

Annex C1

Calibration Certificates for  
Surface Water Quality  
Monitoring Equipment



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	V.C. LAU	WORK ORDER:	HK1840568
CLIENT:	GREEN VALLEY LANDFILL LTD		
ADDRESS:	BOX 65036, TSEUNG KWAN O POST OFFICE, KOWLOON, HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	23-Jul-2018
		DATE OF ISSUE:	31-Jul-2018

### COMMENTS

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 ALS Hong Kong laboratory or quoted from relevant international standards.**

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

Scope of Test:	pH Value and Temperature
Equipment Type:	pH meter
Brand Name:	Oakton
Model No.:	pH 450
Serial No.:	2607885
Equipment No.:	--
Date of Calibration:	25 July, 2018

### 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.

Mr Chan Siu Ming, Vico  
Manager - Inorganic

*This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1840568  
SUB-BATCH: 0  
DATE OF ISSUE: 31-Jul-2018  
CLIENT: GREEN VALLEY LANDFILL LTD

Equipment Type: pH meter  
Brand Name: Oakton  
Model No.: pH 450  
Serial No.: 2607885  
Equipment No.: --  
Date of Calibration: 25 July, 2018                      Date of Next Calibration: 25 October, 2018

## PARAMETERS:

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

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.96	-0.04
7.0	6.95	-0.05
10.0	9.83	-0.17
	Tolerance Limit (pH unit)	±0.20

## 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)
10.4	10.5	+0.1
21.7	20.8	-0.9
40.5	40.4	-0.1
	Tolerance Limit (°C)	±2.0

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

Mr Chan Siu Ming, Vico  
Manager - Inorganic



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	V.C. LAU	WORK ORDER:	HK1840576
CLIENT:	GREEN VALLEY LANDFILL LTD		
ADDRESS:	BOX 65036, TSEUNG KWAN O POST OFFICE, KOWLOON, HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	23-Jul-2018
		DATE OF ISSUE:	31-Jul-2018

### COMMENTS

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 ALS Hong Kong laboratory or quoted from relevant international standards.**

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

Scope of Test:	Dissolved Oxygen and Temperature
Equipment Type:	Dissolved Oxygen Meter
Brand Name:	Oakton
Model No.:	DO 300
Serial No.:	2105784
Equipment No.:	--
Date of Calibration:	25 July, 2018

### 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.

Mr Chan Siu Ming, Vico  
Manager - Inorganic

*This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1840576  
SUB-BATCH: 0  
DATE OF ISSUE: 31-Jul-2018  
CLIENT: GREEN VALLEY LANDFILL LTD

Equipment Type: Dissolved Oxygen Meter  
Brand Name: Oakton  
Model No.: DO 300  
Serial No.: 2105784  
Equipment No.: --  
Date of Calibration: 25 July, 2018

Date of Next Calibration: 25 October, 2018

## PARAMETERS:

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

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.40	2.33	-0.07
4.88	4.92	+0.04
7.86	7.82	-0.04
	Tolerance Limit (mg/L)	±0.20

## 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)
10.5	11.3	+0.8
21.0	21.7	+0.7
41.0	40.0	-1.0
	Tolerance Limit (°C)	±2.0

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

Mr Chan Siu Ming, Vico  
Manager - Inorganic



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT:	V.C. LAU	WORK ORDER:	HK1840580
CLIENT:	GREEN VALLEY LANDFILL LTD		
ADDRESS:	BOX 65036, TSEUNG KWAN O POST OFFICE, KOWLOON, HONG KONG	SUB-BATCH:	0
		LABORATORY:	HONG KONG
		DATE RECEIVED:	23-Jul-2018
		DATE OF ISSUE:	31-Jul-2018

### COMMENTS

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 ALS Hong Kong laboratory or quoted from relevant international standards.**

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

Scope of Test:	Conductivity
Equipment Type:	Conductivity Meter
Brand Name:	YSI
Model No.:	Pro 30
Serial No.:	17B101804
Equipment No.:	--
Date of Calibration:	25 July, 2018

### 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.

Mr Chan Siu Ming, Vico  
Manager - Inorganic

*This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



WORK ORDER: HK1840580  
SUB-BATCH: 0  
DATE OF ISSUE: 31-Jul-2018  
CLIENT: GREEN VALLEY LANDFILL LTD

Equipment Type: Conductivity Meter  
Brand Name: YSI  
Model No.: Pro 30  
Serial No.: 17B101804  
Equipment No.: --  
Date of Calibration: 25 July, 2018

Date of Next Calibration: 25 October, 2018

## PARAMETERS:

Conductivity Method Ref: APHA (21st edition), 2510B

Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)
146.9	153.2	+4.3
6667	6864	+3.0
12890	13856	+7.5
58670	62480	+6.5
	Tolerance Limit (%)	$\pm 10.0$

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

A handwritten signature in black ink, appearing to read 'Chan Siu Ming'.

Mr Chan Siu Ming, Vico  
Manager - Inorganic