute <sup>3</sup>
				Temp (°C)	R.H. (%)	Y-axis		X-axis
1	18-05-13	12:30 -	13:30	28.1	78	0.04714	1887	31.45
2	18-05-13	13:30 -		28.1	78	0.04932	1970	32.83
3	18-05-13	14:30 -	15:30	28.2	77	0.05156	2056	34.27
4	18-05-13	15:30 -	16:30	28.1	78	0.05083	2026	33.77
Slope	2. Total Count 3. Count/minute ar Regression of (K-factor):	was logged e was calcu	by Laser I lated by (7	Dust Moni	tor	ashnick TEOM <sup>®</sup>		
Correla	ation coefficient:		0.9978					
Validity	of Calibration R	ecord:	17 May 2	014				
Remark	S:							
					1/	/		
QC Re	viewer: YW F	ung	Signat	ture:	4/	Date	: _20 May	/ 2013

Manufa				Laser D	ust Mo	nitor		
	cturer/Brand:			SIBATA				
Model N				LD-3				
	ent No.:			A.005.0				
Sensitiv	vity Adjustment	Scale Sett	ing:	702 CP	M			
Operato	or:			Mike Sh	ek (MSI	KM)		
Standard	d Equipment							
Equipm	ent:	Rupi	precht & P	atashnick	TEOM	0		
Venue:			erport (Pui					
Model N	No.:		s 1400AE					
Serial N	lo:	Cont	rol: 14	40AB2198	99803			
		Sens		200C1436		K <sub>o</sub> : 12	500	
Last Ca	libration Date*:		lay 2013					
Remarks	s: Recommend	led interval	for hardwa	are calibra	ition is	1 year		
Calibrati	on Result							
Consitiu	it. Adiustment	Caala Catt	na (Defeat	Calibanti	24.	700	ODM	
	rity Adjustment					702	CPM	
Sensitiv	rity Adjustment	Scale Sett	ng (Aiter C	Janoration	).	702	CPM	
Hour	Date	Tir	me	Amb	ient	Concentration <sup>1</sup>	Total	Count/
	(dd-mm-yy)			Cond	ition	(mg/m <sup>3</sup> )	Count <sup>2</sup>	Minute <sup>3</sup>
				Temp	R.H.	Y-axis	7 - 1	X-axis
				(°C)	(%)	1-2-25		
1	18-05-13	12:30 -	70.00	28.1	78	0.04714	1764	29.40
2	18-05-13	13:30 -	14:30	28.1	78	0.04932	1846	30.77
3	18-05-13	14:30 -	15:30	28.2	77	0.05156	1935	32.25
4	18-05-13	15:30 -		28.1	78	0.05083	1899	31.65
By Linear Slope (k	2. Total Count 3. Count/minut Regression of (-factor):	was logged te was calc Y or X	d by Laser ulated by ( _0.0016	Dust Mor	itor	tashnick TEOM <sup>®</sup>		
Correlat	ion coemcient:		0.9976					
	of Calibration F	Record:	17 May 2	2014				
Validity								
Validity								

Type:				_	Laser Du	ıst Moni	itor		
	facturer/Brand:				SIBATA	3-1			
Mode					LD-3				
	ment No.:				A.005.09				
Sensi	tivity Adjustment	Scale Se	tting:	_	797 CPI	И			
Opera	ator:				Mike She	k (MSKI	M)		
Standa	rd Equipment								
Equip	ment:	Rui	ppred	cht & Pa	tashnick	TEOM®			
Venue		_			Ying Seco		chool)		
Model	I No.:		1400AB						
Serial	No:	ntrol:	140	DAB21989	9803				
		nsor:	120	00C14365	59803	K <sub>o</sub> : 12500	)		
Last C	Calibration Date*:	18	May	2013					
*Remar	ks: Recommend	ed interva	al for	hardwa	re calibrat	ion is 1	year		
Calibra	tion Result								
	tivity Adjustment tivity Adjustment						797 CF		
Hour	Date	J	Γime		Amb		Concentration <sup>1</sup>	Total	Count/
	(dd-mm-yy)				Cond		(mg/m <sup>3</sup> )	Count <sup>2</sup>	Minute <sup>3</sup>
					Temp	R.H.	Y-axis		X-axis
					(°C)	(%)			-
1	18-05-13	12:30	-	13:30	28.1	78	0.04714	1885	31.42
2	18-05-13	13:30	-	14:30	28.1	78	0.04932	1965	32.75
3	18-05-13	14:30	7.	15:30	28.2	77	0.05156	2059	34.32
4	18-05-13	15:30	*	16:30	28.1	78	0.05083	2024	33.73
Slope	2. Total Count 3. Count/minut ar Regression of (K-factor): ation coefficient:	was logge e was cal Y or X	ed by culat	Laser [	Dust Moni	tor	ashnick TEOM <sup>®</sup>		
Validit	y of Calibration F	Record:	1	7 May 20	014				
Remark	S:								

Type:					Laser D	ust Mon	itor		
	acturer/Brand:			SIBATA					
Model I	7 17.75		_	LD-3					
	nent No.:	3,043		A.005.10					
Sensitiv	vity Adjustment	Scale Se	etting	j: _	753 CP	И			
Operate	or:			-	Mike She	ek (MSKI	M)		
Standard	d Equipment								
Equipm	nent:	Ru	ippre	echt & Pa	tashnick	TEOM®			
Venue:		Cy	berp	ort (Pui '	Ying Seco	ondary S	chool)		
Model N	No.:	Se	ries	1400AB					
Serial N	No:	Co	ntro	: 140	OAB2198	99803			
	Sensor:					59803	K <sub>o</sub> : 12500		
Last Ca	Last Calibration Date*: 18 May 2013  Remarks: Recommended interval for hard								
*Remark	s: Recommend	led interv	al fo	r hardwa	re calibra	tion is 1	year		
Calibrati	ion Result								
	vity Adjustment vity Adjustment						753 CF		
Hour	Date		Time		1 Anni	lout.	Consented	Tabl	T 0 11
Hour	The second secon		Tillie	,		oient dition	Concentration <sup>1</sup>	Total	Count
10	(dd-mm-yy)						(mg/m³)	Count <sup>2</sup>	Minute
					Temp (°C)	R.H. (%)	Y-axis		X-axis
1	18-05-13	12:30	-	13:30	28.1	78	0.04714	1886	31.43
2	18-05-13	13:30	-	14:30	28.1	78	0.04714	1968	32.80
3	18-05-13	14:30	-	15:30	28.2	77	0.04932	2061	34.35
4	18-05-13	15:30	-	16:30	28.1	78	0.05083	2026	33.77
Note:							ashnick TEOM®	2020	33.77
By Linear Slope (F	2. Total Count 3. Count/minut Regression of K-factor): tion coefficient:	was logg te was ca Y or X	ged b	y Laser [	<b>Dust Mon</b>	itor			
	of Calibration F		1	7 May 20	014				
Remarks:						-			
Slope (F Correlat	K-factor): tion coefficient: of Calibration F		_(	0.9983	014				

Type:			1	Laser Dust Monitor								
Manufacturer/Brand: Model No.: Equipment No.: Sensitivity Adjustment Scale Setting:				_	SIBATA							
				- 2	LD-3							
				_	A.005.11a							
Sensit	ivity Adjustment	Scale Se	ettirié	];	799 CPM  Mike Shek (MSKM)							
Opera	tor:			- 4								
Standa	rd Equipment											
Equipr	ment:	Ru	ippre	echt & Pa	tashnick	TEOM®						
Venue	C.	Cy	Cyberport (Pui Ying Secondary School)									
Model	No.:	Se	Series 1400AB									
Serial No:		Co	Control: 140AB219899803									
Last C	S			ensor: <u>1200C143659803</u> K <sub>o</sub> : <u>12500</u> 8 May 2013								
	ks: Recommend				ro oalibra	lon is 1						
		led interv	al to	r narowai	re calibra	ion is 1	year					
Calibra	tion Result											
	ivity Adjustment ivity Adjustment						799 CF 799 CF	PM PM				
				, , ,								
Hour			Time		Ambient		Concentration <sup>1</sup>	Total	Count			
	(dd-mm-yy)				Cond		(mg/m <sup>3</sup> )	Count <sup>2</sup>	Minute			
					Temp	R.H.	Y-axis		X-axis			
	10.05.10	10.15		10.15	(°C)	(%)	0.04005		2.7.72			
1	18-05-13	12:15		13:15	28.1	78	0.04685	1871	31.18			
2	18-05-13	13:15	-	14:15	28.1	78	0.04941	1979	32.98			
3	18-05-13	14:15	-	15:15	28.2	77	0.05127	2055	34.25			
4 Note:	18-05-13	15:15	-	16:15	28.1	78	0.05060 ashnick TEOM®	2021	33.68			
By Linea Slope (	2. Total Count 3. Count/minu ar Regression of (K-factor): ation coefficient:	was logg te was ca	jed b ilcula	y Laser [	Dust Mon	itor	STITLE TEST					
				17 May 20								
vallary	o, sanoranem				*							
Remarks	S:											
						1/						
QC Re	viewer: YW F	ung		Signat	ture:	y	Date	e: _20 Ma	y 2013			

Type:					Laser Du	st Moni	itor					
	facturer/Brand:			_	SIBATA							
Mode				_	LD-3B							
	ment No.:	0 1 0 1	445.52	_	A.005.14							
Sensi	itivity Adjustment	Scale Set	ting:	-	786 CPN	1						
Opera	ator:			-44	Mike Shek (MSKM)							
Standa	ard Equipment											
Equip	ment:	Rup	preci	nt & Pai	tashnick 1	TEOM <sup>®</sup>						
Venue	e:	Cyb	erpor	t (Pui Y	ing Seco	ndary S	chool)					
Mode	l No.:	Seri	ies 14	OOAB	Lil Jan							
Serial	No:	Con	Control: 140AB219899803									
			Sensor: 1200C143659803 K <sub>o</sub> : 12500									
Last C	Calibration Date*:	18 /	May 2	013								
*Remar	rks: Recommend	ed interva	l for h	ardwar	e calibrat	ion is 1	year					
Calibra	tion Result											
	tivity Adjustment tivity Adjustment							PM PM				
Hour	Date (dd mm xx)	Т	Time		Ambient Condition		Concentration 1	Total Count <sup>2</sup>	Count/			
1 - 19	(dd-mm-yy)				Temp	R.H.	(mg/m³) Y-axis	Count	Minute <sup>3</sup> X-axis			
					(°C)	(%)	1-dAIS		A-dais			
1	18-05-13	12:15	i e	13:15	28.1	78	0.04685	2005	33.42			
2	18-05-13	13:15	-	14:15	28.1	78	0.04941	2121	35.35			
3	18-05-13	14:15	8 4	15:15	28.2	77	0.05127	2194	36.57			
4	18-05-13	15:15	<b>€</b> 0 − 1	16:15	28.1	78	0.05060	2167	36.12			
Slope	1. Monitoring of 2. Total Count 3. Count/minut ar Regression of (K-factor): ation coefficient:	was logge e was cald Y or X	ed by culate	Laser D	oust Moni	tor	ashnick TEOM <sup>®</sup>					
	y of Calibration F	Record:	_17	May 20	)14							
Remark	is:											



### 綜合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD.

G/F, 9/F, 12/F, 13/F. & 20/F, Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com Tel (852) 2873 6860 Fax: (852) 2555 7533



### CERTIFICATE OF CALIBRATION

Certificate No.:

12CA1115 01-01

Page

of

Item tested

Description: Manufacturer: Sound Level Meter (Type 1)

B&K

, Microphone , B & K

Type/Model No.: Serial/Equipment No.: 2238 2255680 / N.009.01 4188 2250447

Adaptors used:

2200001

2230

Item submitted by

Customer Name:

AECOM ASIA CO., LTD.

Address of Customer: Request No.:

- 2

Date of receipt:

15-Nov-2012

Date of test:

15-Nov-2012

Reference equipment used in the calibration

Description:

Multi function sound calibrator

Signal generator Signal generator Model: B&K 4226 DS 360

2288444 33873 61227

Serial No. Expiry Date:

22-Jun-2013 29-May-2013 29-May-2013 Traceable to:

CIGISMEC CEPREI CEPREI

Ambient conditions

Temperature:

22 ± 1 °C 60 ± 10 %

DS 360

Relative humidity: Air pressure:

1000 ± 5 hPa

Test specifications

 The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

 The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of +20%.

 The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

#### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Mih/Feng Jun Qi

Actual Measurement data are documented on worksheets.

Approved Signatory:

Date:

17-Nov-2012

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



### 綜合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD.

G/F, 9/F, 12/F, 13/F & 20/F, Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com





### CERTIFICATE OF CALIBRATION

Certificate No.:

12CA1008 02

Page

of

2

Item tested

Description:

Sound Level Meter (Type 1)

Microphone

Preamp

Manufacturer:

Rion Co., Ltd. NL-31 Rion Co., Ltd. UC-53A Rion Co., Ltd.

Type/Model No.: Serial/Equipment No.: Adaptors used:

00320528/NOOT. 03 A

90565

NH-19 75883

Item submitted by

Customer Name:

AECOM ASIA CO., LTD.

Address of Customer:

Request No.:

+

Date of receipt:

08-Oct-2012

Date of test:

08-Oct-2012

#### Reference equipment used in the calibration

Description: Multi function so Model:

Serial No.

Expiry Date: 22-Jun-2013 Traceable to:

Multi function sound calibrator Signal generator Signal generator B&K 4226 DS 360 DS 360 2288444 33873 61227

29-May-2013 29-May-2013 CIGISMEC CEPREI CEPREI

#### Ambient conditions

Temperature:

(22 ± 1) °C

Relative humidity: Air pressure:

(60 ± 10) % (1000 ± 5) hPa

#### Test specifications

- The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.
- The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

#### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Huang Jian Win/Feng Jun Qi

Actual Measurement data are documented on worksheets.

Approved Signatory:

Date:

08-Oct-2012

Company Chop:

SENGINE COMPANY OF THE STREET OF THE STREET

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No.CARP152-1/Issue 1/Rev.C/01/02/2007



# 綜合試驗有限公司

G/F., 9/F., 12/F., 13/F. & 20/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. 香港黃竹坑道37號利達中心地下,9樓,12樓,13樓及20樓 E-mail: smec@cigismec.com Website: www.cigismec.com





### CERTIFICATE OF CALIBRATION

Certificate No.:

12CA0817 01

Page:

of

2

Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer: Type/Model No.: Rion Co., Ltd. NC-73

Serial/Equipment No.:

10307223 / N.004.08

Adaptors used:

Item submitted by

Curstomer:

AECOM ASIA CO., LTD.

Address of Customer:

Request No .: Date of receipt:

17-Aug-2012

Date of test:

17-Aug-2012

#### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	29-May-2013	SCL
Preamplifier	B&K 2673	2239857	05-Jan-2013	CEPREI
Measuring amplifier	B&K 2610	2346941	29-Dec-2012	CEPREI
Signal generator	DS 360	61227	29-May-2013	CEPREI
Digital multi-meter	34401A	US36087050	16-Dec-2012	CEPREI
Audio analyzer	8903B	GB41300350	29-May-2013	CEPREI
Universal counter	53132A	MY40003662	29-May-2013	CEPREI

#### Ambient conditions

Temperature: Air pressure:

22 ± 1 °C

Relative humidity:

60 ± 10 % 995 ± 5 hPa

Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference 3, pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

Details of the performed measurements are presented on page 2 of this certificate.

Approved Signatory:

Date: Huang Jian M

17-Aug-2012

Company Chop:

Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long term stability of the instrument.

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Form No.CARP156-1/Issue 1/Rev.D/01/03/2007