Appendix E

Copies of Calibration Certificates for Air Quality Monitoring and Water Quality Monitoring

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 5
Calibrated by	:	K.T.Ho
Date	:	07/10/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0816

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1006
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.2	3.458	1.689	55	54.45
2	13 holes	9.5	3.051	1.493	50	49.50
3	10 holes	7.0	2.619	1.284	46	45.54
4	7 holes	4.8	2.169	1.067	38	37.62
5	5 holes	2.6	1.596	0.790	30	29.70

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):27.714 Intercept(b):8.311 Correlation Coefficient(r): 0.9954

Checked by: Magnum Fan Date: 11/10/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR10
Calibrated by	:	K.T.Ho
Date	:	07/10/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 8162

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1006
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.2	3.313	1.619	54	53.46
2	13 holes	9.0	2.970	1.453	50	49.50
3	10 holes	6.5	2.524	1.238	45	44.55
4	7 holes	4.2	2.029	0.999	37	36.63
5	5 holes	2.4	1.534	0.760	28	27.72

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):29.805 Intercept(b): 6.184 Correlation Coefficient(r): 0.9943

Checked by: Magnum Fan Date: 11/10/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AQMS1
Calibrated by	:	K.T.Ho
Date	:	07/10/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 1253

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1006
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.429	1.675	54	53.46
2	13 holes	9.2	3.003	1.469	48	47.52
3	10 holes	6.8	2.581	1.266	43	42.57
4	7 holes	4.6	2.123	1.045	37	36.63
5	5 holes	2.2	1.468	0.729	28	27.72

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):26.943 Intercept(b):8.253 Correlation Coefficient(r): 0.9997

Checked by: Magnum Fan Date: 11/10/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 1
Calibrated by	:	K.T.Ho
Date	:	07/10/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0146

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1006
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.400	1.661	54	53.46
2	13 holes	9.2	3.003	1.469	49	48.51
3	10 holes	6.6	2.543	1.248	44	43.56
4	7 holes	4.2	2.029	0.999	37	36.63
5	5 holes	2.3	1.501	0.745	29	28.71

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):26.712 Intercept(b):9.464 Correlation Coefficient(r): 0.9982

Checked by: Magnum Fan Date: 11/10/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 6
Calibrated by	:	K.T.Ho
Date	:	07/10/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 3957

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1006
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.2	3.458	1.689	55	54.45
2	13 holes	9.4	3.035	1.485	50	49.50
3	10 holes	6.8	2.581	1.266	45	44.55
4	7 holes	4.6	2.123	1.045	38	37.62
5	5 holes	2.4	1.534	0.760	30	29.70

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):26.773 Intercept(b): 9.721 Correlation Coefficient(r): 0.9984

Checked by: Magnum Fan Date: 11/10/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 5
Calibrated by	:	K.T.Ho
Date	:	07/12/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0816

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.2	3.387	1.655	64	64.77
2	13 holes	9.2	3.069	1.502	58	58.69
3	10 holes	6.8	2.639	1.294	52	52.62
4	7 holes	4.5	2.147	1.056	45	45.54
5	5 holes	2.5	1.600	0.792	35	35.42

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):33.108 Intercept(b):9.702 Correlation Coefficient(r): 0.9984

Checked by: Magnum Fan Date: 11/12/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR10
Calibrated by	:	K.T.Ho
Date	:	07/12/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 8162

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.506	1.712	60	60.7
2	13 holes	9.4	3.103	1.518	53	53.6
3	10 holes	6.8	2.639	1.294	46	46.6
4	7 holes	4.6	2.170	1.068	38	38.5
5	5 holes	2.4	1.568	0.777	30	30.4

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):32.593 Intercept(b): 4.434 Correlation Coefficient(r): 0.9989

Checked by: Magnum Fan Date: 11/12/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AQMS1
Calibrated by	:	K.T.Ho
Date	:	07/12/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 1253

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.476	1.698	56	56.67
2	13 holes	9.2	3.069	1.502	51	51.61
3	10 holes	6.8	2.639	1.294	45	45.54
4	7 holes	4.6	2.170	1.068	38	38.46
5	5 holes	2.4	1.568	0.777	30	30.36

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):28.905 Intercept(b):7.890 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan Date: 11/12/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 1
Calibrated by	:	K.T.Ho
Date	:	07/12/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0146

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.506	1.712	58	58.69
2	13 holes	9.4	3.103	1.518	52	52.62
3	10 holes	6.7	2.619	1.284	44	44.53
4	7 holes	4.5	2.147	1.056	37	37.44
5	5 holes	2.4	1.568	0.777	30	30.36

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):30.712 Intercept(b):5.744 Correlation Coefficient(r): 0.9983

Checked by: Magnum Fan Date: 11/12/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR 6
Calibrated by	:	K.T.Ho
Date	:	07/12/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 3957

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.0	3.356	1.640	58	58.69
2	13 holes	9.0	3.036	1.485	52	52.62
3	10 holes	6.8	2.639	1.294	45	45.54
4	7 holes	4.3	2.098	1.033	37	37.44
5	5 holes	2.5	1.600	0.792	29	29.35

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):34.743 Intercept(b): 1.963 Correlation Coefficient(r): 0.9991

Checked by: Magnum Fan Date: 11/12/2020

TISCH Environmental

RECALIBRATION DUE DATE:
February 18, 2021

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	February 18, 2020	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 753.1	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2454**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4190	3.2	2.00
2	3	4	1	1.0100	6.4	4.00
3	5	6	1	0.9020	7.9	5.00
4	7	8	1	0.8600	8.8	5.50
5	9	10	1	0.7110	12.7	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0001	0.7048	1.4173	0.9958	0.7017	0.8836
0.9959	0.9860	2.0044	0.9915	0.9817	1.2496
0.9939	1.1019	2.2410	0.9895	1.0970	1.3971
0.9927	1.1543	2.3504	0.9883	1.1492	1.4653
0.9875	1.3889	2.8347	0.9831	1.3828	1.7672
QSTD	**m=**	**2.07134**	**QA**	**m=**	**1.29704**
	b=	**-0.04091**		**b=**	**-0.02551**
	r=	**0.99999**		**r=**	**0.99999**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C203177
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1161) Date of Receipt / 收件日期 : 1 June 2020

Description / 儀器名稱 : Anemometer
Manufacturer / 製造商 : Lutron
Model No. / 型號 : AM-4201
Serial No. / 編號 : AF.27513
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 9 June 2020

TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :
- Testo Industrial Services GmbH, Germany

Tested By 測試 : T F Lee
Assistant Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 11 June 2020

Certificate of Calibration
校正證書

Certificate No. : C203177
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 10 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL386	Multi-function Measuring Instrument	S16494

4. Test procedure : MA130N.

5. Results :

Air Velocity

Applied Value (m/s)	UUT Reading (m/s)	Measured Correction		
		Value (m/s)	Measurement Uncertainty	
			Expanded Uncertainty (m/s)	Coverage Factor
2.0	1.8	+0.2	0.2	2.0
4.0	3.8	+0.2	0.3	2.0
6.1	5.9	+0.2	0.3	2.0
8.1	8.0	+0.1	0.3	2.0
10.0	10.1	-0.1	0.4	2.0

Remarks : - The Measured Corrections are defined as :
Value = Applied Value - UUT Reading

- The expanded uncertainties are for a level of confidence of 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this 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 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.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里 1號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 29 June 2020

Brand of Test Meter: Davis

Model: Vantage Pro 2 (s/n: AS160104014)

Location : Roof of Tuen Mun Firestation

Procedures :

1. Wind Still Test: The wind speed sensor was hold by hand until it keep still

2.Wind Speed Test: The wind meter was on-site calibrated against the Anemometer

3.Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Davis (m/s)	Anemometer (m/s)
4.4	4.8
3.2	2.9
1.8	1.9

Wind Direction Test

Davis (o)	Marine Compass (o)
270	270
0	0
91	90
181	180

Calibrated by: Ho

Yeung Ping Fai
(Technical Officer)

Checked by : Fat

Ho Kam Fat
(Senior Technical Officer)

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 8 December 2020

Brand of Test Meter: Davis

Model: Vantage Pro 2 (s/n: AS160104014)

Location : Roof of Tuen Mun Firestation

Procedures :

1. Wind Still Test: The wind speed sensor was hold by hand until it keep still

2.Wind Speed Test: The wind meter was on-site calibrated against the Anemometer

3.Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Davis (m/s)	Anemometer (m/s)
4.7	4.2
2.1	2.3
1.7	1.5

Wind Direction Test

Davis (o)	Marine Compass (o)
270	270
1	0
91	90
180	180

Calibrated by: Yeung Ping Fai (Technical Officer)

Checked by : Ho Kam Fat (Senior Technical Officer)

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ120009
Date of Issue : 02 December 2020

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920V2 (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	17H105557
Date of Received	:	Dec 02, 2020
Date of Calibration	:	Dec 02, 2020
Date of Next Calibration[(a)]	:	Mar 01, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H^+ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS[(b,c)]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[(d)] (pH Unit)	Tolerance[(e)](pH Unit)	Results
4.00	4.05	0.05	Satisfactory
7.42	7.41	-0.01	Satisfactory
10.01	9.92	-0.09	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.0	0.0	Satisfactory
20	20.0	0.0	Satisfactory
40	40.1	0.1	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

(a) *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.*
(b) *The results relate only to the calibrated equipment as received*
(c) *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
(d) *"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.*
(e) *The "Tolerance Limit" mentioned is referenced to YSI product specifications.*

LEE Chun-ning, Desmond
Senior Chemist

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ120009
Date of Issue : 02 December 2020

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.06	0.40	0.34	Satisfactory
1.80	1.36	-0.44	Satisfactory
5.14	4.70	-0.44	Satisfactory
8.44	8.60	0.16	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	157.0	6.88	Satisfactory
0.01	1412	1376	-2.55	Satisfactory
0.1	12890	12854	-0.28	Satisfactory
0.5	58670	57630	-1.77	Satisfactory
1.0	111900	111802	-0.09	Satisfactory

Tolerance limit of conductivity should be less than ±10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.08	0.80	Satisfactory
20	20.10	0.50	Satisfactory
30	30.52	1.73	Satisfactory

Tolerance limit of salinity should be less than ±10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.08	--	Satisfactory
10	9.89	-1.1	Satisfactory
20	19.96	-0.2	Satisfactory
100	107.74	7.7	Satisfactory
800	798.46	-0.2	Satisfactory

Tolerance limit of turbidity should be less than ±10.0 (%)

~ END OF REPORT ~

Remark(s): -

[f] "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

[g] The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ100092
Date of Issue : 23 October 2020

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House,
Yu Chui Court, Shatin
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment	:	YSI 6920V2 (Multi-Parameters)
Manufacturer	:	YSI (a xylem brand)
Serial Number	:	0001C6A7
Date of Received	:	Oct 22, 2020
Date of Calibration	:	Oct 22, 2020
Date of Next Calibration[a]	:	Jan 21, 2021

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H^+ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS[b,c]

(1) pH at 25°C

Target (pH unit)	Displayed Reading[d] (pH Unit)	Tolerance[e](pH Unit)	Results
4.00	4.02	0.02	Satisfactory
7.42	7.46	0.04	Satisfactory
10.01	10.13	0.12	Satisfactory

Tolerance of pH should be less than ±0.20 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
10	10.03	0.03	Satisfactory
20	20.08	0.08	Satisfactory
45	45.20	0.20	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

[a] *The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.*
[b] *The results relate only to the calibrated equipment as received*
[c] *The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.*
[d] *"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.*
[e] *The "Tolerance Limit" mentioned is referenced to YSI product specifications.*

LEE Chun-ning, Desmond
Senior Chemist

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 14/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AJ100092
Date of Issue : 23 October 2020

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
0.16	0.34	0.18	Satisfactory
3.19	3.48	0.29	Satisfactory
6.20	6.45	0.25	Satisfactory
8.10	8.23	0.13	Satisfactory

Tolerance limit of dissolved oxygen should be less than ±0.50 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading (µS/cm)	Displayed Reading (µS/cm)	Tolerance (%)	Results
0.001	146.9	154.7	5.31	Satisfactory
0.01	1412	1477	4.60	Satisfactory
0.1	12890	12815	-0.58	Satisfactory
0.5	58670	57692	-1.67	Satisfactory
1.0	111900	110899	-0.89	Satisfactory

Tolerance limit of conductivity should be less than ±10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.14	1.40	Satisfactory
20	20.24	1.20	Satisfactory
30	30.59	1.97	Satisfactory

Tolerance limit of salinity should be less than ±10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading[f] (NTU)	Tolerance[g] (%)	Results
0	0.1	--	Satisfactory
10	9.9	-1.0	Satisfactory
20	20.3	1.5	Satisfactory
100	105.8	5.8	Satisfactory
800	795.6	-0.5	Satisfactory

Tolerance limit of turbidity should be less than ±10.0 (%)

~ END OF REPORT ~

Remark(s): -

(f) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

(g) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.