

Appendix E
Calibration Record
(Air Quality Monitoring)

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR1
 Calibrated by : P.F.Yeung
 Date : 07/01/2011

Sampler

Model : GMWS-2310 ACCU-VOL
 Serial Number : S/N 1806

Calibration Office and Standard Calibration Relationship

Serial Number : 1785
 Service Date : 10 May 2010
 Slope (m) : 2.01637
 Intercept (b) : -0.02316
 Correlation Coefficient(r) : 0.99996

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
 Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	10.8	3.349	1.672	56	57.1
2 13 holes	9.2	3.091	1.544	51	52.0
3 10 holes	7.0	2.696	1.348	43	43.8
4 7 holes	4.6	2.185	1.095	34	34.6
5 5 holes	2.7	1.674	0.842	24	24.5

Sampler Calibration Relationship

Slope(m): 39.066 Intercept(b): -8.414 Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 10/01/2011

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR2A
 Calibrated by : P.F.Yeung
 Date : 07/01/2011

Sampler

Model : GMWS-2310 ACCU-VOL
 Serial Number : S/N 1061

Calibration Orifice and Standard Calibration Relationship

Serial Number : 1785
 Service Date : 10 May 2010
 Slope (m) : 2.01637
 Intercept (b) : -0.02316
 Correlation Coefficient(r) : 0.99996

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
 Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	12.4	3.588	1.791	49	49.9
2 13 holes	9.8	3.190	1.593	44	44.8
3 10 holes	7.6	2.809	1.405	39	39.7
4 7 holes	4.8	2.232	1.119	31	31.6
5 5 holes	2.8	1.705	0.857	24	24.5

Sampler Calibration Relationship

Slope(m): 27.438 Intercept(b): 0.987 Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 10/01/2011

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR3
Calibrated by : K.T.Ho
Date : 07/01/2011

Sampler

Model : GMWS-2310 ACCU-VOL
Serial Number : S/N 7577

Calibration Orifice and Standard Calibration Relationship

Serial Number : 1785
Service Date : 10 May 2010
Slope (m) : 2.01637
Intercept (b) : -0.02316
Correlation Coefficient(r) : 0.99996

Standard Condition

Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	12.2	3.559	1.777	58	59.1
2 13 holes	9.8	3.190	1.593	52	53.0
3 10 holes	7.7	2.827	1.414	46	46.9
4 7 holes	4.8	2.232	1.119	37	37.7
5 5 holes	2.8	1.705	0.857	28	28.5

Sampler Calibration Relationship

Slope(m): 33.010 Intercept(b): 0.411 Correlation Coefficient(r): 0.9998

Checked by: Magnum Fan

Date: 10/01/2011

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR4
 Calibrated by : P.F.Yeung
 Date : 07/01/2011

Sampler

Model : GMWS-2310 ACCU-VOL
 Serial Number : S/N 1273

Calibration Office and Standard Calibration Relationship

Serial Number : 1785
 Service Date : 10 May 2010
 Slope (m) : 2.01637
 Intercept (b) : -0.02316
 Correlation Coefficient(r) : 0.99996

Standard Condition

Pstd (hpa) : 1013
 Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1020
 Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1 18 holes	11.0	3.379	1.688	57	58.1
2 13 holes	8.8	3.023	1.511	50	50.9
3 10 holes	6.8	2.657	1.329	43	43.8
4 7 holes	4.5	2.162	1.083	34	34.6
5 5 holes	2.6	1.643	0.826	24	24.5

Sampler Calibration Relationship

Slope(m): 38.848 Intercept(b): -7.626 Correlation Coefficient(r): 0.9999

Checked by: Magnum Fan

Date: 10/01/2011

Appendix E
Calibration Record
(Noise Monitoring)

Certificate No. : C105886

Certificate of Calibration

This is to certify that the equipment

Description : Sound Level Meter

Manufacturer : Rion

Model No. : NL-31

Serial No. : 00983400

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C105886.*

The equipment is supplied by

Co. Name : Envirotech Services Co.

*Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong*

Date of Issue : 26 October 2010

Certified by :

K C Lee

Report No. : C105886

Calibration Report

ITEM TESTED

DESCRIPTION : Sound Level Meter
MANUFACTURER : Rion
MODEL NO. : NL-31
SERIAL NO. : 00983400

TEST CONDITIONS

AMBIENT TEMPERATURE : $(23 \pm 2)^{\circ}\text{C}$ RELATIVE HUMIDITY : $(55 \pm 20)\%$
LINE VOLTAGE : ---

TEST SPECIFICATIONS

Calibration check

DATE OF TEST : 25 October 2010

JOB NO. : IC10-2726

TEST RESULTS

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested by :


L L Cheung

Date : 26 October 2010

The test equipment used for calibration 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.

Calibration Report

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- Self-calibration was performed before the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL280	40 MHz Arbitrary Waveform Generator	C100067
CL281	Multifunction Acoustic Calibrator	C1006860

- Test procedure : MA101N.

- Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L _A	A	Fast	94.00	1	94.0	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L _A	A	Fast	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.1

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L _A	A	Fast	94.00	1	94.0	Ref.
			Slow			93.9	± 0.3

Calibration Report

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L _A	A	Fast	94.00	63 Hz	67.6	-26.2 ± 1.5
					125 Hz	77.7	-16.1 ± 1.5
					250 Hz	85.2	-8.6 ± 1.4
					500 Hz	90.7	-3.2 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	95.3	+1.2 ± 1.6
					4 kHz	95.1	+1.0 ± 1.6
					8 kHz	93.0	-1.1 (+2.1 ; -3.1)
					12.5 kHz	90.1	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L _C	C	Fast	94.00	63 Hz	93.2	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.5
					250 Hz	94.0	0.0 ± 1.4
					500 Hz	94.0	0.0 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	93.9	-0.2 ± 1.6
					4 kHz	93.4	-0.8 ± 1.6
					8 kHz	91.1	-3.0 (+2.1 ; -3.1)
					12.5 kHz	88.3	-6.2 (+3.0 ; -6.0)

The test equipment used for calibration 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.

Calibration Report

Remarks : - Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value : 94 dB : 63 Hz - 125 Hz : ± 0.35 dB
250 Hz - 500 Hz : ± 0.30 dB
1 kHz : ± 0.20 dB
2 kHz - 4 kHz : ± 0.35 dB
8 kHz : ± 0.45 dB
12.5 kHz : ± 0.70 dB
104 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)
114 dB : 1 kHz : ± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this Calibration Report 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.



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輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Certificate No. : C110248

This is to certify that the equipment

Description : Sound Calibrator

Manufacturer : Rion

Model No. : NC-74

Serial No. : 34251498

*has been calibrated for the specific items and ranges.
The results are shown in the Calibration Report No. C110248.*

The equipment is supplied by

Co. Name : Envirotech Services Co.

*Address : Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong*

Date of Issue : 14 January 2011

Certified by :

K C Lee

The test equipment used for calibration 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.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

Tel: 2927 2606

Fax: 2744 8986

E-mail: callab@suncreation.com

Website: www.suncreation.com



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輝創工程有限公司

Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C110248

ITEM TESTED

DESCRIPTION : Sound Calibrator
MANUFACTURER : Rion
MODEL NO. : NC-74
SERIAL NO. : 34251498

TEST CONDITIONS

AMBIENT TEMPERATURE : $(23 \pm 2)^{\circ}\text{C}$ RELATIVE HUMIDITY : $(55 \pm 20)\%$
LINE VOLTAGE : ---

TEST SPECIFICATIONS

Calibration check

DATE OF TEST : 14 January 2011

JOB NO. : IC11-0115

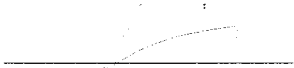
TEST RESULTS

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- The Bruel & Kjaer Calibration Laboratory, Denmark
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested by :


L.L. Cheung

Date : 14 January 2011

The test equipment used for calibration 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.

Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8956 E-mail: callab@suncreation.com Website: www.suncreation.com

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Sun Creation Engineering Limited Calibration and Testing Laboratory

Report No. : C110248

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours before the commencement of the test.
2. The results presented are the mean of 3 measurements at each calibration point.
3. Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
TST150A	Measuring Amplifier	C101008
CL130	Universal Counter	C103289
CL281	Multifunction Acoustic Calibrator	C1006860

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.3	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec. Spec.	Uncertainty of Measured Value (Hz)
1	1.010	1 kHz ± 1 %	± 1

Remark : - The uncertainties are for a confidence probability of not less than 95 %.

Note :

The values given in this Calibration Report 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 environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited 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 the National Standards as specified in this report.
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Calibration and Testing Laboratory of Sun Creation Engineering Limited

c/o - F. Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
Tel: 2927 2606 Fax: 2744 8986 E-mail: callab@suncreation.com Website: www.suncreation.com

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Appendix E
Calibration Record
(Water Quality Monitoring)



CERTIFICATE OF ANALYSIS

CONTACT: MR THOMAS WONG
CLIENT: ENOVATIVE ENVIRONMENTAL TECHNOLOGY COMPANY
ADDRESS: RM 3704, SIK MAN HOUSE,
HOMANTIN ESTATE,
KOWLOON, HONG KONG.

WORK ORDER: HK1028832
LABORATORY: HONG KONG
DATE RECEIVED: 01/12/2010
DATE OF ISSUE: 07/12/2010
SAMPLE TYPE: EQUIPMENT
No. of SAMPLES: 1

ORDER No.:

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

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@alsenviro.com

Mr. Fung Lim Chee, Richard
General Manager - Hong Kong

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Abbreviations: % SPK REC denotes percentage spike recovery
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery

ADDRESS 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong PHONE +852 2610 1044 FAX +852 2610 2021
ALS TECHNICHEM (HK) PTY LTD Part of the ALS Laboratory Group A Campbell Brothers Limited Company



ALS Technichem (HK) Pty Ltd

CERTIFICATE OF ANALYSIS

CONTACT: MR THOMAS WONG
CLIENT: ENOVATIVE ENVIRONMENTAL TECHNOLOGY COMPANY
ADDRESS: RM 3704, SIK MAN HOUSE,
HOMANTIN ESTATE,
KOWLOON, HONG KONG.

WORK ORDER: HK1101810
AMENDMENT: 1
LABORATORY: HONG KONG
DATE RECEIVED: 20/01/2011
DATE OF ISSUE: 22/01/2011
SAMPLE TYPE: EQUIPMENT
No. of SAMPLES: 2

ORDER No.:

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

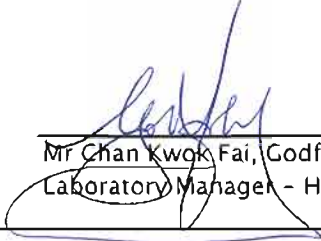
This is the Final Report and supersedes any preliminary report with this batch number.
Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd
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HONG KONG

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


Mr Chan Kwok Fai, Godfrey
Laboratory Manager - Hong Kong

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*Abbreviations: % SPK REC denotes percentage spike recovery
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery*

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ADDRESS 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., Hong Kong PHONE +852 2610 1044 FAX +852 2610 2021
ALS TECHNICHEM (HK) PTY LTD Part of the ALS Laboratory Group A Campbell Brothers Limited Company

CERTIFICATE OF ANALYSIS



Work Order: HK1101810
Date of Issue: 22/01/2011
Client: ENOVATIVE ENVIRONMENTAL TECHNOLOGY COMPANY
Client Reference:

Calibration of Multimeter

Item : YSI Multimeter Serial No.: 10D101566
Model No.: YSI Professional Plus Equipment No.: N/A
ALS Lab ID: HK1101810 -001 Date of Calibration: 20 January, 2011

Testing Results :

Salinity

Expected Reading	Recording Reading
10.0 g/L	10.1 g/L
20.0 g/L	20.4 g/L
30.0 g/L	30.5 g/L
Allowing Deviation	± 10%

Testing Method:

APHA (20th edition), 2520 A and B

Dissolved Oxygen

Expected Reading	Recording Reading
0.0 mg/L	<0.1 mg/L
3.2 mg/L	3.1 mg/L
6.6 mg/L	6.6 mg/L
9.6 mg/L	9.8 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:

APHA (20th edition), 4500-OC & G

pH

Expected Reading	Recording Reading
4.00	4.00
7.00	7.10
10.0	10.0
Allowing Deviation	± 0.2 unit

Testing Method:

APHA (20th edition), 4500-H⁺B

Temperature

Expected Reading	Recording Reading
9.0 °C	8.8 °C
18.7 °C	18.8 °C
Allowing Deviation	±2.0 °C

Testing Method:

In House Method

CERTIFICATE OF ANALYSIS



Work Order: HK1101810
Date of Issue: 22/01/2011
Client: ENOVATIVE ENVIRONMENTAL TECHNOLOGY COMPANY
Client Reference:

Calibration of Multimeter

Item : YSI Multimeter Serial No.: 10D101565
Model No.: YSI Professional Plus Equipment No.: N/A
ALS Lab ID: HK1101810 -002 Date of Calibration: 20 January, 2011

Testing Results :

Salinity

Expected Reading	Recording Reading
10.0 g/L	10.1 g/L
20.0 g/L	20.2 g/L
30.0 g/L	30.3 g/L
Allowing Deviation	± 10%

Testing Method:

APHA (20th edition), 2520 A and B

Dissolved Oxygen

Expected Reading	Recording Reading
0.0 mg/L	0.1 mg/L
3.2 mg/L	3.3 mg/L
6.6 mg/L	6.5 mg/L
9.6 mg/L	9.5 mg/L
Allowing Deviation	± 0.2 mg/L

Testing Method:

APHA (20th edition), 4500-OC & G

pH

Expected Reading	Recording Reading
4.00	3.90
7.00	7.00
10.0	10.0
Allowing Deviation	± 0.2 unit

Testing Method:

APHA (20th edition), 4500-H⁺B

Temperature

Expected Reading	Recording Reading
9.0 °C	9.0 °C
18.7 °C	18.7 °C
Allowing Deviation	±2.0 °C

Testing Method:

In House Method