	ation Access Road to Po Shan Mansions (CA1)				Shum Ka		
Cal. Date:	25-Jul-08			Next Due Date:	25-S∈	эр-08	
Equipment No.:	A.001.46T			Serial No.	102	217	
			Ambient	Condition			
Temperatur	e, Ta (K)	305	Pressure, f	⊃a (mmHg)		753.5	
	•		Orifice Transfer S				
Equipment No.:		843	Slope, mc	2.02026	Interce	<u> </u>	-0.0360
Last Calibration Date:		22-Oct-07			= [DH x (Pa/760) x		
Next Calibra	tion Date:	22-Oct-08		Qstd = {[DH x (I	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc	
		•	Calibration o	of TSP Sampler		······································	
	***************************************	(	Orfice		HV	S Flow Recorder	
Resistance Plate No. DH (orifice), in. of water			[DH x (Pa/760) x (298/Ta)] <sup>1/2</sup>		Flow Recorder Reading (CFM)	Continuous Flow F Reading IC (CFM)	
18	9.9		3.10	1.55	48.0	47.24	
	6.9		2.59	1.30	40.0	39.37	
13	6.9 5.2		2.59 2.24	1.30	40.0 34.0	39.37 33.46	1
13 10	5.2						
13			2.24	1.13	34.0	,33.46	
13 10 7 5  By Linear Regres Slope , mw = Correlation Coef	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* =	0	2.24 1.99 1.70	1.13 1.00	34.0 28.0 22.0	, 33.46 27.56	
13 10 7 5  By Linear Regres Slope , mw = Correlation Coef	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* =	0	2.24 1.99 1.70	1.13 1.00 0.86	34.0 28.0 22.0	, 33.46 27.56 21.65	
13 10 7 5  By Linear Regret Slope , mw = Correlation Coef	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* = efficient < 0.990,	0 check and recal	2.24 1.99 1.70	1.13 1.00 0.86	34.0 28.0 22.0	, 33.46 27.56 21.65	
13 10 7 5  By Linear Regres Slope, mw = Correlation Coef	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* = efficient < 0.990,	check and recal	2.24 1.99 1.70 2.9924 dibrate. Set Point = 1.30m³/min	1.13 1.00 0.86	34.0 28.0 22.0	, 33.46 27.56 21.65	
13 10 7 5  By Linear Regres Slope, mw = Correlation Coef *If Correlation Coef	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* = efficient < 0.990,	check and recal	2.24 1.99 1.70  2.9924  Set Point = 1.30m³/min  arding to	1.13 1.00 0.86  Intercept, bw =	34.0 28.0 22.0	, 33.46 27.56 21.65	
13 10 7	5.2 4.1 3.0 ssion of Y on X 37.2144 ficient* = efficient < 0.990,	check and recal	2.24 1.99 1.70 2.9924 dibrate. Set Point = 1.30m³/min	1.13 1.00 0.86  Intercept, bw =	34.0 28.0 22.0	, 33.46 27.56 21.65	

Station	on Access Road to Po Shan Mansions (CA1)				Shum Ka	am Yuen		
Cal. Date:	22-Sep-08			Next Due Date:	22-N	2-Nov-08		
Equipment No.:	A.001.46T			Serial No.	102	217		
				Condition				
Temperatu	ıre, Ta (K)	307	Pressure, l	Pa (mmHg)		750.5		
		· · · · · · · · · · · · · · · · · · ·	Orifice Transfer S	tandard Informatio	on			
Equipme	ent No.:	843	Slope, mc	2.02026	Interce	ept, bc -0.03609		
Last Calibra	ation Date:	22-Oct-07		mc x Qstd + bc	= [DH x (Pa/760) x	(298/Ta)] <sup>1/2</sup>		
Next Calibra	ation Date:	22-Oct-08			Pa/760) x (298/Ta)]			
				f TSP Sampler				
m to milit	***************************************		Orfice		HV	S Flow Recorder		
Resistance Plate No.	DH (orifice), in. of water	[DH x (Pa/7	(60) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis		
18	9.8		3.06	1.53	50.0	48.95		
13	6.7		2.53	1.27	40.0	39.16		
10	5.1		2.21	1.11	34.0	33.29		
7	4.0		1.96	0.99	28.0	27.41		
5	2.8		1.64	0.83	22.0	21.54		
By Linear Regression of Y on X  Slope , mw = 39.0527  Correlation Coefficient* = 0.9986  *If Correlation Coefficient < 0.990, check and recalibrate.				Intercept, bw = _	-10.7	7255		
	,							
				Calculation				
From the TSP Fie	eld Calibration Cu	rve, take Qstd =	1.30m <sup>3</sup> /min					
From the Regres	sion Equation, the	"Y" value accor	ding to					
			w Ootd + hw = IC :	x [(Pa/760) x (298/1	[a]] <sup>1/2</sup>			
		HIW	X QStd + DW - IC .	x [(Fa/100) x (290/1	i a) j			
Therefore, Set Po	oint; IC = ( mw x C	Qstd + bw ) x [( 7	60 / Pa ) x ( Ta / 29	8)] <sup>1/2</sup> =		40.90		
				-				
Remarks:	·							
	1			Ì	<u> </u>			
OC Basiowan		-1 x	Signature:	lox		Date: 23 Sp OF		
QC Reviewer:		-   47	்புள்ளன்	150 100				

Station	tion Podium oh Hamilton Court ( CA2 )				Shum K		
Cal. Date:	25-Jul-08			Next Due Date:	25-S	w	
Equipment No.:	A.001.15T			Serial No.	10	380	-
		······································	Ambien	Condition			
Temperatu	re, Ta (K)	305	<b>T</b>	Pa (mmHg)	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	753.5	***************************************
***************************************	1		,004,004,004,004,004,004,004,004,004,00				
			Orifice Transfer S	tandard Informatio	on		
Equipment No.:		843	Slope, mc	2.02026		ept, bc	-0.0360
Last Calibra	ition Date:	22-Oct-07			= [DH x (Pa/760) x	,	
Next Calibra	ation Date:	22-Oct-08		Qstd = {[DH x (	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc	
		•					
	· · · · · · · · · · · · · · · · · · ·			of TSP Sampler	1 13 /	0.51 5 1	
Resistance Plate			Orfice		HVS Flow Recorder		
No.	DH (orifice), in. of water	[DH x (Pa/7	760) x (298/Ta)] <sup>1/2</sup>	Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flo Reading IC (CF	
18	10.0		3.11	1.56	50.0	49.21	
13	7.7		2.73	1.37	42.0	41.3	4
10	5.6		2.33	1.17	34.0	33.40	ô
7	4.3		2.04	1.03	28.0	27.50	3
5	3.1		1.73	0.88	22.0	21.6	5
By Linear Regree Slope , mw = Correlation Coef *If Correlation Co	40.3670 ficient* =	······································	<b>9999</b> ibrate.	Intercept, bw =	-13.8	8170	_
			Set Point	Calculation	, 1 <u>44 </u>		
From the TSP Fie	ld Calibration Cu	rve, take Qstd =					
From the Regress							
		mw	$x = 10^{\circ}$ x Qstd + bw = 10	x [(Pa/760) x (298/1	「a)] <sup>1/2</sup>		
Therefore Cul D-	:-1-10 1 (	Smile   1   1   1   1   1   1   1   1   1	CO (D=) (T= 100	0.11/2		20.00	
Therefore, Set Po	int; IC = ( mw x c	/ )] X ( Wd + DJ8k	60 / Pa ) x ( Ta / 29	8 )]=	-	39.28	_
							•••
Remarks:							
-							. ,
**	ľ	<i>-</i>			······································	0	1
QC Reviewer:	100	1 Tu	Signature:	loe		Date: 🔾 <	a of

Station	Podium oh Hami	ilton Court ( CA2	)	Operator:	Shum Ka	am Yuen		
Cal. Date:	22-Sep-08			Next Due Date:	22-N	ov-08		
Equipment No.:	A.001.15T			Serial No.	103	380		
				Condition				
Temperatu	ıre, Ta (K)	307	Pressure, I	Pa (mmHg)	***************************************	750.5		
			Orifice Transfer S	tandard Information	on .			
Equipme	ent No.:	843	Slope, mc	2.02026	Intercept, bc -0.			
Last Calibration Date: 22-Oct-07			mc x Qstd + bc	= [DH x (Pa/760) x	(298/Ta)] <sup>1/2</sup>			
Next Calibra	ation Date:	22-Oct-08			Pa/760) x (298/Ta)]			
		,						
				f TSP Sampler				
		<del>(</del>	Orfice		HV	S Flow Recorder		
Resistance Plate No.	DH (orifice), in. of water	[DH x (Pa/7	(60) x (298/Ta)] <sup>1/2</sup>	Qstd (m <sup>3</sup> /min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Recorder Reading IC (CFM) Y-axis		
18	9.9		3.08	1.54	50.0	48.95		
13	7.6		2.70	1,35	44.0	43.08		
10	5.7		2.34	1.17	34.0	33.29		
7	4.4		2.05	1.03	28.0	27.41		
5	3.0		1.70	0.86	20.0	19.58		
By Linear Regre Slope , mw = Correlation Coef *If Correlation Co	43.9604 fficient* =		<b>9940</b> brate.	Intercept, bw =	-17.9	9651		
	edi - medenal addid di memolakan eni menerikan eder	man ang at dia manada at dia manada ang dia managan pintunggan dia palabahan dilapakahan dilapakahan dilapakah	Set Point	Calculation				
From the TSP Fie	eld Calibration Cu	rve, take Qstd =			<u> </u>			
From the Regress								
					410			
		mw	x Qstd + bw = IC	k [(Pa/760) x (298/1	[a)] <sup>1/2</sup>			
Therefore, Set Po	oint; IC = ( mw x G	Qstd + bw ) x [( 7	60 / Pa ) x ( Ta / 29	8)] <sup>1/2</sup> =	-	40.02		
Remarks:								
•								
QC Reviewer:	Ja F	Ц	Signature:	loc		Dale: 23 SEYD OF		

### **EQUIPMENT CALIBRATION RECORD**

Type: Manufacturer/Brand: Model No.: Equipment No.: Sensitivity Adjustment Scale Setting:				Laser Do SIBATA LD-3 A.005.07 557 CPI		itor		
Opera	ator:			Mike She	ek (MSKI	Л)		
Standa	rd Equipment							
Equipment: Rupprecht & Cyberport (I Series 1400 Serial No: Control: Sensor: Last Calibration Date*: Rupprecht & Cyberport (I Sensor: 12 June 200			rt (Pui ) 400AB 140 120		ondary So 99803	chool) K <sub>o</sub> : <u>12500</u>		
*Remar	ks: Recommend	ed interval for h	nardwar	e calibra	tion is 1 y	/ear		
Calibra	tion Result							
	ivity Adjustment ivity Adjustment					557 CP		
Hour	Date (dd-mm-yy)	Time		Amb Cond Temp (°C)		Concentration (mg/m³)  Y-axis	Total Count <sup>2</sup>	Count/ Minute <sup>3</sup> <b>X-axis</b>
1	14-06-08	~	10:00	32.2	75	0.03113	1007	16.78
3	14-06-08		11:00	32.4	74	0.03566	1166	19.43
4	14-06-08 14-06-08		12:00 14:00	32.5 32.5	74 75	0.03146 0.04583	1025 1485	17.08
Note:	1. Monitoring of 2. Total Count 3. Count/minut	ata was measu was logged by e was calculate	red by Laser D	Rupprect Dust Mon	nt & Pata itor		1400	24.75
Slope	ar Regression of (K-factor): ation coefficient:	0.0	0018 9993					
Validity	y of Calibration F	Record: 13	June 2	009	· · · · · · · · · · · · · · · · · · ·			
Remark	8:						·····	
QC Re	eviewer: <i>Mike</i>	Shek	Signati	ure:	Hike	Date	· 16.lun	e 2008

#### **EQUIPMENT CALIBRATION RECORD**

Type: Manufacturer/Brand: Model No.: Equipment No.: Sensitivity Adjustment Scale Setting:				Laser Do SIBATA LD-3 A.005.09 797 CPI	)a	itor		
Opera	ator:		<u></u>	Mike She	ek (MSKI	М)		
Standa	rd Equipment						<del></del>	
Equipment:  Venue:  Model No.:  Series 1400  Serial No:  Control:  Sensor:  Last Calibration Date*:  *Remarks: Recommended interval for hard			port (Pui ) 1400AB bl: <u>140</u> r: <u>120</u> ne 2008	Ying Seco 0AB2198: 00C1436:	ondary So 99803 59803	K <sub>o</sub> : <u>12500</u>		
	tion Result		·-··					
Sensit	ivity Adjustment ivity Adjustment	Scale Setting	g (After Ca	alibration)	):	CF CF	M.	
Hour	Date (dd-mm-yy)	Tim	е	Ambient Condition Temp R.H. (°C) (%)		Concentration <sup>1</sup> (mg/m <sup>3</sup> ) <b>Y-axis</b>	Total Count <sup>2</sup>	Count/ Minute <sup>3</sup> <b>X-axis</b>
1	15-06-08	08:00 -	09:00	29.7	78	0.01928	716	11.94
2	15-06-08	09:00 -	10:00	29.8	79	0.02128	767	12.78
3	15-06-08	10:00 -	11:00	29.8	78	0.02574	885	14.75
4 Note:	1 <i>5-06-08</i> 1. Monitoring c	<u>11:00 -</u> lata was mea	12:00 isured by	<i>29.7</i> Rupprect	<i>79</i> nt & Pata	<i>0.01953</i>  shnick TEOM <sup>®</sup>	712	11.86
Slope	2. Total Count 3. Count/minut ar Regression of (K-factor); ation coefficient;	e was calcul						
Validit	y of Calibration F	Record:	14 June 2	009				
Remark	s:		·					
QC Re	oviewer: <u>Mike</u>	Shek	Signat	ure:	Hiki	Date	: <u>16 J</u> un	e 2008

### **EQUIPMENT CALIBRATION RECORD**

Type:	facturer/Brand:		_	Laser D SIBATA	ust Mon	itor		
Model				LD-3				
	ment No.:		_	A.005.11a				
	tivity Adjustment	Scale Settin	ıg: _	799 CP				
Opera	utor:		_	Mike Sh	ek (MSKI	М)		
Standa	rd Equipment							
P= 1								J
Equipment: Rupprecht &								
Venue			rport (Pui	Ying Seco	ondary S	chool)		<del></del>
Model Serial			s 1400AB	0400400	00000			
Senai	NO.	Contro Senso		0AB2198				
Last C	Calibration Date*:		ne 2008	00C1436	09803	K <sub>o</sub> : <u>1250</u>	U	
*D	l D							
- Hemar	ks: Recommend	ied interval f	or nardwa	re calibra	tion is 1 y	year		
Calibra	tion Result							
Sensit Sensit	ivity Adjustment ivity Adjustment	Scale Settin Scale Settin	g (Before g (After C	Calibration alibration	on): ):		PM PM	
Hour	Date	Tim	Time		oient	Concentration	Total	Count/
	(dd-mm-yy)			Condition		(mg/m³)	Count <sup>2</sup>	Minute <sup>3</sup>
				Temp	R.H.	Y-axis		X-axis
	20 25 25		<del></del>	(°C)	(%)			
1	06-07-08	10:00 -	11100	29.9	81	0.01680	704	11.74
2	06-07-08	11:00 -	12:00	29.8	80	0.01748	738	12.30
3 4	06-07-08	12:00 -	13:00	29.6	80	0.01537	659	10.98
Note:	06-07-08	13:00 -	14:00	29.6	80	0.01688 shnick TEOM®	730	12.17
vol <del>o</del> .	2. Total Count					ISHNICK TEOW		
	3. Count/minut							
Duling	or Dooroopion of	V ou V			,			
	ar Regression of (K-factor):	YOFX	0.0014					
	ation coefficient:	-	0.0014		<del></del>			
	y of Calibration F	Record: _	5 July 200	09				
Remark	s:							
						•		ł
<u>.                                    </u>				<del></del>	1			
OC <b>D</b> a	eviewer: <i>Mike</i>	Shok	Cianat	uroi	H.Lo	Б.,	711	2000
WO HE	viewer: <i>Mike</i>	OHEK	Signat	ui e	<i></i>	Dat	e: _ 7 July 2	2UU8



#### 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.:

08CA0603 01

Page

of

Item tested

Description:

Sound Level Meter (Type I)

Microphone

2

Manufacturer:

RION CO., LTD.

RION CO., LTD.

Type/Model No.:

NL-31

UC-53A

Serial/Equipment No.:

00320528 / N.007.03A

88783

Adaptors used:

Item submitted by

Customer Name:

ENSR ASIA (HK) LTD.

Address of Customer:

Room 1213-1219, Grand Central Plaza, Tower 2, 138 Shalin Rural Committee Rd, Sha Tin, New Territories, HK

Request No.: Date of request:

03-Jun-2008

Date of test:

12-Jun-2008

Reference equipment used in the calibration

Description:

Model:

Serial No.

**Expiry Date:** 

Traceable to:

Multi function sound calibrator Signal generator

**B&K 4226** 

2288444 33873

11-Jan-2009 06-Dec-2008 CIGISMEC

Signal generator

DS 360 DS 360

61227

13-Jun-2008

CEPREI CEPRE

**Ambient conditions** 

Temperature:

(23 ± 2) °C

Relative humidity: Air pressure:

(60 ± 15) % (1000 ± 10) hPa

#### Test specifications

The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580; Part 1: 1997 1, 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 2, replaced by an equivalent capacitance within a tolerance of ±20%.

3, 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\_lian-Min/Feng Jun Qi

Actual Measurement data are documented on worksheets.

Approved Signatory:

12-Jun-2008

Company Chop:

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.

© Soils & Materials Engineering Co., Ltd.

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



## 輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No.: C083543

# Certificate of Calibration

### This is to certify that the equipment

Description: Sound Level Calibrator

Manufacturer: Rion

Model No.: NC-73

Serial No.: 10307223 (N. 004 08)

has been calibrated for the specific items and ranges. The results are shown in the Calibration Report No. C083543.

### The equipment is supplied by

Co. Name: ENSR Asia (HK) Limited

Address: 11/F., Grand Central Plaza, Tower 2, 138 Shatin Rural Committee Rd., Shatin, N.T.

Date of Issue: 14 July 2008

Certified by:

K C/Lee

The test equipment used for testing are traceable to the National Standards as specified in this report. This report shall not be reproduced except in full and with prior written approval from this laboratory.

Tel: 2927 2606

Fax: 2744 8986

E-mail: callab@suncreation.com

Website: www.suncreation.com