2022
ANNEX H
CALIBRATION CERTIFICATES FOR MARINE WATER QUALITY MONITORING
EQUIPMENT

HONG KONG OFFSHORE LNG TERMINAL PROJECT



#### ALS Technichem (HK) Ptv Ltd

11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong

T: +852 2610 1044 | F: +852 2610 2021

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

LAM MEI SHING

CLIENT:

EGS (ASIA) LTD

**ADDRESS:** 

2/F., NORTH POINT INDUSTRIAL BUILDING,

499 KING ROAD,

NORTH POINT, HONG KONG

WORK ORDER:

HK2231140

SUB- BATCH:

0

LABORATORY:

HONG KONG

DATE RECEIVED:

09-Aug-2022

DATE OF ISSUE:

10-Aug-2022

### 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:

09-August-2022

### **GENERAL COMMENTS**

This report superseded any previous report(s) with same work order number.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

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WORK ORDER:

HK2231140

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/

[YSI]/ [6820 V2-M]

Model No.: Serial No./

[09H101347]/ [MPP37]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

**PARAMETERS:** 

Dissolved Oxygen

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.89	2.88	-0.01
5.68	5.56	-0.12
7.27	7.18	-0.09
	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	4.16	+0.16
7.0	7.16	+0.16
10.0	9.97	-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

WORK ORDER:

HK2231140

SUB- BATCH:

C

DATE OF ISSUE:

10-Aug-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: 09-August-2022

Date of Next Calibration:

09-November-2022

**PARAMETERS:** 

**Turbidity** 

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	
4	4.1	+2.5
40	39.3	-1.8
80	81.0	+1.3
	Tolerance Limit (%)	±10.0

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	<del></del>
10	9.41	-5.9
20	18.81	-6.0
30	27.93	-6.9
	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

WORK ORDER:

HK2231140

SUB- BATCH:

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/ [6820 V2-M]

09-August-2022

Serial No./

[09H101347]/[MPP37]

Equipment No.: Date of Calibration:

Date of Next Calibration:

09-November-2022

PARAMETERS:

**Temperature** 

Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Francisco (9C) Displayed Bastian (9C) Talanana		T-1 (%C)
Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
9.5	9.62	+0.1
20.3	20.45	+0.1
39.6	39.99	+0.4
	Tolerance Limit (°C)	±2.0

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

Ms. Lin Wai Yu, Iris



### ALS Technichem (HK) Pty Ltd

11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong T: +852 2610 1044 | F: +852 2610 2021

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

LAM MEI SHING

WORK ORDER:

HK2231168

CLIENT: ADDRESS: EGS (ASIA) LTD

SUB- BATCH:

499 KING ROAD,

LABORATORY:

HONG KONG

DATE RECEIVED:

09-Aug-2022

NORTH POINT, HONG KONG

2/F., NORTH POINT INDUSTRIAL BUILDING,

DATE OF ISSUE:

10-Aug-2022

### 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]/ [6920 V2-2]

Serial No./ Equipment No.:

[16L100579]/ [MPP56]

Date of Calibration:

09-August-2022

### **GENERAL COMMENTS**

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

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

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WORK ORDER:

HK2231168

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/ [6920 V2-2]

Serial No./

[16L100579]/ [MPP56]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

PARAMETERS:

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.95	2.83	-0.12
5.36	5.32	-0.04
7.22	7.28	+0.06
No. of Control	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	4.14	+0.14
7.0	7.17	+0.17
10.0	10.02	+0.02
	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

WORK ORDER:

HK2231168

SUB- BATCH:

DATE OF ISSUE:

10-Aug-2022 EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/

[YSI]/ [6920 V2-2]

Model No.: Serial No./

CLIENT:

[16L100579]/ [MPP56]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

**PARAMETERS:** 

**Turbidity** 

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	U <del>RA</del>
4	3.7	-7.5
40	39.4	-1.5
80	78.8	-1.5
	Tolerance Limit (%)	±10.0

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	3==
10	9.40	-6.0
20	18.84	-5.8
30	27.89	-7.0
	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

WORK ORDER:

HK2231168

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/

[YSI]/ [6920 V2-2]

Model No.: Serial No./ [131]/ [0320 12 2]

Equipment No.:

[16L100579]/ [MPP56]

Date of Calibration:

09-August-2022 Date of Next Calibration:

09-November-2022

**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)
8.2	7.91	-0.3
20.7	20.44	-0.3
41.4	40.80	-0.6
	Tolerance Limit (°C)	±2.0

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

16:5

Ms. Lin Wai Yu, Iris



### ALS Technichem (HK) Pty Ltd

11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong

T: +852 2610 1044 | F: +852 2610 2021

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

LAM MEI SHING

WORK ORDER:

HK2231172

CLIENT: ADDRESS: EGS (ASIA) LTD

2/F., NORTH POINT INDUSTRIAL BUILDING,

SUB- BATCH:

U CNC VON

499 KING ROAD,

LABORATORY:

HONG KONG 09-Aug-2022

NORTH POINT, HONG KONG

DATE RECEIVED: DATE OF ISSUE:

10-Aug-2022

### 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.:

[14A101573]/ [MPP46]

Date of Calibration:

09-August-2022

### **GENERAL COMMENTS**

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

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

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WORK ORDER:

HK2231172

SUB- BATCH:

C

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/ [6820 V2-M]

Serial No./

[14A101573]/ [MPP46]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

**PARAMETERS:** 

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.70	2.71	+0.01
5.00	4.94	-0.06
7.09	7.01	-0.08
	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	4.15	+0.15
7.0	7.18	+0.18
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

WORK ORDER:

HK2231172

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/

[YSI]/ [6820 V2-M]

Model No.: Serial No./

[14A101573]/ [MPP46]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

**PARAMETERS:** 

**Turbidity** 

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	**
4	3.9	-2.5
40	41.9	+4.8
80	81.1	+1.4
	Tolerance Limit (%)	±10.0

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	**
10	9.38	-6.2
20	18.80	-6.0
30	27.94	-6.9
	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

WORK ORDER:

HK2231172

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/

[YSI]/ [6820 V2-M]

Model No.: Serial No./

[131]/ [0020 72 14]

Equipment No.:

[14A101573]/ [MPP46]

Date of Calibration:

09-August-2022 Date of Next Calibration:

09-November-2022

**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)	
7.5	7.33	-0.2	
20.8	20.46	-0.3	
41.2	40.94	-0.3	
	Tolerance Limit (°C)	±2.0	

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

N:5

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganics



### ALS Technichem (HK) Pty Ltd

11/F, Chung Shun Knitting Centre 1-3 Wing Yip Street, Kwai Chung N.T., Hong Kong T: +852 2610 1044 | F: +852 2610 2021

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:

LAM MEI SHING

EGS (ASIA) LTD

CLIENT: ADDRESS:

2/F., NORTH POINT INDUSTRIAL BUILDING,

499 KING ROAD,

NORTH POINT, HONG KONG

WORK ORDER:

HK2231176

SUB- BATCH:

•

0

LABORATORY: DATE RECEIVED: HONG KONG 09-Aug-2022

DATE OF ISSUE:

10-Aug-2022

### 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]/ [6920 V2-2]

Serial No./ Equipment No.:

[16L100580]/ [MPP57]

Date of Calibration:

09-August-2022

### **GENERAL COMMENTS**

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

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganics

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WORK ORDER:

HK2231176

SUB- BATCH:

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

**Equipment Type:** 

Multifunctional Meter

Brand Name/

[YSI]/ [6920 V2-2]

Model No.: Serial No./

Equipment No.:

[16L100580]/ [MPP57]

Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

PARAMETERS:

**Dissolved Oxygen** 

Method Ref: APHA (21st edition), 45000: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.42	2.50	+0.08
5.44	5.43	-0.01
7.10	7.07	-0.03
	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	4.12	+0.12
7.0	7.17	+0.17
10.0	10.01	+0.01
	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

WORK ORDER:

HK2231176

SUB- BATCH:

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/ Model No.:

[YSI]/[6920 V2-2]

Serial No./

Equipment No.:

[16L100580]/ [MPP57]

Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

PARAMETERS:

**Turbidity** 

Method Ref: APHA (21st edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)	
0	0.0	een)	
4	3.9	-2.5	
40	42.3	+5.7	
80	79.8	-0.3	
	Tolerance Limit (%)	±10.0	

Salinity

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

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	9.37	-6.3
20	18.83	-5.9
30	27.92	-6.9
	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

WORK ORDER:

HK2231176

SUB- BATCH:

0

DATE OF ISSUE:

10-Aug-2022

CLIENT:

EGS (ASIA) LTD

Equipment Type:

Multifunctional Meter

Brand Name/

[YSI]/ [6920 V2-2]

Model No.: Serial No./

[16L100580]/ [MPP57]

Equipment No.: Date of Calibration:

09-August-2022

Date of Next Calibration:

09-November-2022

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)	
9.3	9.01	-0.3	
21.1	20.42	-0.7	
40.7	40.25	-0.5	
	Tolerance Limit (°C)	±2.0	

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless

of equipment precision or significant figures.

N:5

Ms. Lin Wai Yu, Iris



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

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

Date of Next Calibration:

15 December 2022

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  $\pm 10.0$  (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

Assistant Manager (Chemical Testing)



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

Test Report No.

: R-BB090081

Date of Issue

: 19 September 2022

Page No.

: 2 of 2

#### (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  $\pm 10.0$  (%)

#### (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)

- '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.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- '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.

--- END OF REPORT ---



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

Test Report No.

: R-BB070113

**Date of Issue** 

: 28 July 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 :

15M10005

Date of Received:

28 July 2022

Date of Calibration:

28 July 2022

Date of Next Calibration:

27 October 2022

Request No.:

D-BB070113

#### 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	4.08	0.08	Satisfactory
7.42	7.53	0.11	Satisfactory
10.01	10.14	0.13	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
15.0	14.9	-0.1	Satisfactory
25.0	25.1	0.1	Satisfactory
40.0	40.0	0.0	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.90	-1.00	Satisfactory
20	20.49	2.45	Satisfactory
30	30.77	2.57	Satisfactory

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

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AUTHORIZED SIGNATORY:

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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#### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
7.36	7.56	0.20	Satisfactory
5.52	5.70	0.18	Satisfactory
2.82	3.00	0.18	Satisfactory
0.11	0.30	0.19	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	0.05	<del>-</del>	Satisfactory
10	9.82	-1.80	Satisfactory
20	19.17	-4.10	Satisfactory
100	97.92	-2.10	Satisfactory
800	812.44	1.60	Satisfactory

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

#### (6) Conductivity

Expected Reading ( μS/cm at 25°C )	Display Reading ( μS/cm at 25°C )	Tolerance (%)	Result
146.9	150.6	2.52	Satisfactory
1412	1291	-8.57	Satisfactory
12890	12806	-0.65	Satisfactory
58670	59168	0.85	Satisfactory
111900	114106	1.97	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.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- '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.

--- END OF REPORT ---