Post-Construction Water Quality Monitoring Report

ANNEX A

CALIBRATION CERTIFICATES



ALS Technichem (HK) Pty Ltd

11/F., Chung Shun Knitting Centre,

1 - 3 Wing Yip Street,

Kwai Chung, N.T., Hong Kong

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: JOHNNY HO WORK ORDER: HK2242870

CLIENT: EGS (ASIA) LTD

ADDRESS: 15/F., NORTH POINT INDUSTRIAL BUILDING, **SUB-BATCH:** (

499 KING'S ROAD,

NORTH POINT, HONG KONG DATE RECEIVED: 01-Nov-2022

DATE OF ISSUE: 02-Nov-2022

HONG KONG

LABORATORY:

SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type: Multifunctional Meter Service Nature: Performance Check

Scope: Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [6820 V2-M]
Serial No./ Equipment No.: [09H101347]/ [MPP37]
Date of Calibration: 01-November-2022

GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

16.3

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2242870

SUB-BATCH: 0

DATE OF ISSUE: 02-Nov-2022 **CLIENT:** EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/[6820 V2-M]

Serial No./ Equipment No.:

[09H101347]/[MPP37]

Date of Calibration:

01-November-2022

Date of Next Calibration:

01-February-2023

PARAMETERS:

Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.44	2.39	-0.05
5.38	5.18	-0.20
7.92	7.87	-0.05
	Tolerance Limit (mg/L)	±0.20

pH Value Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.98	-0.02
7.0	7.12	+0.12
10.0	10.03	+0.03
	Tolerance Limit (pH unit)	±0.20

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

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2242870

SUB-BATCH: 0

DATE OF ISSUE: 02-Nov-2022 **CLIENT:** EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/[6820 V2-M]

Serial No./

[09H101347]/[MPP37]

Equipment No.:

Date of Calibration:

01-November-2022

Date of Next Calibration: 01-February-2023

PARAMETERS:

Turbidity

Method Ref: APHA (23rd edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	
4	4.1	+2.5
40	38.8	-3.0
80	82.2	+2.8
	Tolerance Limit (%)	±10.0

Salinity

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	9.85	-1.5
20	20.10	+0.5
30	30.22	+0.7
	Tolerance Limit (%)	±10.0

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

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK2242870

SUB-BATCH: 0

DATE OF ISSUE: 02-Nov-2022 **CLIENT:** EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/[6820 V2-M]

Serial No./

[09H101347]/[MPP37]

Equipment No.: Date of Calibration:

[-----

01-November-2022

Date of Next Calibration: 01-February-2023

PARAMETERS:

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)
14.0	14.89	+0.9
20.0	21.22	+1.2
40.5	41.55	+1.1
	Tolerance Limit (°C)	±2.0

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

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Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB100113

Date of Issue

: 28 October 2022

Page No.

: 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

16H104233

Date of Received :

28 October 2022

Date of Calibration :

28 October 2022

Date of Next Calibration :

27 January 2023

Request No.:

D-BB100113

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

pH value

APHA 21e 4500 H+

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520 B

Dissolved oxygen

APHA 21e 4500 O APHA 21e 2130 B

Turbidity Conductivity

APHA 21e 2510 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.04	0.04	Satisfactory
7.42	7.50	0.08	Satisfactory
10.01	10.18	0.17	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
10	10.0	0.0	Satisfactory
20	19.9	-0.1	Satisfactory
40	39.9	-0.1	Satisfactory

Tolerance of Temperature should be less than $\pm\,2.0$ ($^{\circ}C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.19	1.90	Satisfactory
20	20.33	1.65	Satisfactory
30	30.48	1.60	Satisfactory

Tolerance of Salinity should be less than \pm 10.0 (%)

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AUTHORIZED SIGNATORY:

LEE Chun ning
Assistant Manager (Chemical Testing)



專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB100113

Date of Issue

: 28 October 2022

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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.65	8.00	0.35	Satisfactory
4.65	4.33	-0.32	Satisfactory
2.18	2.00	-0.18	Satisfactory
0.46	0.50	0.04	Satisfactory

Tolerance of Dissolved oxygen should be less than \pm 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.86	-1.4	Satisfactory
20	20.28	1.4	Satisfactory
100	100.59	0.6	Satisfactory
800	797.25	-0.3	Satisfactory

Tolerance of Turbidity should be less than \pm 10.0 (%)

(6) Conductivity

Expected Reading (μS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	138.6	-5.65	Satisfactory
1412	1370.9	-2.91	Satisfactory
12890	12684	-1.6	Satisfactory
58670	57921	-1.28	Satisfactory
111900	111663	-0.21	Satisfactory

Tolerance of Conductivity should be less than ± 10.0 (%)

Remark(s)

- 'The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
- ·The results relate only to the calibrated equipment as received
- •The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
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--- END OF REPORT ---



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB090081

Date of Issue

: 19 September 2022

Page No.

: 1 of 2

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd. Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

16H104234

Date of Received:

16 September 2022

Date of Calibration:

16 September 2022 15 December 2022

Date of Next Calibration: Request No.:

D-BB090081

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

pH value

APHA 21e 4500 H+

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520B

Dissolved oxygen

APHA 21e 4500 O

Turbidity

APHA 21e 2130B

Conductivity

APHA 21e 2510B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.97	-0.03	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	9.92	-0.09	Satisfactory

Tolerance of pH value should be less than \pm 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
40	40.1	0.1	Satisfactory
30	30.1	0.1	Satisfactory
10	10.0	0.0	Satisfactory

Tolerance of Temperature should be less than $\pm~2.0$ ($^{\circ}C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.17	1.70	Satisfactory
20	20.50	2.50	Satisfactory
30	30.31	1.03	Satisfactory

Tolerance of Salinity should be less than $\pm~10.0$ (%)

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AUTHORIZED SIGNATORY:

Assistant Manager (Chemical Testing)



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB090081

Date of Issue

: 19 September 2022

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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.38	7.60	0.22	Satisfactory
4.70	4.85	0.15	Satisfactory
1.48	1.80	0.32	Satisfactory
0.45	0.40	-0.05	Satisfactory

Tolerance of Dissolved oxygen should be less than $\pm~0.5$ (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.84	-1.60	Satisfactory
20	19.82	-0.90	Satisfactory
100	97.79	-2.20	Satisfactory
800	819.11	2.40	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

(6) Conductivity

Expected Reading (μS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	137.9	-6.13	Satisfactory
1412	1380.2	-2.25	Satisfactory
12890	12637.4	-1.96	Satisfactory
58670	57116	-2.65	Satisfactory
111900	112537	0.57	Satisfactory

Tolerance of Conductivity should be less than \pm 10.0 (%)

Remark(s)

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--- END OF REPORT ---



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

: R-BB090082

Date of Issue

: 19 September 2022

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PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.

Flat 2207, Yu Fun House Yu Chui Court, Shatin

New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment:

YSI ProDSS (Multi-Parameters)

Manufacturer:

YSI (a xylem brand)

Serial Number:

17E100747

Date of Received:

16 September 2022

Date of Calibration:

16 September 202215 December 2022

Date of Next Calibration: Request No.:

D-BB090082

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter

Reference Method

pH value

APHA 21e 4500 H+

Temperature

Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March

2008: Working Thermometer Calibration Procedure

Salinity

APHA 21e 2520B

Dissolved oxygen

APHA 21e 4500 O

Turbidity

APHA 21e 2130B

Conductivity

APHA 21e 2510B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.95	-0.05	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	9.94	-0.07	Satisfactory

Tolerance of pH value should be less than \pm 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
40	40.1	0.1	Satisfactory
30	30.1	0.1	Satisfactory
10	10.0	0.0	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.19	1.90	Satisfactory
20	20.43	2.15	Satisfactory
30	30.33	1.10	Satisfactory

Tolerance of Salinity should be less than $\pm~10.0$ (%)

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AUTHORIZED SIGNATORY:

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Assistant Manager (Chemical Testing)



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.

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: 19 September 2022

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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.38	7.58	0.20	Satisfactory
4.70	4.86	0.16	Satisfactory
1.48	1.81	0.33	Satisfactory
0.45	0.39	-0.06	Satisfactory

Tolerance of Dissolved oxygen should be less than \pm 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10		Satisfactory
10	9.86	-1.40	Satisfactory
20	19.85	-0.70	Satisfactory
100	98.96	-1.00	Satisfactory
800	817.32	2.20	Satisfactory

Tolerance of Turbidity should be less than \pm 10.0 (%)

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	136.8	-6.88	Satisfactory
1412	1372.4	-2.8	Satisfactory
12890	12522.6	-2.85	Satisfactory
58670	56891	-3.03	Satisfactory
111900	112764	0.77	Satisfactory

Tolerance of Conductivity should be less than \pm 10.0 (%)

Remark(s)

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