## ENSR ASIA (HK) LTD TSP High Volume Sampler Field Calibration Report

Station	ation TKO2 (Combined Reception & Exit Office )				Shum Ka			
Cal. Date:	25-Aug-08			Operator: Next Due Date:	25-O	•		
Equipment No.: A-001-71T			Serial No. 10268			•		
				•			•	
			Ambient	Condition				
Temperati	ure, Ta (K)	305	Pressure, l	Pa (mmHg)		756.5		
			Orifice Transfer S	tandard Informatio	on			
Seria	al No:	843 Slope, mc		2.02026	Intercept, bc		-0.03609	
Last Calibr	ation Date:	22-Oct-07		mc x Qstd + bc = [DH x (Pa/760) x (29				
Next Calibr	ation Date:	22-Oct-08		Qstd = {[DH x (	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc		
•	· · · · · · · · · · · · · · · · · ·				····			
		······································		of TSP Sampler	#			
Destara Dist		<del></del>	Orfice		HV	S Flow Recorder	Flow Recorder	
Resistance Plate No.	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] <sup>1/2</sup>		Qstd (m³/min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Reading IC (CFI		
18	10.8		3.24	1.62	52.0	51.28		
13	8.6		2.89	1.45	44.0	43.39		
10	6.5	2.51		1.26	38.0	37.47		
7	4.2		2.02		30.0	29.59		
5	2.8	1.65		0.83	24.0	23.67		
By Linear Regression of Y on X Slope, mw = 34.3151 Correlation Coefficient* = *If Correlation Coefficient < 0.990, che		0.9952		Intercept, bw = _	-5.3	798		
"if Correlation Co	periicient < 0.990,	check and recal	prate.					
	<del></del> , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·	Set Point	Calculation	,			
From the TSP Fi	eld Calibration Cu	rve, take Qstd =						
From the Regres	sion Equation, the	e "Y" value accor	ding to					
-								
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/1	Га)] <sup>1/2</sup>			
Therefore, Set P	oint; IC = ( mw x (	Qstd + bw ) x [( 7	60 / Pa ) x ( Ta / 29	08 )]" <sup>z</sup> =		39.78	-	
-,	<del>,</del>							
Remarks:								
, williamo.								
		<b>-</b>						
QC Reviewer:	\ ne	tu	Signature:	) or		Date: 26	Aug	
TO I WHO HOLI		<u></u>	orginaturo.		·		1	
					V:\EM&A	Calibration Cert	ificate\Higl	

## ENSR ASIA (HK) LTD TSP High Volume Sampler Field Calibration Report

Station	TKO2 (Combined	d Reception & Ex	xit Office)	Operator:	Shum K	Shum Kam Yuen	
Cal. Date:	20-Oct-08			Next Due Date:	20-D		
Equipment No.:	A-001-71T			Serial No.	10:	<del>-</del>	
	. #		Ambient	Condition	<del></del>		
Temperatu	re, Ta (K)	303	Pressure,	Pa (mmHg)		759.3	
			Orifice Transfer S	tandard Information	on		
Serial No:		843 Slope, mc		2.02026	Intercept, bc		-0.0360
Last Calibra	ation Date:	22-Oct-07	•	mc x Qstd + bc	c = [DH x (Pa/760) x (298/Ta)] <sup>1/2</sup>		
Next Calibra	ation Date:	22-Oct-08		Qstd = {[DH x (	Pa/760) x (298/Ta)]	<sup>1/2</sup> -bc} / mc	
			Calibration of	of TSP Sampler			
	·· <del>·</del> ···	(	Orfice	i Toi Gampier	HV	S Flow Recorder	
Resistance Plate	DI1 (-25-2)			3		<u> </u>	
No.	DH (orifice), in. of water	[DH x (Pa/760) x (298/Ta)] <sup>1/2</sup>		Qstd (m <sup>3</sup> /min) X - axis	Flow Recorder Reading (CFM)	Continuous Flow Reco	
18	10.8	3.26		1.63	50.0	49.56	
13	8.5		2.89	1.45	44.0	43.6	i2
10	6.4		2.51	1.26	38.0	37.67	
7	4.1	2.01		1.01	30.0	29.74	
5	2.6	1.60		0.81	24.0	23.7	9
By Linear Regre Slope , mw = Correlation Coef	31.4500	_ 0.	9997	Intercept, bw =	-1.8	606	_
*If Correlation Co	efficient < 0.990,	check and recali	brate.	_			
			Set Point	Calculation	····		
From the TSP Fie	eld Calibration Cu	rve, take Qstd =	1.30m <sup>3</sup> /min		**		
From the Regress	sion Equation, the	e "Y" value accor	ding to				
					415		
		mw	x Qstd + bw = IC	x [(Pa/760) x (298/1	Га)] <sup>1/2</sup>		
Therefore Set Po	int: IC = / mw.x.C	)std + hw ) v [/ 7	60 / Pa ) x ( Ta / 29	8 \1 <sup>1/2</sup>		39.37	
morororo, occir o	, 10 - ( 111 <b>4</b> x c	sou · Dw / x [( /	00718/1/(18729	0)] -	•	39.37	-
	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
Remarks:		****					
-							
		744		Ì			
QCReviewer: 📐	loe t	-u_	Signature:	loe		Date: 2/ (	IT at

## **EQUIPMENT CALIBRATION RECORD**

Type: Manufacturer/Brand:				Laser Di SIBATA	ust Moni	tor					
Model			•	LD-3		<del></del>					
Equipment No.:				A.005.09	 )a		•				
Sensitivity Adjustment Scale Setting:				797 CP							
Opera	itor:		· 	Mike Shek (MSKM)							
Standa	rd Equipment										
Equipi	ment:	Rup	precht & Pa	tashnick	TEOM®						
Venue	<b>)</b> :		erport (Pui \			chool)					
Model	No.:		es 1400AB								
Serial	No:	Conf		140AB219899803							
		Sens		00C1436		K <sub>o</sub> : 12500		<del></del>			
Last C	Calibration Date*:		une 2008								
*Remar	ks: Recommend	led interval	for hardwar	e calibra	tion is 1 y	/ear					
Calibra	tion Result										
	ivity Adjustment ivity Adjustment					797 CP					
Hour	Date	L L			pient	Concentration	Total	Count/			
	(dd-mm-yy)			Condition		(mg/m³)	Count <sup>2</sup>	Minute <sup>3</sup>			
				Temp	R.H.	Y-axis		X-axis			
				(°C)	(%)						
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	15-06-08	11:00	- 12:00	29.7	79	0.01953	712	11.86			
Slope	2. Total Count 3. Count/minut ar Regression of (K-factor); ation coefficient:	was logge e was calc	d by Laser [	Dust Mon	itor	shnick TEOM <sup>®</sup>					
Validit	y of Calibration F	Record:	14 June 2	009							
Remark	s:							· · · · · · · · · · · · · · · · · · ·			
	-										
QC Re	eviewer: Mike	Shek	Signat	ure:	MK	Date	: 16 Jun	e 2008			

## **EQUIPMENT CALIBRATION RECORD**

Type:				Laser Di	ıst Moni	tor				
Manuf	acturer/Brand:			SIBATA						
Model		•		LD-3				."		
Equipr	ment No.:			A.005.11a						
Sensitivity Adjustment Scale Setting:				799 CPM						
Opera	tor:			Mike Shek (MSKM)						
Standa	rd Equipment									
Equipr	ment:	Dun	araaht P. Da	tanbniak	TCOM					
Venue			orecht & Pa			shoo!				
Model			erport (Pui \ es 1400AB	ing seco	nicary Sc	211001)		<del></del>		
Serial			****	3AB0100	00000		<del></del>			
Serial	INO.		Control: <u>140AB219899803</u> Sensor: <u>1200C143659803</u> K <sub>o</sub> : <u>12500</u>							
Last C	Calibration Date*:		une 2008	JUC 1430:	59803	K₀: <u>12500</u>	·······			
*Remari	ks: Recommend	ed interval	for hardwai	e calibra	tion is 1 v	/ear				
Calibra	tion Result									
Sancit	ivity Adjustment	Canla Catti	na (Doloro	Calibratia		700 00	N 4			
	ivity Adjustment					799 CP				
Sensit	ivity Adjustment	Scale Selli	ng (Alter Ca	alibration	):	_ <i>799</i> CP	M			
Hour	Date	Ti	me	Amb	olent	Concentration <sup>1</sup>	Total	Count/		
	(dd-mm-yy)		Condition			(mg/m <sup>3</sup> )	Count <sup>2</sup>	Minute <sup>3</sup>		
•	(,,,,			Temp	R.H.	Y-axis	Journ	X-axis		
				(°C)	(%)			A UAIO		
1	06-07-08	10:00	- 11:00	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	06-07-08	12:00	- 13:00	29.6	80	0.01537	659	10.98		
4	06-07-08	13:00	- 14:00	29.6	80	0.01688	730	12.17		
Note:	1. Monitoring of	lata was m	easured by	Rupprecl	ht & Pata	shnick TEOM®		1		
	2. Total Count	was logged	d by Laser [	Dust Mon	itor					
	3. Count/minut	e was calc	ulated by (T	otal Cou	nt/60)					
<b>B</b> 11										
	ar Regression of	Y or X	0.0044							
	(K-factor):		0.0014							
Correi	ation coefficient:		0.9275	· • • • • • • • • • • • • • • • • • • •		-				
Validity	y of Calibration F	Record:	5 July 200	09	<del></del>					
Remark	·e•									
Torridin							<del></del>	···		
		*								
		•								
						•				
		· · · · · · · · · · · · · · · · · ·								
					1					
OC Re	eviewer: Mike	Shek	Signat	ııro,	Hike	Date	: 7 July :	2008		
	TAILORNOT INTO	UHUN	Olynat	때 도.	MIN.	Date	. / July i	2.000		