Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. 23551 Page 1 of 4 Pages

Customer : Lam Geotechnics Limited

Address : 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No. : Q21462 **Date of receipt :** 11-Jun-12

Item Tested

Description : Digital Sound Level Meter

Manufacturer : B&K

Model : Type 2236 **Serial No. :** 2100736

Test Conditions

Date of Test : 12-Jun-12 **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 Type 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	C101623	SCL-HKSAR
S024	Sound Level Calibrator	15136	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 : P. F. Wong

Approved by : Dorothy Cheuk

Date: 12-Jun-12

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

E

Calibration Certificate

Results :

1. SPL Accuracy

UUT Setting				Applied Value (dB)	UUT Reading (dB)
Range	Parameter	Frequency Wt.	Freq. Response		
20 - 100	SPL	dBA	F	94.0	93.8
			S		93.8
		dBC	F		93.9
		dBL	F		93.9
		1 kHz	F		93.9
40 - 120	SPL	dBA	F	94.0	93.9
		1 kHz	F		94.0
	SPL	dBA	F	114.0	114.0
			S		114.0
		dBC	F		114.0
		dBL	F		114.1
		1 kHz	F		114.0

IEC 651 Type 1 Spec. : ± 0.7 dB
Uncertainty : ± 0.1 dB

2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. : ± 0.3 dB
Uncertainty : ± 0.01 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	113.8	-0.1	± 0.7 dB
130	104.0	103.9	0.0	
120	94.0	93.9 (Ref.)	--	
110	84.0	83.9	0.0	
100	74.0	73.9	0.0	
90	64.0	63.9	0.0	
90	54.0	53.9	0.0	

Uncertainty : ± 0.1 dB

Calibration Certificate

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	94.8	-0.1	± 0.2 dB

Uncertainty : ± 0.1 dB

4. Frequency Weighting

A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.4	- 39.4 dB, ± 1.5 dB
63 Hz	-26.1	- 26.2 dB, ± 1.5 dB
125 Hz	-16.1	- 16.1 dB, ± 1 dB
250 Hz	-8.6	- 8.6 dB, ± 1 dB
500 Hz	-3.2	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref)	0 dB, ± 1 dB
2 kHz	+1.3	+ 1.2 dB, ± 1 dB
4 kHz	+1.0	+ 1.0 dB, ± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ -3 dB
16 kHz	-6.7	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 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 : ± 0.1 dB

Calibration Certificate

6. Filter Response

Filter Setting	Attenuation (dB)	IEC 1260 Class 1 Spec.
125 Hz	-63.5	< - 61
250 Hz	-44.7	< - 42
500 Hz	-20.8	< - 17.5
707 Hz	-3.5	- 2 ~ - 5
1 kHz (Ref.)	0.0 (Ref.)	--
1.414 kHz	-3.9	- 2 ~ - 5
2 kHz	-21.2	< - 17.5
4 kHz	-44.9	< - 42
8 kHz	-63.7	< - 61

Uncertainty : ± 0.2 dB

Remark : 1. UUT : Unit-Under-Test
2. The uncertainty claimed is for a confidence probability of not less than 95%.
3. Atmospheric Pressure : 992 hPa

---------- END ----------

Hong Kong Calibration Ltd.
香港校正有限公司

Calibration Certificate

Certificate No. **25144** Page 1 of 2 Pages

Customer : Lam Geotechnics Limited

Address : 11/F, Centre Point, 181-185 Gloucester Road, Wanchai, Hong Kong.

Order No. : Q22033 **Date of receipt :** 2-Aug-12

Item Tested

Description : Sound Level Calibrator

Manufacturer : B & K

Model : Type 4230 **Serial No. :** 1411076

Test Conditions

Date of Test : 10-Aug-12 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure: F21, Z02.

Test Results

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S014	Spectrum Analyzer	13535	NIM-PRC & SCL-HKSAR
S024	Sound Level Calibrator	15136	NIM-PRC & SCL-HKSAR
S041	Universal Counter	15610	SCL-HKSAR
S191	6½ dgt. Multimeter	20033	NIM-PRC

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 : Stephen Chu

Approved by : Dorothy Cheuk

Date: 10-Aug-12

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

CASTCO
佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

TEST REPORT
Performance Check / Calibration of Turbidity Meter

Date of issue : 04-10-2012
Page 1 of 1 page(s)
Castco LRN: EN0120924-1

Sample details as supplied by customer:-

Customer: Lam Geotechnics Ltd.
Customer Ref. No.: --

Address: 11/F., Centre Point, 181-185 Gloucester Rosd, Wanchai, Hong Kong
Contract No.: --

Job Title: --

Sample Identification No.: --
Date Sampled: --

Laboratory Test Results:-

Date of sample received: 24-09-2012
Test period: 26-09-2012

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)	Method
0	0.01	--	ENV-WAT-TUR
4	3.95	-1.2	
40	37.0	-7.5	
80	76.1	-4.9	
400	393	-1.8	
800	814	+1.8	

Remark(s):
1. Test results only relate to the specimen tested.
2. Compliance requirement : Tolerance Limit ± 10.0%.
3. Turbidity meter model No.: Turb 430T.
4. Turbidity meter serial No.: 12220419.
5. Next Calibration due date: 26-12-2012.
6. Reference method: APHA 21st Ed. 2130B (Nephelometric method).

Checked by : _____
Li Yiu Wah

Certified by : _____
MA HIU TUNG
Assistant Technical Manager

End of Report

Form No. ENV CAL Tur T1 dd 26/06/2012

香港粉嶺安居街33號 33, On Kui Street, Fanling, Hong Kong. Tel : 2677 2138
香港粉嶺安全街29A號 29A, On Chuen Street, Fanling, Hong Kong. Fax: 2677 0351
E-mail: castco@netvigator.com Website: www.castco.com.hk

ALS Technichem (HK) Pty Ltd

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	MS EMILY KONG	**WORK ORDER:**	HK1222848
CLIENT:	LAM GEOTECHNICS LIMITED	**LABORATORY:**	HONG KONG
ADDRESS:	11/F., CENTRE POINT, 181-185 GLOUCESTER ROAD, WAN CHAI, HONG KONG	**DATE RECEIVED:**	28/08/2012
		DATE OF ISSUE:	04/09/2012
PROJECT:	--		

COMMENTS

It is certified that the item under calibration/checking has been calibrated/checked by corresponding calibrated equipment in the laboratory.
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal aceptance criteria of ALS will be followed.

Scope of Test:	Dissolved Oxygen, pH, Salinity and Temperature
Description:	Multimeter
Brand Name:	YSI
Model No.:	YSI Professional Plus
Serial No.:	11F100421
Equipment No.:	--
Date of Calibration:	04 September, 2012

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

11/F Chung Shun Knitting Centre
1-3 Wing Yip Street
Kwai Chung
HONG KONG

Phone: 852-2610 1044
Fax: 852-2610 2021
Email: hongkong@alsglobal.com

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Work Order: HK1222848
Date of Issue: 04/09/2012
Client: LAM GEOTECHNICS LIMITED

Description: Multimeter
Brand Name: YSI
Model No.: YSI Professional Plus
Serial No.: 11F100421
Equipment No.: --
Date of Calibration: 04 September, 2012 Date of next Calibration: 04 December, 2012

Parameters:

Dissolved Oxygen **Method Ref: APHA (21st edition), 4500O: G**

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
1.64	1.51	-0.13
4.71	4.61	-0.10
8.19	8.02	-0.17
	Tolerance Limit (±mg/L)	0.20

pH Value **Method Ref: APHA (21st edition), 4500H:B**

Expected Reading (pH Unit)	Displayed Reading (pH Unit)	Tolerance (pH unit)
4.0	3.97	-0.03
7.0	6.95	-0.05
10.0	9.94	-0.06
	Tolerance Limit (±unit)	0.20

Salinity **Method Ref: APHA (21st edition), 2520B**

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	9.86	-1.4
20	20.46	2.3
30	29.25	-2.5
	Tolerance Limit (±%)	10.0

Temperature **Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
8.0	7.6	-0.4
27.0	27.3	0.3
40.0	41.0	1.0
	Tolerance Limit (°C)	2.0

Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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 - Jul 19, 2012 Rootsmeter S/N 0438320 Ta (K) - 298
Operator Tisch Orifice I.D. - 0005 Pa (mm) - 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	NA	NA	1.00	1.3840	3.2	2.00
2	NA	NA	1.00	0.9760	6.4	4.00
3	NA	NA	1.00	0.8730	7.9	5.00
4	NA	NA	1.00	0.8340	8.8	5.50
5	NA	NA	1.00	0.6890	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)		Va	(x axis) Qa	(y axis)
0.9850	0.7117	1.4066		0.9957	0.7194	0.8903
0.9809	1.0050	1.9892		0.9915	1.0159	1.2591
0.9788	1.1212	2.2240		0.9894	1.1333	1.4078
0.9777	1.1723	2.3326		0.9883	1.1850	1.4765
0.9725	1.4115	2.8132		0.9831	1.4268	1.7807
Qstd slope (m) =		2.01145		Qa slope (m) =		1.25953
intercept (b) =		-0.02803		intercept (b) =		-0.01774
coefficient (r) =		0.99995		coefficient (r) =		0.99995
y axis = SQRT[H2O(Pa/760)(298/Ta)]				y axis = SQRT[H2O(Ta/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}

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA1b	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL452	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition			
Temperature, T_a	301 Kelvin	**Pressure, P_a**	1010 mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)** (up)	(down)	(difference)	**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** ($W(P_a/1013.3\times298/T_a)^{1/2}/35.31$) **Y-axis**
1	6.1	6.1	12.2	1.7389	62	61.5897
2	5.0	5.0	10.0	1.5757	55	54.6360
3	4.1	4.1	8.2	1.4281	48	47.6824
4	2.5	2.5	5.0	1.1182	36	35.7618
5	1.4	1.4	2.8	0.8403	25	24.8346

By Linear Regression of Y on X

Slope, m = 40.7641 Intercept, b = -9.7338

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks :

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA5a	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL380	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	301	Kelvin	**Pressure, P_a**	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$ **Y-axis**
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7389	57	56.6228
2	5.0	5.0	10.0	1.5757	52	51.6559
3	3.8	3.8	7.6	1.3754	45	44.7022
4	2.4	2.4	4.8	1.0959	35	34.7684
5	1.5	1.5	3.0	0.8693	27	26.8213

By Linear Regression of Y on X

Slope, m = 34.5420 Intercept, b = -3.0633

Correlation Coefficient* = 0.9997

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks :

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA4a	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL390	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	301	Kelvin	**Pressure, P_a**	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3\times298/T_a)^{1/2}/35.31)$ **Y-axis**
	(up)	(down)	(difference)			
1	6.1	6.1	12.2	1.7389	60	59.6030
2	5.0	5.0	10.0	1.5757	53	52.6493
3	3.8	3.8	7.6	1.3754	44	43.7088
4	2.4	2.4	4.8	1.0959	34	33.7750
5	1.4	1.4	2.8	0.8403	23	22.8478

By Linear Regression of Y on X

Slope, m = 40.4660 Intercept, b = -11.1111

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks :

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA3a	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL888	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	301	Kelvin	**Pressure, P_a**	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.)	**Continuous Flow Recorder, W**	**IC** ($W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31$)
	(up)	(down)	(difference)	**X-axis**	(CFM)	**Y-axis**
1	6.1	6.1	12.2	1.7389	50	49.6691
2	4.7	4.7	9.4	1.5281	42	41.7221
3	4.0	4.0	8.0	1.4108	38	37.7485
4	2.4	2.4	4.8	1.0959	24	23.8412
5	1.4	1.4	2.8	0.8403	14	13.9074

By Linear Regression of Y on X

Slope, m = 40.2808 Intercept, b = -19.9065

Correlation Coefficient* = 0.9994

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA2a	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL449	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	301	Kelvin	**Pressure, P_a**	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** ($W(P_a/1013.3\times298/T_a)^{1/2}/35.31$) **Y-axis**
	(up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7247	53	52.6493
2	5.0	5.0	10.0	1.5757	45	44.7022
3	4.0	4.0	8.0	1.4108	38	37.7485
4	2.5	2.5	5.0	1.1182	26	25.8279
5	1.5	1.5	3.0	0.8693	15	14.9007

By Linear Regression of Y on X

Slope, m = 43.3273 Intercept, b = -22.8822

Correlation Coefficient* = 0.9992

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks : _____

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12

Lam Geotechincs Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	CMA6a	**Calbration Date**	:	16-Oct-12
Equipment no.	:	EL448	**Calbration Due Dat**	:	16-Dec-12

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	301	Kelvin	**Pressure, P_a**	1010	mmHg

Orifice Transfer Standard Information					
Equipment No.	**EL086**	**Slope, m_c**	2.01145	**Intercept, bc**	-0.02803
Last Calibration Date	19-Jul-12	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	19-Jul-13	$= m_c \times Q_{std} + b_c$			

Calibration of RSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** ($W(P_a/1013.3\times298/T_a)^{1/2}/35.31$) **Y-axis**
	(up)	(down)	(difference)			
1	6.0	6.0	12.0	1.7247	61	60.5963
2	5.0	5.0	10.0	1.5757	54	53.6427
3	4.0	4.0	8.0	1.4108	46	45.6956
4	2.5	2.5	5.0	1.1182	34	33.7750
5	1.5	1.5	3.0	0.8693	23	22.8478

By Linear Regression of Y on X

Slope, m = 43.8163 Intercept, b = -15.3916

Correlation Coefficient* = 0.9996

Calibration Accepted = Yes/~~No~~**

* if Correlation Coefficient < 0.990, check and recalibration again.

** Delete as appropriate.

Remarks :

Calibrated by	:	Sam	**Checked by**	:	Derek Lo
Date	:	16-Oct-12	**Date**	:	16-Oct-12