

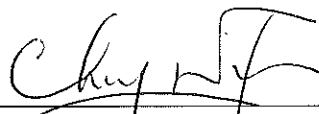
Penta-Ocean – Concentric – Alchemex Joint Venture

Contract No. KL/2010/02

**Kai Tak Development – Kai Tak
Appriach Channel and Kwun Tong
Typhoon Shelter Improvement Works
(Phase 1)
Monthly EM&A Report**

May 2015

(Version 1.0)

Approved By	 Environmental Team Leader
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REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

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EXECUTIVE SUMMARY**Introduction**

1. This is the 42nd Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited for the “Contract No. KL/2010/02 – Kai Tak Development – Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (KTTS) Improvement Works” (hereinafter called “the Project”). This report documents the findings of EM&A Works conducted in May 2015.

Water quality monitoring works

2. Bioremediation works for the Project have been completed in 2014 and water quality monitoring during the post-treatment phase for the Project was performed in accordance with the Kai Tak Development Schedule 3 EM&A Manual and Particular Specification of Contract No. KL/2010/02 and the monitoring results were checked and reviewed.
3. According to Section 7.3.3 of EM&A Manual, post-treatment water quality monitoring has been conducted during the first year after completion of the bioremediation works (i.e. 28 May 2014) and completed on 28 May 2015.
4. Summary of the non-compliance of the reporting month is tabulated in Table I.

Table I Summary Table for Non-compliance Recorded in the Reporting Month

Parameter	No. of Exceedance		No. of Exceedance Due to the Project		Action Taken
	Action Level	Limit Level	Action Level	Limit Level	
Water	0	0	0	0	N/A

Water Quality

5. Post-treatment water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

1. INTRODUCTION

Background

- 1.1 The Kai Tak Development (KTD) is located in the south-eastern part of Kowloon Peninsula, comprising the apron and runway areas of the former Kai Tak Airport and existing waterfront areas at To Kwa Wan, Ma Tau Kok, Kowloon Bay, Kwun Tong and Cha Kwo Ling. It covers a land area of about 328 hectares.
- 1.2 Civil Engineering and Development Department (CEDD) had completed an Environmental Impact Assessment (EIA) study for KTD under Agreement No. CE 35/2006(CE) Kai Tak Development Engineering Study cum Design and Construction of Advance Works – Investigation, Design and Construction (hereafter called “Schedule 3 EIA Report”). The Schedule 3 EIA Report was approved under Environmental Impact Assessment Ordinance (EIAO) in March 2009.
- 1.3 Penta-Ocean – Concentric – Alchmex Joint Venture (PCAJV) was awarded as the main contractor of the Contract No. KL/2010/02 – Kai Tak Development – Kai Tak Approach Channel (KTAC) and Kwun Tong Typhoon Shelter (Phase 1) (hereinafter referred to as the Project) and Cinotech Consultants Limited was commissioned by PCAJV to undertake the water quality monitoring for bioremediation works for the Project in accordance with EM&A Manual and Particular Specification.
- 1.4 According to the Particular Specification, Section 25 – Environmental Protection (PS25) and Environmental Monitoring and Audit Manual (EM&A Manual) for Kai Tak Development, Section 7.3.3, water quality monitoring is required for the period from commencement of and throughout the duration of Bioremediation works and during the first year after completion of the bioremediation works.
- 1.5 This is the 42nd Monthly EM&A report summarizing the post-treatment water quality monitoring works for the Project in May 2015. The other EM&A information of Contract No. KL/2010/02 is presented in the Monthly EM&A Reports under Schedule 3 EIA (Contract No. KLN/2013/16).

2. WATER QUALITY MONITORING

Monitoring Requirements

- 2.1 Water quality monitoring is required during the first year after completion of the bioremediation works. Marine water quality monitoring shall be carried out three times per week, at mid-flood and mid-ebb tides at the locations likely to be affected by bioremediation.
- 2.2 The interval between two sets of monitoring shall not be less than 36 hours except where there are exceedances of AL levels, in which case monitoring frequency shall be increased.
- 2.3 For all the monitoring stations, sampling should be taken at 3 water depths, namely 1m below the water surface, mid depth and 1m above the sea bed. For stations that are less than 3m in depth, only the mid depth sample should be taken. Shall the water depth is less than 6m, in which case the mid-depth station may be omitted.
- 2.4 At each monitoring station, duplicate samples shall be collected at each water depth. Sufficient volume of each water sample (not less than 1 litre) shall be collected for analysis to achieve the required detection limit.

Monitoring Locations

- 2.5 According to EM&A Manual, Section 7.2.2 and PS25, two monitoring locations in the vicinity of the works area (i.e. one 100m upstream and one 100m downstream of the works area) shall be selected as the impact monitoring stations. Three control stations shall also included for comparing the water quality from potentially impacted sites with the ambient water quality. The control stations shall be sited outside the area of influence of the works, as far as practical, not affected by any other works.
- 2.6 The indicative locations of water quality monitoring stations approved by EPD on 30th November 2011 are shown on **Figure 1**. The coordinates of the water quality monitoring stations are presented in Table 2.1.

Table 2.1 Location for Marine Water Quality Monitoring Locations

Monitoring Stations	Coordinates	
	Easting	Northing
W1	838772.203	820413.345
W2	838741.308	820330.290
W3	838749.902	820278.615
W4	840663.244	818653.087
W5	840792.106	818435.346

Monitoring Equipment

Dissolved Oxygen (DO) and Temperature Measuring Equipment

- 2.7 The instrument for measuring dissolved oxygen and temperature was portable and weatherproof complete with cable, sensor, comprehensive operation manuals and use DC power source. It was capable of measuring:
- a dissolved oxygen level in the range of 0-20 mg/L and 0-200% saturation; and
 - a temperature of 0-45 degree Celsius.
- 2.8 It has a membrane electrode with automatic temperature compensation complete with a cable.
- 2.9 Sufficient stocks of spare electrodes and cables were available for replacement where necessary.
- 2.10 Salinity compensation was built-in in the DO equipment.

Turbidity

- 2.11 Turbidity was measured *in situ* by the nephelometric method. The instrument was portable and weatherproof using a DC power source complete with cable, sensor and comprehensive operation manuals. The equipment was capable of measuring turbidity between 0-1000 NTU. The probe cable was not less than 25m in length. The meter was calibrated in order to establish the relationship between NTU units and the levels of suspended solids. The turbidity measurement was carried out on split water sample collected from the same depths of suspended solids samples.

Sampler

- 2.12 A water sampler, consisting of a transparent PVC or glass cylinder of a capacity of not less than two litres which can be effectively sealed with cups at both ends was used. The water sampler has a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth.

Water Depth Detector

- 2.13 A portable, battery-operated echo sounder was used for the determination of water depth at each designated monitoring station.

pH

- 2.14 The instrument was consisting of a potentiometer, a glass electrode, a reference electrode and a temperature-compensating device. It was readable to 0.1pH in a range of 0 to 14. Standard buffer solutions of at least pH 7 and pH 10 were used for calibration of the instrument before and after use.

Salinity

- 2.15 A portable salinometer capable of recording salinity within the range of 0-40 ppt was used for salinity measurements.

Position System

- 2.16 A hand held differential Global Positioning System (GPS) was used during water quality monitoring to ensure the monitoring vessel is at the correct location before taking measurements. GPS was calibrated at checkpoint (Quarry Bay Survey Nail at Easting 840683.49 and Northing 816709.55) to ensure the monitoring station was at the correct position before taking measurement and water samples.

Sample Container and Storage

- 2.17 Following collection, water samples for laboratory analysis were stored in high density polythene bottles with appropriate preservatives added, packed in ice (cooled to 4°C without being frozen), delivered to the laboratory and analysed as soon as possible. Sufficient volume of samples was collected to achieve the detection limit.

Calibration of *In Situ* Instruments

- 2.18 All *in situ* monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring event.
- 2.19 For the on site calibration of field equipment (Multi-parameter Water Quality System), the BS 1427:2009, "Guide to on-site test methods for the analysis of waters" was observed.
- 2.20 Sufficient stocks of spare parts were maintained for replacements when necessary. Backup monitoring equipment was also being made available so that monitoring can proceed uninterrupted even when some equipment was under maintenance, calibration, etc.

- 2.21 Table 2.2 summarizes the equipment used in the water quality monitoring program. Copies of the calibration certificates of the equipment are shown in **Appendix B**.

Table 2.2 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Water Sampler	Kahlsico Water-Bottle Model 135DW 150	1
Multi-parameter Water Quality System	YSI 6820-C-M / Aquaread Ltd AP-2000	3
Monitoring Position Equipment	“Magellan” Handheld GPS Model GPS-320	1
Water Depth Detector	Fishfinder 140	1

Monitoring Parameters

- 2.22 The monitoring parameters to be measured *in-situ* and in laboratory are summarized in Table 2.3.

Table 2.3 Water Quality Monitoring Parameters

In-situ Measurement	Laboratory Measurement
Dissolved Oxygen	Suspended Solids (SS)
pH	Nitrate-nitrogen (NO ₃ -N)
Water Temperature	Cadmium (Cd)
Salinity	Chromium (Cr)
Turbidity	Copper (Cu)
	Mercury (Hg)
	Nickel (Ni)
	Lead (Pb)
	Silver (Ag)
	Zinc (Zn)

- 2.23 Monitoring location/position, time, water depth, sampling depth, pH, salinity, DO saturation, water temperature, tidal stages, weather conditions and any special phenomena or work underway nearby were recorded.

Monitoring Frequency

- 2.24 Table 2.4 summarizes the monitoring parameters, monitoring period and frequencies of the water quality monitoring.

Table 2.4 Water Quality Monitoring Parameters and Frequency

Monitoring Stations	Parameters, unit	Depth	Frequency
W1 W2 W3 W4 W5	<p><u>In-situ Measurement</u></p> <ul style="list-style-type: none"> • DO, mg/L • DO Saturation, % • Salinity, ppt • Turbidity, NTU • pH • water temperature, °C <p><u>Laboratory Measurement</u></p> <ul style="list-style-type: none"> • SS, mg/L • NO₃-N, mg/L • Cd, mg/L • Cr, mg/L • Cu, mg/L • Hg, mg/L • Ni, mg/L • Pb, mg/L • Ag, mg/L • Zn, mg/L 	<ul style="list-style-type: none"> • 3 water depths: 1m below water surface, mid-depth and 1m above sea bed. • If the water depth is less than 3m, mid-depth sampling only. • If the water depth is between 3-6m, omit mid-depth sampling. 	<ul style="list-style-type: none"> • 3 times per week (each series of sampling / measurement should not be less than 36 hours)

2.25 The water quality monitoring schedule in the reporting period is provided in **Appendix C**.

Monitoring Methodology

2.26 The monitoring stations were accessed using survey boat to within 3 m by the guide of a hand-held Global Positioning System (GPS). The depth of the monitoring location was measured using depth meter in order to determine the sampling depths. Afterwards, the probes of the in-situ measurement equipment were lowered to the predetermined depths (1 m below water surface, mid-depth and 1 m above seabed) and the measurements were carried out accordingly. The in-situ measurements at predetermined depths were carried out in duplicate. In case the difference in the duplicate in-situ measurement results was larger than 25%, the third set of in-situ measurement would be carried out for result confirmation purpose.

2.27 Water sampler was lowered into the water to the required depths of sampling. Upon reaching the pre-determined depth, a messenger to activate the sampler was then released to travel down the wire. The water sample was sealed within the sampler before retrieving. At each station, water samples at three depths (1 m below water surface, mid-depth and 1 m above seabed) were collected accordingly. Water samples were stored in a cool box and kept at less than 4°C but without frozen and sent to the laboratory as soon as possible. In addition, field information as described in Section 2.24 was also recorded.

Laboratory Analytical Methods

- 2.28 The testing of all parameters was conducted by Wellab Ltd. (HOKLAS Registration No.083) and comprehensive quality assurance and control procedures in place in order to ensure quality and consistency in results. The testing method, lowest detection limit and limit of reporting are provided in Table 2.5.

Table 2.5 Methods for Laboratory Analysis for Water Samples

Determinant	Proposed Method	Limit of Reporting	Lowest Detection Limit
Cadmium (Cd)	In-house Method SOP 053 (ICP-ES) and SOP 076 (ICP-MS) [Ref. Method: APHA 19e 3030F 3b and 3120B, USEPA 3005A & 6020A]	0.1 µg/L	0.1 µg/L
Chromium (Cr)		0.2 µg/L	0.2 µg/L
Copper (Cu)		0.2 µg/L	0.2 µg/L
Silver (Ag)		0.2 µg/L	0.2 µg/L
Nickel (Ni)		0.2 µg/L	0.2 µg/L
Zinc (Zn)		0.4 µg/L	0.4 µg/L
Lead (Pb)		0.2 µg/L	0.2 µg/L
Mercury (Hg)		0.2 µg/L	0.2 µg/L
Suspended Solids (SS)		APHA 17ed 2540 D	0.5 mg/L
Nitrate-nitrogen (NO ₃ -N)	In-house Method SOP056 (FIA) [Ref. Method: APHA 20e 4500-NO ₃ ⁻ F (FIA)]	0.01 mg NO ₃ ⁻ -N/L	0.01 mg NO ₃ ⁻ -N/L

QA/QC Requirements

Decontamination Procedures

- 2.29 Water sampling equipment used during the course of the monitoring programme was decontaminated by manual washing and rinsed clean seawater/distilled water after each sampling event. All disposal equipment was discarded after sampling.

Sampling Management and Supervision

- 2.30 Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

Quality Control Measures for Sample Testing

2.31 The samples testing were performed by HOKLAS accredited laboratories. The following quality control programme was performed by the laboratories for each batch of samples:

- ✧ Method blank;
- ✧ Sample duplicate (at 5% level i.e. one for every 20 samples);
- ✧ Sample spike (at 5% level i.e. one for every 20 samples); and
- ✧ Quality control samples.

Results and Observation

2.32 The established Action/Limit Levels for the water quality monitoring works based on the baseline water quality monitoring results under Contract No. KLN/2009/10 is presented in **Appendix A**.

2.33 Post-treatment water quality monitoring was conducted as scheduled in the reporting month. No Action/Limit Level exceedance was recorded.

2.34 According to Section 7.3.3 of EM&A Manual, post-treatment water quality monitoring has been conducted during the first year after completion of the bioremediation works (i.e. 28 May 2014) and completed on 28 May 2015.

2.35 The monitoring data and graphical presentations of water quality monitoring results are shown in **Appendix D and Appendix E** respectively.

2.36 The weather during the sampling at mid-ebb tide and mid-flood tide are presented in the following table:

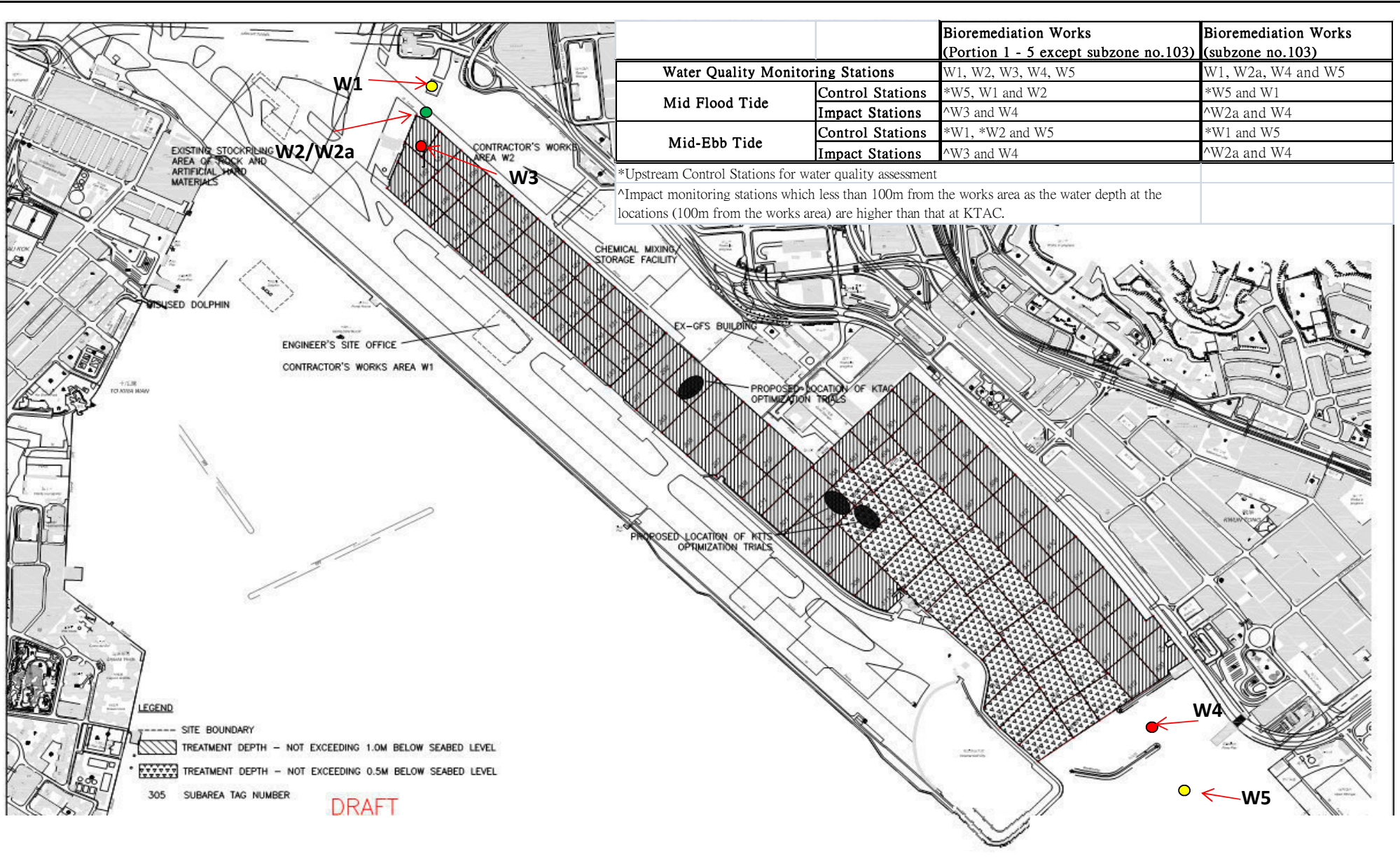
Date	Weather Condition	
	Mid-Ebb	Mid-Flood
2 May 2015	Sunny	Fine
4 May 2015	Fine	Fine
6 May 2015	Fine	Fine
8 May 2015	Sunny	Sunny
11 May 2015	Fine	Fine
13 May 2015	Fine	Fine
15 May 2015	Fine	Fine
18 May 2015	Fine	Fine
20 May 2015	Fine	Fine
22 May 2015	Cloudy	Cloudy
26 May 2015	Cloudy	Cloudy
28 May 2015	Cloudy	Cloudy

- 2.37 No special phenomena near the monitoring stations were observed which might affect the monitoring results during the monitoring works.
- 2.38 The laboratory testing report and QC report are provided in **Appendix F and Appendix G respectively**.

Event and Action Plan

- 2.39 If there is Action / Limit Level exceedance in any parameters of the water quality, the actions in accordance with the Event and Action Plan as shown in **Appendix H** will be carried out.

FIGURES



		Bioremediation Works (Portion 1 - 5 except subzone no.103)	Bioremediation Works (subzone no.103)
Water Quality Monitoring Stations		W1, W2, W3, W4, W5	W1, W2a, W4 and W5
Mid Flood Tide	Control Stations	*W5, W1 and W2	*W5 and W1
	Impact Stations	^W3 and W4	^W2a and W4
Mid-Ebb Tide	Control Stations	*W1, *W2 and W5	*W1 and W5
	Impact Stations	^W3 and W4	^W2a and W4

*Upstream Control Stations for water quality assessment
 ^Impact monitoring stations which less than 100m from the works area as the water depth at the locations (100m from the works area) are higher than that at KTAC.

Title	Contract No. KL/2010/02	Scale	N.T.S	Project No.	MA11017	CINOTECH
	Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter	Date	Nov-11	Figure	1	
Indicative Locations of Water Quality Monitoring Stations for Bioremediation Works						

**APPENDIX A
ACTION AND LIMIT LEVEL FOR
WATER QUALITY**

Appendix A - Action and Limit Levels for Marine Water Quality

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>24.0</u>	<u>40.7</u>
Cd	<u>0.8</u>	<u>1.5</u>
Cu	<u>54.8</u>	<u>95.0</u>
Zn	<u>120.0</u>	<u>150.0</u>
Ag	<u>0.5</u>	<u>0.8</u>
Hg	<u>5.1</u>	<u>8.7</u>
Ni	<u>36.8</u>	<u>71.3</u>
Pb	<u>46.0</u>	<u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

**APPENDIX B
COPIES OF CALIBRATION
CERTIFICATES FOR WATER
QUALITY MONITORING**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/150427-1
Date of Issue:	2015-04-27
Date Received:	2015-04-27
Date Tested:	2015-04-27
Date Completed:	2015-04-27
Next Due Date:	2015-07-26

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 02D0126AA
Equipment No.	: W.03.01

Test conditions:

Room Temperature	: 24 degree Celsius
Relative Humidity	: 60%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 11J100025

1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, L/N: 07E100029

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 12B100900

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/N: 11H

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards
Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
pH (APHA 19th 4500-H+ B)

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Test Report No.:	C/W/150427-1
Date of Issue:	2015-04-27
Date Received:	2015-04-27
Date Tested:	2015-04-27
Date Completed:	2015-04-27
Next Due Date:	2015-07-26
Page:	2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, $\mu\text{S}/\text{cm}$		Correction, $\mu\text{S}/\text{cm}$	Acceptable range
Salinity Meter (C1)	Theoretical Value (C2)	D = C1 - C2	
1420	1420	0	1420 \pm 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.0	30.0	0.0	30.0 \pm 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O ₂ /L		Correction, mg O ₂ /L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.1	9.1	0.0	\pm 0.2
Half-saturated	5.6	5.6	0.0	\pm 0.2
Zero	0.0	0.0	0.0	\pm 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 \pm 0.05
100	100	0	100 \pm 5
1000	1000	0	1000 \pm 100

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_l , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.00	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 \pm 0.05

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/150311-1
Date of Issue:	2015-03-11
Date Received:	2015-03-11
Date Tested:	2015-03-11
Date Completed:	2015-03-11
Next Due Date:	2015-06-10

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description	: Sonde Environmental Monitoring System
Manufacturer	: YSI
Model No.	: 6820-C-M
Serial No.	: 12B100803
Equipment No.	: W.03.12

Test conditions:

Room Temperature	: 22 degree Celsius
Relative Humidity	: 61%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, L/N: 12B10055

1. Conductivity performance check with Potassium Chloride standard solution
2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, L/N: 12A100930

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 12B100644

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, L/N: 11H

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
2. In-house method with reference to APHA and ISO standards
Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
pH (APHA 19th 4500-H+ B)

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Laboratory Manager

TEST REPORT

Test Report No.:	C/W/150311-1
Date of Issue:	2015-03-11
Date Received:	2015-03-11
Date Tested:	2015-03-11
Date Completed:	2015-03-11
Next Due Date:	2015-06-10

Page: 2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, $\mu\text{S}/\text{cm}$		Correction, $\mu\text{S}/\text{cm}$	Acceptable range
Salinity Meter (C1)	Theoretical Value (C2)	D = C1 - C2	
1420	1420	0	1420 \pm 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.0	30.0	0	30.0 \pm 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O ₂ /L		Correction, mg O ₂ /L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.0	9.0	0.0	\pm 0.2
Half-saturated	5.8	5.8	0.0	\pm 0.2
Zero	0.0	0.0	0.0	\pm 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 \pm 0.05
100	100	0	100 \pm 5
1000	1000	0	1000 \pm 100

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_l , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.00	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 \pm 0.05

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
Room 1710, Technology Park,
18 On Lai Street,
Shatin, NT, Hong Kong

Test Report No.:	C/W/150422-1
Date of Issue:	2015-04-22
Date Received:	2015-04-22
Date Tested:	2015-04-22
Date Completed:	2015-04-22
Next Due Date:	2015-07-21

ATTN: Mr. W.K. Tang

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description : Multiparameter Water Quality Probe
Manufacturer : Aquaread Ltd
Model No. : AP-2000-D
Serial No. : 135240520
Equipment No. : W.18.04

Test conditions:

Room Temperature : 24 degree Celsius
Relative Humidity : 66 %

Test Specifications:

Dissolved Oxygen, Conductivity & Salinity Sensor,
1. Performance check against Winkler titration
2. Conductivity performance check with Potassium Chloride standard solution
3. Salinity performance check with Sodium Chloride standard solution
Turbidity Sensor, Batch: 12213
1. Calibration check with Formazin standard solution
pH / ORP electrode, Batch: 13504
1. Calibration check with standard pH buffer
2. Redox performance check with ZoBell's standard solution
Depth Meter
1. Calibration check at 1m water level depth

Methodologies:

1. Aquaprobe AP-2000 Manual
2. In-house method with reference to APHA and ISO standards
Conductivity (APHA 20ed 2510), Salinity (APHA 20ed 2520B)
Dissolved Oxygen (APHA 20ed 4500-O C), Turbidity (APHA 19ed 2130 B),
pH (ISO 10523, Section 9.1 and APHA 19ed 4500-H+ B),
Redox electrode (APHA 20ed 2580)

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Test Report No.:	C/W/150422-1
Date of Issue:	2015-04-22
Date Received:	2015-04-22
Date Tested:	2015-04-22
Date Completed:	2015-04-22
Next Due Date:	2015-07-21

Page: 2 of 2

Results:

1. Conductivity performance check

Specific Conductivity, $\mu\text{S}/\text{cm}$		Correction, $\mu\text{S}/\text{cm}$	Acceptable range
Instrument Reading	Theoretical Value		
1420	1420	0	1420 ± 20

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.0	30.0	0.0	30.0 ± 3

3. Dissolved Oxygen check

Oxygen level in water at 20°C	Dissolved Oxygen, mg O ₂ /L		Correction, mg O ₂ /L	Acceptable range
	D.O. Meter	Winkler Titration		
Saturated	9.1	9.1	0.0	± 0.2
Half-saturated	5.6	5.6	0.0	± 0.2
Zero	0.0	0.0	0.0	± 0.2

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5
1000	1000	0	1000 ± 100

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ΔpH_l , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH_n , pH unit	0.00	Less than 0.02

6. Redox Meter check

Redox, mV		Acceptable range
Instrument Reading	Theoretical Value	
228	229	229 ± 10

7. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05

*****END OF REPORT*****

**APPENDIX C
WATER QUALITY MONITORING
SCHEDULE**

Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Tentative Post-Treatment Water Quality Monitoring for Bioremediation Works in May 2015

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1-May	2-May
						<u>Water Quality Monitoring</u> Mid-Ebb 11:28 Mid-Flood 17:52
3-May	4-May	5-May	6-May	7-May	8-May	9-May
	<u>Water Quality Monitoring</u> Mid-Ebb 12:28 Mid-Flood 19:08		<u>Water Quality Monitoring</u> Mid-Flood 7:04 Mid-Ebb 13:39		<u>Water Quality Monitoring</u> Mid-Flood 8:12 Mid-Ebb 15:00	
10-May	11-May	12-May	13-May	14-May	15-May	16-May
	<u>Water Quality Monitoring</u> Mid-Flood 10:49 Mid-Ebb 17:53		<u>Water Quality Monitoring</u> Mid-Ebb 8:31 Mid-Flood 14:01		<u>Water Quality Monitoring</u> Mid-Ebb 10:17 Mid-Flood 16:20	
17-May	18-May	19-May	20-May	21-May	22-May	23-May
	<u>Water Quality Monitoring</u> Mid-Ebb 12:26 Mid-Flood 19:04		<u>Water Quality Monitoring</u> Mid-Flood 7:07 Mid-Ebb 13:51		<u>Water Quality Monitoring</u> Mid-Flood 8:18 Mid-Ebb 15:18	
24-May	25-May	26-May	27-May	28-May	29-May	30-May
		<u>Water Quality Monitoring</u> Mid-Flood 11:43 Mid-Ebb 18:39		<u>Water Quality Monitoring</u> Mid-Ebb 9:26 Mid-Flood 15:06		
31-May						

Remark: Reference was made to the tidal information of Hong Kong Observatory
* Post-treatment water quality monitoring was completed on 28 May 2015

**APPENDIX D
MARINE WATER QUALITY
MONITORING RESULTS**

Appendix D - Action and Limit Levels for Marine Water Quality on 2 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 11.6 and W2: 10.4</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 12.6 and W2: 11.3</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 16.8 and W2: 15.4</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 18.2 and W2: 16.6</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 5.95 and W2: 5.74</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 6.37 and W2: 6.14</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.4 and W2: 3.4 or 24.0</u>	<u>W1: 3.6 and W2: 3.7 or 40.7</u>
Cd	<u>W1: 0.4 and W2: 0.5 or 0.8</u>	<u>W1: 0.4 and W2: 0.5 or 1.5</u>
Cu	<u>W1: 9.4 and W2: 8.9 or 54.8</u>	<u>W1: 10.2 and W2: 9.7 or 95.0</u>
Zn	<u>W1: 19.1 and W2: 24.7 or 120.0</u>	<u>W1: 20.7 and W2: 26.8 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 3.6 and W2: 2.5 or 36.8</u>	<u>W1: 3.9 and W2: 2.7 or 71.3</u>
Pb	<u>W1: 1.6 and W2: 1.3 or 46.0</u>	<u>W1: 1.7 and W2: 1.4 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 2 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 15.2</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 16.5</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 14.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 15.2</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.39</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.43</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 3.1</u> or <u>24.0</u>	<u>W5: 3.3</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.5</u> or <u>1.5</u>
Cu	<u>W5: 7.1</u> or <u>54.8</u>	<u>W5: 7.6</u> or <u>95.0</u>
Zn	<u>W5: 22.4</u> or <u>120.0</u>	<u>W5: 24.2</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.9</u> or <u>36.8</u>	<u>W5: 3.1</u> or <u>71.3</u>
Pb	<u>W5: 1.2</u> or <u>46.0</u>	<u>W5: 1.3</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 2 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*					
W1	Sunny	Moderate	11:00	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	0.9	25.9	25.9	8.1	8.1	15.6	15.9	102.1	102.7	7.6	7.7	7.7	14.2	14.0	14.0	9.6	9.8	9.7	9.7	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Sunny	Moderate	11:18	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.3	25.5	25.5	8.1	8.1	33.4	33.6	129.1	129.8	8.8	8.8	8.8	12.5	13.1	12.8	8.7	8.7	8.7	8.7	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Sunny	Moderate	11:25	Surface	1	25.7	25.7	8.1	8.1	27.9	27.9	120.0	117.7	8.4	8.2	8.2	9.8	9.2	9.5	10.3	10.5	10.4	8.5	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
				Bottom	3.5	24.9	24.8	7.6	7.6	34.0	33.2	30.5	25.3	27.9	2.1	1.9	1.9	10.5	10.8	10.7	6.6	6.4		6.5
W4	Sunny	Moderate	11:48	Surface	1	24.7	24.7	8.1	8.1	33.0	33.5	110.2	110.8	7.6	7.6	7.5	7.4	7.6	7.5	3.7	3.7	3.7	4.2	
				Middle	3	24.5	24.5	8.1	8.1	33.5	33.6	105.8	105.7	7.3	7.3	7.3	8.4	8.5	8.5	5.6	5.5	5.6		
				Bottom	5	24.4	24.4	8.1	8.1	33.8	33.8	102.6	102.5	7.1	7.1	7.1	12.3	11.9	12.1	3.1	3.2	3.2		
W5	Sunny	Moderate	11:55	Surface	1	24.6	24.6	8.1	8.1	33.9	33.8	107.8	107.9	7.4	7.4	7.4	8.4	8.7	8.6	5.5	5.7	5.6	4.7	
				Middle	4	24.5	24.4	8.1	8.1	33.5	33.6	105.1	105.2	7.2	7.3	7.3	9.8	10.1	10.0	4.7	4.6	4.7		
				Bottom	7	24.3	24.3	8.1	8.1	33.9	33.9	103.2	103.2	7.1	7.1	7.1	12.4	12.8	12.6	3.9	3.8	3.9		

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 2 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*					
W1	Fine	Moderate	16:50	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1	26.7	26.6	7.6	7.6	21.7	22.2	68.1	68.8	4.8	4.9	4.9	12.6	12.7	12.7	8.4	8.2	8.3	8.3	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	17:10	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.2	25.5	25.5	8.2	8.2	33.3	33.5	131.4	131.7	8.9	8.9	8.9	13.4	13.9	13.7	9.2	9.2	9.2	9.2	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	17:18	Surface	1	26.5	26.6	7.5	7.5	20.0	20.2	51.4	54.2	3.7	3.9	3.9	11.8	12.4	12.1	14.5	14.7	14.6	12.9	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
				Bottom	3.1	25.1	25.0	7.5	7.5	33.0	33.0	17.8	18.6	1.2	1.3	1.3	13.8	13.7	13.8	11.1	11.2	11.2		
W4	Fine	Moderate	17:42	Surface	1	24.7	24.7	8.1	8.1	33.4	33.4	109.9	110.7	7.6	7.7	7.7	9.8	9.5	9.7	7.6	7.4	7.5	8.6	
				Middle	3.5	24.4	24.4	8.1	8.1	33.6	33.6	105.4	105.4	7.3	7.3	7.3	10.2	10.5	10.4	11.4	11.6	11.5		
				Bottom	6	24.2	24.2	8.1	8.1	33.0	33.0	101.5	101.2	7.1	7.1	7.1	10.9	11.3	11.1	6.8	6.7	6.8		
W5	Fine	Moderate	17:49	Surface	1	24.3	24.3	8.1	8.1	33.8	33.8	104.2	104.1	7.2	7.2	7.2	9.7	9.8	9.8	5.8	6.0	5.9	8.7	
				Middle	4	24.4	24.4	8.1	8.1	33.7	33.8	104.6	104.6	7.2	7.2	7.2	10.8	10.9	10.9	7.5	7.5	7.5		
				Bottom	7	24.3	24.3	8.1	8.1	33.8	33.8	103.7	103.6	7.2	7.2	7.2	14.5	14.1	14.3	12.6	12.7	12.7		

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	4.23 4.19	4.21	4.21	0.3 0.3	2.8 2.8	7.8 7.9	0.3 0.3	3.0 3.0	1.3 1.3	0.2 0.2	16.1 15.8
	Bottom	-	-	-	-	-	-	-	-	-	-	
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	4.01 4.05	4.03	4.03	0.4 0.4	2.9 2.8	7.6 7.3	0.3 0.3	2.1 2.1	1.1 1.1	0.2 0.2	21.0 20.2
	Bottom	-	-	-	-	-	-	-	-	-	-	
W3	Surface	2.77 2.71	2.74	3.03	0.1 0.1	1.7 1.7	5.3 5.4	0.2 0.2	1.4 1.4	0.5 0.5	<0.2 <0.2	16.1 16.0
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	3.30 3.32	3.31	-	0.2 0.2	2.8 2.7	6.5 6.3	0.2 0.2	3.0 3.0	1.2 1.1	<0.2 <0.2	10.5 10.8
W4	Surface	1.50 1.49	1.50	1.48	0.1 0.1	1.7 1.7	6.4 6.3	<0.2 <0.2	1.3 1.3	0.6 0.6	<0.2 <0.2	8.9 9.1
	Middle	1.47 1.48	1.48	-	0.2 0.2	2.5 2.4	6.1 5.8	<0.2 <0.2	2.9 3.0	1.6 1.5	<0.2 <0.2	20.3 20.4
	Bottom	1.47 1.47	1.47	-	0.4 0.4	1.2 1.2	7.7 7.8	0.2 0.2	2.7 2.7	1.6 1.6	<0.2 <0.2	15.5 15.5
W5	Surface	1.47 1.46	1.47	1.46	0.3 0.3	1.1 1.2	5.7 5.5	0.2 0.2	2.4 2.3	1.0 1.0	<0.2 <0.2	11.0 11.0
	Middle	1.47 1.45	1.46	-	<0.1 <0.1	1.4 1.4	6.3 6.2	0.2 0.2	2.9 2.8	1.2 1.1	<0.2 <0.2	18.5 18.8
	Bottom	1.47 1.45	1.46	-	0.5 0.5	1.8 1.8	5.4 5.5	0.2 0.2	1.5 1.4	1.4 1.4	<0.2 <0.2	10.7 10.5

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.55 0.52	0.54	0.54	0.1 0.2	2.6 2.7	5.1 5.2	<0.2 <0.2	2.8 2.8	0.6 0.6	<0.2 <0.2	10.6 10.4
	Bottom	-	-	-	-	-	-	-	-	-	-	
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.62 0.60	0.61	0.61	0.2 0.2	1.9 1.8	5.7 5.7	<0.2 <0.2	2.4 2.4	0.8 0.7	<0.2 <0.2	9.5 9.2
	Bottom	-	-	-	-	-	-	-	-	-	-	
W3	Surface	1.72 1.68	1.70	1.14	0.3 0.3	1.1 1.1	5.3 5.5	<0.2 <0.2	1.2 1.2	0.7 0.7	<0.2 <0.2	16.1 16.8
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	0.58 0.58	0.58	-	0.4 0.4	3.0 2.9	6.8 6.8	0.2 0.2	2.7 2.7	0.7 0.7	<0.2 0.2	18.0 17.9
W4	Surface	0.41 0.41	0.41	0.41	0.1 0.1	1.0 1.0	5.3 5.5	0.3 0.3	1.3 1.2	0.9 0.9	<0.2 <0.2	8.7 8.6
	Middle	0.41 0.41	0.41	-	0.1 0.1	2.8 2.9	5.7 5.7	<0.2 <0.2	2.4 2.5	0.7 0.7	<0.2 <0.2	19.2 19.1
	Bottom	0.42 0.41	0.42	-	0.2 0.2	2.1 2.1	8.1 7.8	<0.2 <0.2	2.8 2.8	1.3 1.3	<0.2 <0.2	20.7 20.5
W5	Surface	0.41 0.41	0.41	0.41	0.4 0.5	2.8 2.7	6.6 6.6	0.2 0.2	1.4 1.4	0.7 0.7	<0.2 <0.2	22.3 22.3
	Middle	0.41 0.40	0.41	-	0.5 0.5	2.2 2.2	5.4 5.5	0.3 0.3	2.7 2.8	0.9 0.9	<0.2 0.2	17.2 17.7
	Bottom	0.40 0.41	0.41	-	0.3 0.3	2.8 2.7	5.6 5.6	0.3 0.3	3.1 3.0	1.3 1.3	0.2 0.2	16.1 16.2

Appendix D - Action and Limit Levels for Marine Water Quality on 4 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 18.8 and W2: 20.6</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 20.4 and W2: 22.4</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 11.5 and W2: 14.8</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 12.5 and W2: 16.0</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.97 and W2: 1.48</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 2.06 and W2: 1.52</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.3 and W2: 2.6 or 24.0</u>	<u>W1: 3.6 and W2: 2.9 or 40.7</u>
Cd	<u>W1: 0.5 and W2: 0.5 or 0.8</u>	<u>W1: 0.5 and W2: 0.5 or 1.5</u>
Cu	<u>W1: 7.1 and W2: 9.7 or 54.8</u>	<u>W1: 7.7 and W2: 10.5 or 95.0</u>
Zn	<u>W1: 17.8 and W2: 25.1 or 120.0</u>	<u>W1: 19.3 and W2: 27.2 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 2.6 and W2: 3.1 or 36.8</u>	<u>W1: 2.8 and W2: 3.3 or 71.3</u>
Pb	<u>W1: 1.7 and W2: 1.3 or 46.0</u>	<u>W1: 1.8 and W2: 1.4 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 4 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 18.2</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 19.8</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 11.3</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 12.2</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.98</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 2.07</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.5</u> or <u>24.0</u>	<u>W5: 2.7</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.6</u> or <u>1.5</u>
Cu	<u>W5: 8.0</u> or <u>54.8</u>	<u>W5: 8.6</u> or <u>95.0</u>
Zn	<u>W5: 25.0</u> or <u>120.0</u>	<u>W5: 27.1</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.5</u> or <u>36.8</u>	<u>W5: 2.7</u> or <u>71.3</u>
Pb	<u>W5: 1.6</u> or <u>46.0</u>	<u>W5: 1.7</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 4 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*				
W1	Fine	Moderate	11:54	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.1	25.9	25.8	7.9	7.9	16.5	16.6	86.2	87.0	6.4	6.5	6.5	9.4	9.7	9.6	9.6	15.4	15.7	15.7		
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W2	Fine	Moderate	12:05	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.3	25.4	25.4	8.0	8.0	33.2	33.3	97.1	97.3	6.6	6.6	6.6	12.6	11.9	12.3	12.3	17.5	17.2	17.2		
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W3	Fine	Moderate	12:18	Surface	1	25.9	25.9	8.2	8.2	32.0	32.1	124.4	125.0	124.7	8.4	8.5	8.5	8.5	7.8	7.5	7.7	7.1	7.1	7.1	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3	25.2	25.1	8.0	8.0	32.1	32.2	82.5	83.8	83.2	5.7	5.8	5.8	14.3	14.2	14.3	11.0	7.8	7.5	7.7	
W4	Fine	Moderate	12:31	Surface	1	25.8	25.8	8.1	8.1	32.0	32.0	107.0	106.9	7.3	7.3	7.3	7.0	8.9	9.2	9.1	10.4	9.7	9.8	9.8	
				Middle	3.5	25.1	25.0	8.1	8.1	32.9	33.3	99.4	95.6	97.5	6.8	6.5	6.7	10.4	10.8	10.6	10.4	6.6	6.7	6.7	
				Bottom	6	24.5	24.5	8.1	8.1	32.4	32.4	86.4	86.0	86.2	6.0	6.0	6.0	11.7	11.5	11.6	10.4	7.1	6.8	7.0	
W5	Fine	Moderate	12:44	Surface	1	25.7	25.7	8.1	8.1	32.3	32.4	104.8	105.1	105.1	7.1	7.2	7.2	6.9	7.8	7.6	9.3	11.8	12.0	12.0	
				Middle	4	25.0	25.0	8.1	8.1	33.3	33.4	96.4	96.1	96.3	6.6	6.6	6.6	6.9	8.9	9.1	9.3	5.0	4.9	5.0	
				Bottom	7	24.7	24.7	8.1	8.1	33.8	33.7	89.4	89.7	89.6	6.1	6.2	6.2	11.5	11.1	11.3	9.3	5.2	5.2	5.2	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 4 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*				
W1	Fine	Moderate	18:20	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	0.9	25.6	25.6	7.8	7.8	32.0	32.0	45.0	41.8	43.4	3.1	2.9	3.0	3.0	8.7	8.5	8.6	8.6	16.0	15.8	15.8
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	18:31	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.2	25.2	25.2	7.7	7.7	33.1	33.1	30.3	28.6	29.5	2.1	2.0	2.1	2.1	9.4	10.2	9.8	9.8	13.4	13.9	13.7
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	18:42	Surface	1	26.2	26.0	8.2	8.3	31.1	31.1	147.0	151.4	10.0	10.3	10.3	10.3	7.4	7.6	7.5	8.6	11.4	11.1	11.3	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	2.9	25.0	25.0	8.0	8.0	33.6	33.5	91.1	91.2	91.2	6.2	6.2	6.2	6.2	9.4	9.8	9.6	8.6	16.0	15.1	16.1
W4	Fine	Moderate	18:58	Surface	1	25.8	25.8	8.3	8.3	31.8	31.8	136.4	136.1	9.3	9.3	9.3	8.3	7.1	7.5	7.5	8.5	7.9	7.8	7.8	
				Middle	3.5	25.4	25.4	8.2	8.2	32.4	32.5	106.2	105.7	106.0	7.3	7.2	7.3	8.3	8.5	8.5	8.5	12.0	11.5	11.8	
				Bottom	6	25.4	25.3	8.1	8.1	32.8	32.7	105.4	103.1	104.3	7.2	7.1	7.1	7.1	9.6	9.2	9.4	8.5	9.2	9.3	9.3
W5	Fine	Moderate	19:10	Surface	1	25.8	25.8	8.2	8.2	32.2	32.2	120.3	118.7	8.2	8.1	8.1	7.6	8.9	8.7	9.4	12.4	12.3	12.4	12.1	
				Middle	4	25.5	25.4	8.1	8.1	32.6	32.5	103.1	102.3	102.7	7.0	7.0	7.0	7.6	8.7	8.8	8.8	8.8	8.5	8.7	8.7
				Bottom	7	24.8	24.8	8.1	8.1	33.6	33.3	83.2	90.2	86.7	5.7	6.0	6.0	6.0	10.5	10.7	10.6	9.4	15.1	15.2	15.2

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.89 0.89	0.89	0.4 0.4	2.8 2.7	5.9 5.9	0.3 0.3	2.2 2.1	1.4 1.4	0.2 0.2	15.0 14.7
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.48 0.48	0.48	0.4 0.4	2.2 2.2	8.2 8.0	0.3 0.3	2.6 2.5	1.1 1.1	<0.2 <0.2	21.2 20.7
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	1.06 1.05	1.06	0.3 0.3	1.3 1.3	6.5 6.5	0.2 0.2	2.5 2.5	0.9 0.9	<0.2 <0.2	15.2 15.1
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.39 0.39	0.39	0.1 0.1	2.3 2.3	6.7 6.4	<0.2 <0.2	1.1 1.1	1.5 1.5	<0.2 <0.2	10.6 10.8
W4	Surface	1.29 1.26	1.28	0.4 0.4	1.4 1.4	6.1 6.1	<0.2 <0.2	3.0 2.8	0.7 0.7	<0.2 <0.2	10.9 10.7
	Middle	0.61 0.60	0.61	0.1 0.1	2.0 2.0	7.1 7.0	<0.2 <0.2	1.8 1.9	0.9 1.0	0.2 0.2	12.9 13.4
	Bottom	0.32 0.30	0.31	0.2 0.2	1.8 1.8	5.9 5.8	<0.2 <0.2	2.0 1.9	1.1 1.1	0.2 0.2	22.3 23.2
W5	Surface	0.55 0.56	0.56	<0.1 <0.1	1.2 1.2	6.8 6.7	<0.2 <0.2	1.8 1.8	0.7 0.7	<0.2 <0.2	20.2 19.5
	Middle	0.28 0.27	0.28	0.2 0.2	1.2 1.2	6.8 6.9	0.2 0.2	2.7 2.7	1.6 1.5	<0.2 <0.2	9.2 9.5
	Bottom	0.31 0.31	0.31	0.5 0.5	2.2 2.2	5.8 5.5	0.2 0.2	2.1 2.0	0.6 0.6	<0.2 <0.2	18.8 18.3

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	1.08 1.09	1.09	0.1 0.2	2.0 2.0	5.2 5.2	<0.2 0.2	1.5 1.5	1.4 1.3	<0.2 <0.2	9.9 9.7
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	1.39 1.37	1.38	0.4 0.4	1.9 1.9	7.6 7.6	<0.2 <0.2	1.8 1.8	0.6 0.6	<0.2 <0.2	22.4 21.8
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.26 0.26	0.26	0.4 0.5	1.4 1.4	7.3 7.1	<0.2 <0.2	1.3 1.3	0.9 0.9	<0.2 <0.2	12.7 12.8
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.37 0.37	0.37	0.2 0.2	1.3 1.3	5.6 5.3	<0.2 <0.2	2.8 2.7	0.6 0.5	0.2 0.2	15.7 15.6
W4	Surface	0.61 0.58	0.60	0.2 0.2	2.5 2.5	5.2 5.0	<0.2 <0.2	1.2 1.3	1.0 1.0	<0.2 <0.2	16.4 16.1
	Middle	0.59 0.57	0.58	0.4 0.4	1.8 1.8	8.0 7.8	<0.2 0.2	1.1 1.1	0.7 0.7	<0.2 <0.2	13.2 13.7
	Bottom	0.39 0.38	0.39	0.3 0.3	2.1 2.2	6.4 6.3	0.2 0.2	2.2 2.1	1.4 1.4	0.2 0.2	10.1 10.2
W5	Surface	0.27 0.27	0.27	0.4 0.4	2.3 2.3	5.5 5.5	0.2 0.2	1.0 1.0	1.5 1.5	0.2 0.2	19.4 19.3
	Middle	0.29 0.30	0.30	0.5 0.4	1.1 1.2	7.1 7.2	0.2 0.2	2.6 2.7	1.1 1.1	<0.2 <0.2	20.9 20.1
	Bottom	2.15 2.13	2.14	0.4 0.5	2.8 2.8	7.4 7.2	0.3 0.3	2.6 2.5	1.4 1.4	0.2 0.2	22.8 22.7

Appendix D - Action and Limit Levels for Marine Water Quality on 6 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 19.7 and W2: 15.7</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 21.3 and W2: 17.0</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 6.8 and W2: 9.8</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 7.4 and W2: 10.7</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 2.23 and W2: 2.26</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 2.34 and W2: 2.37</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.6 and W2: 3.3</u> or <u>24.0</u>	<u>W1: 3.9 and W2: 3.6</u> or <u>40.7</u>
Cd	<u>W1: 0.4 and W2: 0.5</u> or <u>0.8</u>	<u>W1: 0.4 and W2: 0.5</u> or <u>1.5</u>
Cu	<u>W1: 8.6 and W2: 8.3</u> or <u>54.8</u>	<u>W1: 9.4 and W2: 9.0</u> or <u>95.0</u>
Zn	<u>W1: 24.8 and W2: 24.5</u> or <u>120.0</u>	<u>W1: 26.8 and W2: 26.5</u> or <u>150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2</u> or <u>0.5</u>	<u>W1: 0.3 and W2: 0.3</u> or <u>0.8</u>
Hg	<u>W1: 0.4 and W2: 0.2</u> or <u>5.1</u>	<u>W1: 0.4 and W2: 0.3</u> or <u>8.7</u>
Ni	<u>W1: 3.6 and W2: 3.7</u> or <u>36.8</u>	<u>W1: 3.9 and W2: 4.0</u> or <u>71.3</u>
Pb	<u>W1: 1.5 and W2: 1.2</u> or <u>46.0</u>	<u>W1: 1.6 and W2: 1.3</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 6 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 23.2</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 25.1</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.7</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.46</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.50</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 3.0</u> or <u>24.0</u>	<u>W5: 3.3</u> or <u>40.7</u>
Cd	<u>W5: 0.4</u> or <u>0.8</u>	<u>W5: 0.4</u> or <u>1.5</u>
Cu	<u>W5: 8.6</u> or <u>54.8</u>	<u>W5: 9.3</u> or <u>95.0</u>
Zn	<u>W5: 23.3</u> or <u>120.0</u>	<u>W5: 25.2</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.8</u> or <u>36.8</u>	<u>W5: 3.0</u> or <u>71.3</u>
Pb	<u>W5: 1.5</u> or <u>46.0</u>	<u>W5: 1.6</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 6 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*				
W1	Fine	Moderate	12:16	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1	24.2	24.2	8.1	8.1	20.1	20.6	49.2	49.0	3.7	3.7	3.7	5.7	5.6	5.7	5.7	16.3	16.5	16.4		
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W2	Fine	Moderate	12:31	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.3	24.1	24.1	8.1	8.1	19.3	19.6	45.5	44.5	45.0	3.4	3.4	3.4	8.3	8.1	8.2	8.2	13.4	12.7	13.1	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	12:37	Surface	1	24.0	24.1	8.1	8.1	20.4	20.4	52.1	52.1	3.9	3.9	3.9	3.9	3.2	3.4	3.3	3.3	8.5	8.7	8.6	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.2	23.8	23.9	8.1	8.1	20.7	20.6	48.8	48.6	48.7	3.7	3.6	3.7	3.7	5.1	5.1	5.1	5.1	3.0	3.0	3.0
W4	Fine	Moderate	12:50	Surface	1	24.0	24.1	8.1	8.1	33.3	33.4	90.8	90.8	6.3	6.3	6.3	1.8	1.7	1.8	1.8	6.3	6.2	6.3		
				Middle	4	23.8	23.8	8.1	8.1	33.9	33.5	86.1	85.6	6.0	6.0	6.0	2.1	2.0	2.1	2.1	9.6	9.9	9.8		
				Bottom	7	23.6	23.6	8.1	8.1	33.5	33.7	79.4	79.4	5.6	5.5	5.6	2.5	2.4	2.5	2.5	7.7	7.7	7.7		
W5	Fine	Moderate	13:04	Surface	1	24.3	24.2	8.1	8.1	32.6	32.8	92.4	92.2	6.4	6.4	6.4	2.0	1.9	2.0	2.0	3.5	3.5	3.5		
				Middle	4	23.8	23.7	8.1	8.1	33.2	33.3	87.2	87.5	6.1	6.1	6.1	2.4	2.1	2.3	2.3	6.5	8.8	8.7		
				Bottom	7	23.7	23.7	8.1	8.1	33.9	33.3	81.1	80.1	5.7	5.6	5.7	2.8	2.9	2.9	2.9	13.0	12.9	13.0		

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 6 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*				
W1	Fine	Moderate	07:10	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1	24.1	24.2	8.1	8.1	19.4	19.4	43.1	43.0	43.1	3.2	3.2	3.2	3.2	3.5	4.1	3.8	3.8	9.2	8.9	9.1
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	07:25	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.3	24.4	24.3	8.1	8.1	17.8	18.4	48.5	48.3	48.4	3.7	3.6	3.7	3.7	6.9	7.1	7.0	7.0	7.4	7.4	7.4
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	07:31	Surface	1	24.4	24.3	8.1	8.1	19.7	19.8	58.1	58.3	4.3	4.4	4.4	4.4	8.1	8.2	8.2	8.2	5.9	5.9	5.9	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.4	24.0	24.0	8.1	8.1	20.6	20.6	43.2	43.6	43.4	3.2	3.3	3.3	3.3	7.1	7.4	7.3	7.3	11.3	11.0	11.2
W4	Fine	Moderate	07:44	Surface	1	24.3	24.2	8.1	8.1	33.2	33.3	96.0	95.5	95.8	6.7	6.7	6.7	5.6	5.7	5.7	5.7	17.2	17.0	17.1	
				Middle	4	23.8	23.8	8.1	8.1	33.8	33.9	84.6	84.8	84.7	5.9	5.9	5.9	6.1	6.3	6.2	6.3	4.4	4.5	4.5	
				Bottom	7	23.7	23.6	8.1	8.1	33.4	33.6	84.0	83.9	84.0	5.9	5.9	5.9	5.9	7.0	6.7	6.9	6.9	5.9	5.8	5.9
W5	Fine	Moderate	07:56	Surface	1	23.9	23.9	8.1	8.1	32.5	32.7	92.9	92.9	6.5	6.5	6.5	6.2	6.1	6.2	6.2	5.1	5.1	5.1		
				Middle	4	23.8	23.8	8.1	8.1	33.1	33.2	83.0	83.2	83.1	5.8	5.8	5.8	6.6	6.7	6.7	6.7	12.4	11.9	12.2	
				Bottom	7	23.6	23.5	8.1	8.1	33.8	33.5	82.8	82.5	82.7	5.8	5.8	5.8	5.8	7.3	7.1	7.2	7.2	19.1	19.5	19.3

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	1.16 1.05	1.11	1.11	0.3 0.3	3.0 3.0	7.2 7.2	0.3 0.3	3.0 3.0	1.3 1.2	0.2 0.2	20.5 20.8
	Bottom	-	-	-	-	-	-	-	-	-	-	
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	1.11 1.15	1.13	1.13	0.4 0.4	2.8 2.7	7.0 6.8	0.2 0.2	3.0 3.1	1.0 1.0	0.2 0.2	20.6 20.2
	Bottom	-	-	-	-	-	-	-	-	-	-	
W3	Surface	1.13 1.17	1.15	1.16	0.3 0.3	1.7 1.8	7.1 7.0	0.2 0.2	1.6 1.6	1.5 1.5	0.2 0.2	14.5 14.5
	Middle	-	-	-	-	-	-	-	-	-	-	
	Bottom	1.20 1.14	1.17	-	0.3 0.3	2.4 2.3	7.3 7.4	<0.2 <0.2	2.9 2.9	0.7 0.7	<0.2 <0.2	22.5 22.8
W4	Surface	0.49 0.49	0.49	0.49	0.4 0.4	1.3 1.3	6.6 6.5	0.2 0.2	1.5 1.4	0.9 0.8	0.2 0.2	10.5 10.5
	Middle	0.48 0.48	0.48	0.49	0.1 0.1	1.3 1.3	5.6 5.5	0.2 0.2	2.8 2.8	0.9 0.9	<0.2 <0.2	14.4 14.6
	Bottom	0.49 0.49	0.49	0.49	0.1 0.1	2.6 2.6	6.6 6.8	<0.2 <0.2	2.8 2.7	1.1 1.1	<0.2 <0.2	11.4 10.9
W5	Surface	0.49 0.49	0.49	0.48	0.3 0.2	1.0 1.0	5.8 5.9	<0.2 <0.2	1.8 1.8	0.6 0.5	0.2 0.2	13.0 13.0
	Middle	0.48 0.47	0.48	0.48	0.2 0.2	1.3 1.3	7.2 6.8	0.2 0.2	1.8 1.8	0.9 0.9	<0.2 <0.2	20.6 20.3
	Bottom	0.47 0.46	0.47	0.48	0.1 0.1	1.3 1.3	6.2 6.3	<0.2 <0.2	3.1 3.0	1.5 1.5	<0.2 <0.2	11.7 11.8

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	1.16 1.18	1.17	1.17	<0.1 <0.1	1.9 1.9	5.1 5.0	<0.2 <0.2	1.9 1.9	1.4 1.4	<0.2 <0.2	12.2 12.1
	Bottom	-	-	-	-	-	-	-	-	-	-	
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	1.23 1.13	1.18	1.18	0.2 0.2	1.8 1.8	5.3 5.2	0.2 0.2	2.7 2.7	0.9 0.8	<0.2 <0.2	9.9 9.8
	Bottom	-	-	-	-	-	-	-	-	-	-	
W3	Surface	0.97 0.99	0.98	1.30	0.3 0.3	3.1 3.0	6.8 6.9	0.2 0.2	2.0 2.0	0.8 0.8	0.2 0.2	12.3 12.4
	Middle	-	-	-	-	-	-	-	-	-	-	
	Bottom	1.63 1.60	1.62	-	0.3 0.3	1.7 1.7	5.6 5.4	0.2 0.2	1.7 1.7	1.6 1.5	<0.2 <0.2	22.4 23.3
W4	Surface	0.43 0.43	0.43	0.46	0.3 0.3	1.3 1.3	7.6 7.5	<0.2 <0.2	1.1 1.1	0.6 0.6	<0.2 <0.2	8.1 8.4
	Middle	0.50 0.50	0.50	0.46	0.4 0.4	2.4 2.3	8.0 7.8	0.2 0.2	1.1 1.1	1.1 1.1	<0.2 <0.2	23.0 23.7
	Bottom	0.44 0.43	0.44	0.46	0.3 0.3	2.0 2.0	5.3 5.2	0.3 0.2	1.9 1.9	0.6 0.6	<0.2 <0.2	13.9 13.4
W5	Surface	0.47 0.47	0.47	0.46	0.2 0.2	2.6 2.6	7.1 7.3	0.2 0.2	2.7 2.6	1.2 1.2	<0.2 <0.2	22.1 22.7
	Middle	0.47 0.47	0.47	0.46	0.3 0.3	2.6 2.5	6.6 6.5	0.2 0.2	2.5 2.6	1.0 1.0	0.2 0.2	13.9 13.6
	Bottom	0.45 0.45	0.45	0.46	0.4 0.4	2.4 2.3	7.6 7.8	0.3 0.3	1.8 1.8	1.5 1.5	0.2 0.2	21.8 22.2

Appendix D - Action and Limit Levels for Marine Water Quality on 8 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 11.9 and W2: 12.5</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 12.9 and W2: 13.5</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 23.2 and W2: 21.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 25.1 and W2: 22.8</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.73 and W2: 3.86</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.97 and W2: 4.11</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.6 and W2: 2.5 or 24.0</u>	<u>W1: 3.9 and W2: 2.7 or 40.7</u>
Cd	<u>W1: 0.5 and W2: 0.4 or 0.8</u>	<u>W1: 0.5 and W2: 0.4 or 1.5</u>
Cu	<u>W1: 8.9 and W2: 9.2 or 54.8</u>	<u>W1: 9.7 and W2: 10.0 or 95.0</u>
Zn	<u>W1: 24.2 and W2: 25.0 or 120.0</u>	<u>W1: 26.2 and W2: 27.0 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 2.9 and W2: 3.4 or 36.8</u>	<u>W1: 3.1 and W2: 3.6 or 71.3</u>
Pb	<u>W1: 1.3 and W2: 1.4 or 46.0</u>	<u>W1: 1.4 and W2: 1.5 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 8 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 11.3</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 12.2</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.9</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 9.6</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 2.89</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 3.05</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.7</u> or <u>24.0</u>	<u>W5: 2.9</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.6</u> or <u>1.5</u>
Cu	<u>W5: 8.6</u> or <u>54.8</u>	<u>W5: 9.3</u> or <u>95.0</u>
Zn	<u>W5: 22.9</u> or <u>120.0</u>	<u>W5: 24.8</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.8</u> or <u>36.8</u>	<u>W5: 3.0</u> or <u>71.3</u>
Pb	<u>W5: 1.5</u> or <u>46.0</u>	<u>W5: 1.6</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 8 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Sunny	Moderate	15:14	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	0.9	25.5 25.0	25.3	8.1 8.2	8.2	19.2 19.7	19.5	29.8 30.4	30.1	2.2 2.3	2.3	2.3	19.4 19.3	19.3	19.3	9.9 9.8	9.9	9.9
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Sunny	Moderate	15:25	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.3	24.5 24.9	24.7	7.9 8.0	8.0	19.9 20.8	20.4	38.3 40.4	39.4	2.9 3.0	3.0	3.0	17.6 17.3	17.5	17.5	10.2 10.6	10.4	10.4
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Sunny	Moderate	15:36	Surface	1	25.7 24.6	25.2	8.0 8.2	8.1	20.1 20.2	20.2	28.4 27.6	28.0	2.1 2.1	2.1	2.1	12.4 12.5	12.5	12.4	4.7 4.7	4.7	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.2	25.4 24.5	25.0	8.4 8.0	8.2	20.4 20.5	20.5	30.5 30.4	30.5	2.2 2.3	2.3	2.3	12.3 12.0	12.2	12.4	9.6 9.5	9.6	9.6
W4	Sunny	Moderate	15:56	Surface	1	25.3 24.0	24.7	8.3 8.0	8.2	32.3 32.6	32.5	77.1 75.9	76.5	5.3 5.3	5.3	5.3	5.4 5.3	5.4	5.3	11.1 10.7	10.9	
				Middle	3.5	25.1 24.5	24.8	8.5 8.2	8.4	32.9 33.1	33.0	75.5 74.2	74.9	5.2 5.1	5.2	5.2	5.0 5.2	5.1	5.3	6.8 6.7	6.8	
				Bottom	6	24.2 24.7	24.5	8.1 8.2	8.2	33.6 34.0	33.8	75.7 74.6	75.2	5.2 5.1	5.2	5.2	5.6 5.2	5.4	5.3	8.2 8.3	8.3	
W5	Sunny	Moderate	16:04	Surface	1	25.0 24.8	24.9	8.3 8.0	8.2	33.0 33.2	33.1	77.2 75.8	76.5	5.3 5.2	5.3	5.3	4.2 4.4	4.3	9.5	8.9 9.9	8.9	
				Middle	4	24.9 25.5	25.2	8.0 8.0	8.1	33.6 33.7	33.7	75.3 75.7	75.5	5.2 5.1	5.2	5.2	8.3 8.3	8.3	9.5	7.9 8.2	8.1	
				Bottom	7	24.9 25.2	25.1	8.4 8.6	8.5	34.1 34.6	34.4	75.4 78.4	76.9	5.1 5.3	5.2	5.2	15.2 16.3	15.8	9.5	8.3 8.4	8.4	

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Water Quality Monitoring Results on 8 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Sunny	Moderate	07:25	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.3 25.3	25.3	8.1 8.1	8.1	17.4 18.5	18.0	30.6 30.8	30.7	2.3 2.3	2.3	2.3	8.3 8.7	8.5	8.5	3.5 3.5	3.5	3.5
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Sunny	Moderate	07:33	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.4	25.2 25.2	25.2	8.1 8.1	8.1	19.0 19.1	19.1	29.6 29.5	29.6	2.2 2.2	2.2	2.2	8.5 8.1	8.3	8.3	5.2 5.0	5.1	5.1
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Sunny	Moderate	07:40	Surface	1	25.2 25.0	25.1	8.1 8.2	8.2	19.5 19.3	19.4	43.3 42.5	42.9	3.2 3.2	3.2	3.2	5.6 5.2	5.4	7.5	4.8 4.8	4.8	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.2	25.0 25.0	25.0	8.2 8.2	8.2	20.2 20.2	20.2	70.6 70.4	70.5	5.2 5.2	5.2	5.2	9.3 9.7	9.5	7.5	7.0 6.7	6.9	
W4	Sunny	Moderate	07:59	Surface	1	25.0 24.9	25.0	8.1 8.1	8.1	31.9 32.2	32.1	75.9 77.9	76.9	5.2 5.4	5.3	5.3	4.5 4.6	4.6	5.9	10.0 9.7	9.9	
				Middle	3.5	25.0 25.0	25.0	8.2 8.2	8.2	32.5 32.7	32.6	75.7 76.0	75.9	5.2 5.2	5.2	5.2	6.5 6.5	6.5	5.9	8.2 8.2	8.2	
				Bottom	6	24.8 24.8	24.8	8.2 8.2	8.2	33.2 33.6	33.4	77.6 77.8	77.7	5.3 5.3	5.3	5.3	6.3 6.7	6.5	5.9	9.4 9.4	9.4	
W5	Sunny	Moderate	08:09	Surface	1	25.1 24.8	25.0	8.1 8.2	8.2	32.6 33.8	33.2	76.3 77.9	77.1	5.2 5.3	5.3	5.3	5.4 5.4	5.4	7.4	10.8 10.7	10.8	
				Middle	4	25.0 24.9	25.0	8.2 8.2	8.2	33.2 33.3	33.3	75.5 75.6	75.6	5.2 5.2	5.2	5.2	7.8 8.3	8.1	7.4	4.5 4.4	4.5	
				Bottom	7	24.9 24.7	24.8	8.2 8.2	8.2	33.7 33.2	33.5	75.8 77.0	76.4	5.2 5.3	5.3	5.3	8.9 8.4	8.7	7.4	9.4 9.4	9.4	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.33 2.39	2.36	0.4 0.4	3.1 2.9	7.4 7.5	0.3 0.3	2.4 2.4	1.1 1.1	0.2 0.2	19.9 20.4
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.45 2.49	2.47	0.3 0.3	2.1 2.1	7.8 7.6	0.3 0.3	2.8 2.8	1.2 1.1	0.2 0.2	21.0 20.6
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.44 2.26	2.35	0.1 0.1	2.3 2.3	5.9 5.8	<0.2 <0.2	1.1 1.1	0.6 0.6	0.2 0.2	8.7 8.5
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	2.70 2.64	2.67	0.1 0.1	2.5 2.4	7.8 7.8	0.2 0.2	2.5 2.5	1.4 1.4	<0.2 <0.2	13.5 13.4
W4	Surface	1.25 1.26	1.26	0.3 0.3	1.5 1.4	4.9 5.1	0.2 0.2	1.2 1.2	1.0 0.9	<0.2 <0.2	7.9 7.9
	Middle	1.25 1.23	1.24	0.1 0.1	1.1 1.1	6.3 6.1	0.2 0.2	2.7 2.7	0.8 0.7	0.2 0.2	11.6 11.3
	Bottom	1.23 1.23	1.23	0.1 0.1	1.2 1.2	7.9 7.9	<0.2 <0.2	2.6 2.4	0.7 0.7	<0.2 <0.2	19.8 19.6
W5	Surface	1.23 1.22	1.23	0.2 0.2	1.8 1.7	5.8 5.9	<0.2 <0.2	2.9 2.7	1.0 1.0	<0.2 <0.2	15.6 15.5
	Middle	1.23 1.23	1.23	0.3 0.3	2.3 2.3	6.5 6.6	0.3 0.3	2.5 2.5	1.0 1.0	<0.2 0.2	21.8 22.1
	Bottom	1.24 1.25	1.25	0.4 0.4	2.0 2.0	7.5 7.4	0.3 0.2	2.2 2.2	1.6 1.6	0.2 0.2	13.8 14.3

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.35 2.44	2.40	0.2 0.2	1.1 1.1	8.1 8.0	0.2 0.2	2.4 2.4	1.4 1.4	<0.2 <0.2	16.2 16.8
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.48 2.34	2.41	0.4 0.4	1.0 1.1	6.9 7.0	<0.2 <0.2	1.3 1.4	0.5 0.5	<0.2 <0.2	11.2 11.2
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.75 2.70	2.73	0.1 0.1	2.1 2.1	5.9 5.9	0.2 0.2	2.0 2.0	1.5 1.5	<0.2 <0.2	14.2 14.3
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	2.48 2.30	2.39	0.4 0.4	2.9 2.8	6.1 6.1	0.3 0.3	1.7 1.8	1.1 1.1	<0.2 <0.2	18.9 18.7
W4	Surface	1.66 1.66	1.66	<0.1 <0.1	2.7 2.8	7.2 6.8	0.2 0.2	1.8 1.7	0.7 0.7	<0.2 <0.2	10.2 9.7
	Middle	1.66 1.66	1.66	<0.1 <0.1	2.6 2.6	6.1 6.4	0.2 0.2	1.7 1.7	1.2 1.3	<0.2 <0.2	9.0 9.1
	Bottom	1.66 1.67	1.67	0.3 0.3	1.6 1.6	5.4 5.2	0.3 0.3	1.3 1.3	1.2 1.2	<0.2 <0.2	17.2 16.8
W5	Surface	1.65 1.65	1.65	0.5 0.5	2.0 2.0	8.0 8.3	0.3 0.3	2.9 2.9	0.9 0.9	<0.2 <0.2	14.2 14.1
	Middle	1.66 1.65	1.66	0.3 0.3	2.0 2.0	7.5 7.4	0.2 0.2	1.1 1.1	1.3 1.4	0.2 0.2	22.9 22.7
	Bottom	1.66 1.66	1.66	0.5 0.5	2.7 2.8	5.9 5.7	0.3 0.3	2.9 3.0	1.4 1.4	<0.2 <0.2	20.3 20.2

Appendix D - Action and Limit Levels for Marine Water Quality on 11 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 14.8 and W2: 15.2</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 16.0 and W2: 16.5</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 8.2 and W2: 12.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 8.8 and W2: 13.0</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.89 and W2: 3.79</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 4.14 and W2: 4.03</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 2.0 and W2: 2.6 or 24.0</u>	<u>W1: 2.1 and W2: 2.8 or 40.7</u>
Cd	<u>W1: 0.6 and W2: 0.6 or 0.8</u>	<u>W1: 0.7 and W2: 0.7 or 1.5</u>
Cu	<u>W1: 9.0 and W2: 9.6 or 54.8</u>	<u>W1: 9.8 and W2: 10.4 or 95.0</u>
Zn	<u>W1: 16.1 and W2: 24.8 or 120.0</u>	<u>W1: 17.5 and W2: 26.9 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 2.8 and W2: 3.5 or 36.8</u>	<u>W1: 3.0 and W2: 3.8 or 71.3</u>
Pb	<u>W1: 1.8 and W2: 1.2 or 46.0</u>	<u>W1: 2.0 and W2: 1.3 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 11 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 20.0</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 21.7</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 6.8</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 7.4</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 3.90</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 4.15</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.1</u> or <u>24.0</u>	<u>W5: 2.3</u> or <u>40.7</u>
Cd	<u>W5: 0.3</u> or <u>0.8</u>	<u>W5: 0.3</u> or <u>1.5</u>
Cu	<u>W5: 8.0</u> or <u>54.8</u>	<u>W5: 8.7</u> or <u>95.0</u>
Zn	<u>W5: 25.5</u> or <u>120.0</u>	<u>W5: 27.6</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 3.1</u> or <u>36.8</u>	<u>W5: 3.4</u> or <u>71.3</u>
Pb	<u>W5: 1.5</u> or <u>46.0</u>	<u>W5: 1.7</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 11 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*			
W1	Fine	Moderate	17:06	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1	25.2	25.3	8.1	8.1	19.7	20.3	40.3	39.9	3.0	3.0	3.0	6.4	7.2	6.8	12.2	12.4	12.3		
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W2	Fine	Moderate	17:19	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.3	25.3	25.4	8.0	8.1	20.5	21.4	44.1	43.8	44.0	3.2	3.2	3.2	10.2	9.8	10.0	12.7	12.6	12.7	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W3	Fine	Moderate	17:24	Surface	1	25.3	24.9	25.1	8.0	8.0	20.7	20.8	47.2	46.8	47.0	3.5	3.4	3.5	5.4	5.3	5.4	12.7	13.0	12.9
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.3	25.2	24.9	25.1	8.1	8.1	21.0	21.1	43.9	43.4	43.7	3.2	3.2	3.2	2.4	2.4	2.4	13.4	13.9	13.7
W4	Fine	Moderate	17:36	Surface	1	25.0	24.8	24.9	8.1	8.1	30.3	30.5	85.8	85.4	85.6	6.0	6.0	6.0	2.5	2.5	2.5	9.5	9.6	9.6
				Middle	4	25.1	24.8	25.0	8.1	8.1	30.9	31.0	81.5	81.6	81.6	5.6	5.7	5.7	3.0	2.8	2.9	6.8	7.0	6.9
				Bottom	7	24.7	24.9	24.8	8.0	8.0	31.6	31.8	74.9	74.7	74.8	5.2	5.2	5.2	4.2	4.0	4.1	4.1	4.0	4.1
W5	Fine	Moderate	17:49	Surface	1	24.9	24.8	24.9	8.1	8.1	31.0	31.6	84.5	84.5	84.5	5.9	5.9	5.9	3.1	3.2	3.2	13.2	13.4	13.3
				Middle	4	25.1	24.8	25.0	8.0	8.1	31.6	31.7	80.3	79.3	79.8	5.5	5.5	5.5	3.7	4.1	3.9	8.0	7.9	8.0
				Bottom	7	24.9	24.7	24.8	8.0	8.1	32.2	32.6	74.1	73.8	74.0	5.1	5.1	5.1	4.8	5.1	5.0	5.9	5.7	5.8

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 11 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*			
W1	Fine	Moderate	10:56	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1	25.2	25.4	8.1	8.1	18.1	19.2	43.2	43.3	43.3	3.2	3.2	3.2	5.4	5.7	5.6	17.7	18.2	18.0	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W2	Fine	Moderate	11:09	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.3	25.2	25.2	8.1	8.1	19.8	19.8	37.9	37.8	37.9	2.8	2.8	2.8	6.2	6.7	6.5	6.1	6.2	6.2	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W3	Fine	Moderate	11:15	Surface	1	25.0	25.0	8.0	8.1	20.2	20.2	53.4	52.8	53.1	3.9	3.9	3.9	5.8	5.1	5.5	6.7	6.8	6.8	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Bottom	3.3	24.9	25.0	8.1	8.1	21.0	21.0	38.2	37.9	38.1	2.8	2.8	2.8	7.4	7.4	7.4	13.2	13.2	13.2	
W4	Fine	Moderate	11:27	Surface	1	25.1	25.0	8.1	8.1	30.2	30.4	87.0	86.6	86.8	6.1	6.1	6.1	5.2	5.1	5.2	18.6	18.6	18.4	
				Middle	4	24.8	24.9	8.0	8.1	30.8	31.0	77.1	77.1	77.1	5.4	5.4	5.4	5.8	5.7	5.8	14.2	13.9	14.1	
				Bottom	7	24.8	24.8	8.1	8.1	31.5	31.9	76.9	77.1	77.0	5.3	5.3	5.3	6.2	6.5	6.4	8.5	8.8	8.7	
W5	Fine	Moderate	11:39	Surface	1	25.0	24.9	25.0	8.1	8.1	30.9	32.1	89.4	89.6	89.5	6.2	6.2	6.2	4.7	4.8	4.8	15.3	15.3	15.3
				Middle	4	24.8	24.8	8.0	8.1	31.5	31.6	78.5	78.7	78.6	5.4	5.5	5.5	5.4	5.4	5.4	18.4	17.3	17.9	
				Bottom	7	24.8	24.8	8.1	8.1	32.1	32.5	78.5	78.4	78.5	5.4	5.4	5.4	6.9	6.8	6.9	16.8	16.6	16.7	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	2.51 2.48	2.50	2.50	0.5 0.5	1.7 1.6	7.5 7.5	0.3 0.3	2.3 2.3	1.5 1.5	0.2 0.2	13.4 13.5
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	2.39 2.42	2.41	2.41	0.5 0.5	2.2 2.1	7.9 8.1	0.3 0.3	3.0 2.9	1.0 1.0	0.2 0.2	21.0 20.4
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.43 2.44	2.44	2.34	0.2 0.2	1.2 1.1	6.6 6.4	<0.2 <0.2	1.5 1.4	1.1 1.1	<0.2 <0.2	8.8 8.7
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	2.28 2.22	2.25	-	0.1 0.1	2.5 2.4	8.2 8.2	<0.2 <0.2	1.6 1.7	1.3 1.2	<0.2 <0.2	12.3 12.7
W4	Surface	0.38 0.38	0.38	0.37	0.3 0.3	2.0 1.9	7.6 7.5	0.2 0.2	1.4 1.4	0.9 0.9	<0.2 <0.2	18.8 18.2
	Middle	0.37 0.36	0.37	-	<0.1 <0.1	1.2 1.2	6.7 6.6	0.2 0.2	2.4 2.4	0.9 0.9	<0.2 <0.2	14.5 14.4
	Bottom	0.36 0.38	0.37	-	<0.1 <0.1	1.2 1.2	7.0 7.1	0.2 0.2	2.9 2.9	0.9 0.9	<0.2 <0.2	13.1 12.7
W5	Surface	0.38 0.38	0.38	0.37	0.2 0.2	1.3 1.4	6.0 5.7	0.2 0.2	1.2 1.2	1.1 1.1	<0.2 <0.2	13.4 12.9
	Middle	0.36 0.36	0.36	-	0.1 0.1	1.6 1.6	6.9 6.8	<0.2 <0.2	1.9 1.9	1.5 1.5	<0.2 <0.2	22.3 22.8
	Bottom	0.36 0.36	0.36	-	0.1 0.1	2.5 2.5	7.6 7.4	<0.2 <0.2	1.6 1.6	0.7 0.7	0.2 0.2	12.7 12.0

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.39 0.38	0.39	0.39	<0.1 <0.1	1.9 2.0	6.9 7.1	0.2 0.2	1.9 1.9	1.5 1.5	<0.2 <0.2	18.4 18.1
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.45 0.44	0.45	0.45	0.1 0.1	1.8 1.8	5.7 5.6	<0.2 <0.2	1.6 1.6	0.5 0.5	<0.2 <0.2	8.9 8.5
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.41 0.40	0.41	0.39	0.2 0.2	1.7 1.8	7.8 7.6	<0.2 0.2	1.9 2.0	1.5 1.5	0.2 0.2	15.5 15.6
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	0.38 0.38	0.38	-	0.2 0.2	2.1 2.2	7.5 7.2	<0.2 <0.2	2.7 2.8	1.0 1.0	<0.2 <0.2	12.9 12.5
W4	Surface	0.43 0.43	0.43	0.41	0.1 0.1	1.3 1.3	7.0 7.1	<0.2 <0.2	1.8 1.8	1.0 1.0	0.2 0.2	20.7 21.4
	Middle	0.41 0.41	0.41	-	0.1 0.1	2.9 2.8	7.1 7.2	<0.2 <0.2	1.7 1.7	1.1 1.1	<0.2 <0.2	13.8 13.7
	Bottom	0.40 0.39	0.40	-	<0.1 <0.1	1.3 1.3	7.4 7.2	0.2 0.2	1.1 1.1	1.2 1.2	<0.2 <0.2	14.2 13.7
W5	Surface	2.52 2.62	2.57	2.50	0.1 0.1	2.0 1.9	6.0 6.0	0.2 0.2	3.0 3.0	1.4 1.3	0.2 0.2	22.6 22.6
	Middle	2.41 2.42	2.42	-	0.4 0.4	1.6 1.5	6.5 6.4	0.2 0.2	2.2 2.2	1.4 1.4	0.2 0.2	22.7 22.9
	Bottom	2.53 2.48	2.51	-	0.3 0.3	1.8 1.8	7.6 7.7	0.3 0.3	2.7 2.6	1.1 1.1	0.2 0.2	18.7 18.0

Appendix D - Action and Limit Levels for Marine Water Quality on 13 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 23.3 and W2: 18.1</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 25.2 and W2: 19.6</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 5.2 and W2: 13.1</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 5.6 and W2: 14.2</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.46 and W2: 5.29</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.51 and W2: 5.66</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.6 and W2: 2.7 or 24.0</u>	<u>W1: 3.9 and W2: 2.9 or 40.7</u>
Cd	<u>W1: 0.5 and W2: 0.5 or 0.8</u>	<u>W1: 0.5 and W2: 0.5 or 1.5</u>
Cu	<u>W1: 8.0 and W2: 9.0 or 54.8</u>	<u>W1: 8.6 and W2: 9.8 or 95.0</u>
Zn	<u>W1: 17.3 and W2: 26.5 or 120.0</u>	<u>W1: 18.8 and W2: 28.7 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 2.7 and W2: 2.6 or 36.8</u>	<u>W1: 2.9 and W2: 2.8 or 71.3</u>
Pb	<u>W1: 1.6 and W2: 1.6 or 46.0</u>	<u>W1: 1.8 and W2: 1.7 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 13 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 15.4</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 16.6</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.7</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.18</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.20</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.1</u> or <u>24.0</u>	<u>W5: 2.3</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.5</u> or <u>1.5</u>
Cu	<u>W5: 7.8</u> or <u>54.8</u>	<u>W5: 8.5</u> or <u>95.0</u>
Zn	<u>W5: 21.3</u> or <u>120.0</u>	<u>W5: 23.1</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.2</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.8</u> or <u>36.8</u>	<u>W5: 3.1</u> or <u>71.3</u>
Pb	<u>W5: 1.4</u> or <u>46.0</u>	<u>W5: 1.6</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 13 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Fine	Moderate	08:12	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.6	25.6	7.7	7.7	30.0	30.0	28.1	27.6	1.9	1.9	1.9	4.3	4.3	4.3	19.4	19.4	19.4
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	08:33	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.2	25.6	25.6	7.6	7.6	30.1	30.1	18.7	19.3	1.3	1.4	1.4	10.4	11.3	10.9	14.9	15.3	15.1
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	08:40	Surface	1	25.7	25.7	7.8	7.8	29.4	29.5	49.1	48.9	3.4	3.4	3.4	2.8	2.9	2.9	8.4	8.5	8.5
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	2.3	25.5	25.5	7.7	7.8	30.3	30.3	30.6	28.8	2.1	2.0	2.0	6.4	6.5	6.5	10.3	10.0	10.2
W4	Fine	Moderate	08:53	Surface	1	25.5	25.5	7.9	7.9	29.4	29.6	60.3	60.4	4.2	4.2	4.2	2.4	2.3	2.4	10.4	10.1	10.3
				Middle	3.5	25.0	25.0	8.0	8.0	31.4	31.5	61.6	61.7	4.3	4.3	4.3	3.7	3.8	3.8	5.6	5.4	5.5
				Bottom	6	24.8	24.8	8.0	8.0	32.1	32.1	62.2	62.2	4.3	4.3	4.3	4.6	4.5	4.6	11.5	11.3	11.4
W5	Fine	Moderate	09:07	Surface	1	25.5	25.5	8.0	8.0	29.9	29.9	68.1	67.8	4.7	4.7	4.7	2.3	2.3	2.3	11.3	11.2	11.3
				Middle	4	25.2	25.3	8.0	8.0	30.9	30.9	67.2	67.2	4.6	4.6	4.6	2.4	2.3	2.4	12.2	12.6	12.4
				Bottom	7	24.8	24.8	8.0	8.0	32.1	32.1	65.6	65.5	4.5	4.5	4.5	2.8	2.8	2.8	10.2	9.7	10.0

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 13 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Fine	Moderate	13:01	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.6	25.6	7.7	7.7	29.9	30.0	33.9	33.3	2.3	2.3	2.3	7.7	7.7	7.7	11.6	11.8	11.7
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	13:12	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.3	25.5	25.6	7.7	7.7	30.2	30.2	17.7	17.6	1.2	1.2	1.2	7.4	7.4	7.4	12.1	11.5	11.8
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	13:53	Surface	1	25.6	25.6	7.8	7.8	29.6	29.7	45.3	45.5	3.1	3.2	3.2	3.1	3.5	3.3	15.0	14.8	14.9
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.3	25.1	25.1	7.5	7.5	31.0	31.0	19.2	18.9	1.3	1.3	1.3	8.4	8.7	8.6	11.2	10.6	10.9
W4	Fine	Moderate	14:08	Surface	1	25.9	25.9	8.0	8.0	29.8	29.9	73.4	71.5	5.1	5.1	5.1	5.1	5.1	5.1	12.7	11.9	12.3
				Middle	4	25.4	25.5	8.1	8.1	30.9	30.3	75.4	75.9	5.2	5.2	5.2	5.3	5.2	5.3	11.5	10.9	11.2
				Bottom	7	25.2	25.2	8.0	8.0	31.4	31.4	72.4	70.8	5.0	4.9	5.0	6.5	6.6	6.6	13.4	13.5	13.5
W5	Fine	Moderate	14:22	Surface	1	25.6	25.6	8.1	8.1	29.8	30.1	84.9	84.3	5.9	5.9	5.9	5.3	5.1	5.2	13.0	12.7	12.9
				Middle	4	25.4	25.4	8.1	8.1	31.1	31.1	74.9	75.0	5.2	5.2	5.2	6.8	6.8	6.8	13.5	13.3	13.4
				Bottom	7	25.2	25.2	8.0	8.0	31.4	30.9	68.4	68.2	4.7	4.7	4.7	8.3	8.1	8.2	12.7	12.8	12.8

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.47 0.47	0.47	0.4 0.4	3.0 3.0	6.7 6.6	0.3 0.3	2.3 2.2	1.3 1.4	<0.2 <0.2	14.4 14.5
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	3.71 3.61	3.66	0.4 0.4	2.3 2.2	7.6 7.4	0.3 0.3	2.2 2.1	1.3 1.3	<0.2 0.2	22.2 22.0
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.09 0.09	0.09	0.3 0.2	1.5 1.4	5.1 5.1	<0.2 <0.2	1.7 1.7	1.3 1.4	0.2 0.2	8.1 8.5
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.46 0.47	0.47	0.1 0.1	1.5 1.4	6.2 6.3	0.2 0.2	2.7 2.5	0.6 0.5	0.2 0.2	21.7 21.6
W4	Surface	0.88 0.86	0.87	0.2 0.2	1.6 1.6	6.6 6.7	<0.2 <0.2	1.6 1.6	0.9 0.9	<0.2 <0.2	12.0 11.9
	Middle	0.93 0.90	0.92	0.3 0.3	2.3 2.3	5.4 5.4	0.2 0.2	2.7 2.7	1.1 1.1	0.2 0.2	12.8 12.6
	Bottom	0.19 0.19	0.19	0.5 0.5	2.5 2.5	7.5 7.5	0.2 0.2	1.9 2.0	1.6 1.5	0.2 0.2	9.1 9.1
W5	Surface	0.37 0.37	0.37	0.4 0.4	1.4 1.4	7.4 7.5	<0.2 <0.2	2.9 2.9	0.6 0.6	<0.2 <0.2	20.7 20.0
	Middle	0.24 0.24	0.24	0.2 0.2	2.6 2.6	5.2 5.3	<0.2 <0.2	1.9 1.9	1.0 1.0	0.2 0.2	13.9 14.5
	Bottom	0.14 0.14	0.14	0.5 0.5	2.9 2.9	7.9 7.8	<0.2 <0.2	1.8 1.8	1.3 1.3	0.2 0.2	10.8 11.2

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.50 0.45	0.48	0.1 0.1	1.4 1.4	7.7 7.6	0.2 0.2	2.3 2.3	0.7 0.7	<0.2 <0.2	8.6 8.4
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.59 0.62	0.61	0.2 0.2	1.6 1.6	5.8 5.6	<0.2 <0.2	1.7 1.7	1.1 1.1	<0.2 <0.2	11.7 12.2
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	1.03 1.14	1.09	0.4 0.5	1.1 1.1	4.8 4.9	<0.2 <0.2	2.7 2.7	0.6 0.6	<0.2 <0.2	11.8 11.7
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.18 0.18	0.18	0.2 0.2	1.7 1.6	5.4 5.2	<0.2 <0.2	1.3 1.4	0.8 0.8	<0.2 <0.2	9.8 9.7
W4	Surface	0.41 0.42	0.42	0.2 0.2	2.1 2.1	5.4 5.4	<0.2 <0.2	2.3 2.3	0.8 0.8	<0.2 <0.2	10.5 10.5
	Middle	0.27 0.26	0.27	0.1 0.1	1.4 1.4	5.9 6.0	0.2 0.2	2.4 2.4	0.6 0.6	<0.2 <0.2	19.1 18.3
	Bottom	0.22 0.22	0.22	<0.1 <0.1	1.2 1.3	6.2 6.2	<0.2 <0.2	2.0 2.1	1.4 1.4	<0.2 <0.2	20.9 21.3
W5	Surface	0.29 0.30	0.30	0.4 0.4	2.3 2.3	6.4 6.2	0.2 0.2	1.9 1.9	1.0 1.0	<0.2 <0.2	13.3 13.4
	Middle	0.21 0.21	0.21	0.3 0.3	1.9 1.8	6.7 6.6	0.2 0.2	2.0 2.0	1.5 1.5	0.2 0.2	17.0 17.4
	Bottom	0.20 0.19	0.20	0.5 0.5	1.1 1.1	6.7 6.4	0.2 0.2	3.1 3.2	1.1 1.1	<0.2 <0.2	22.9 22.7

Appendix D - Action and Limit Levels for Marine Water Quality on 15 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 19.0 and W2: 17.8</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 20.5 and W2: 19.2</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 9.1 and W2: 9.7</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 9.9 and W2: 10.5</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.31 and W2: 3.32</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.51 and W2: 3.53</u> Or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.0 and W2: 2.6 or 24.0</u>	<u>W1: 3.3 and W2: 2.9 or 40.7</u>
Cd	<u>W1: 0.6 and W2: 0.5 or 0.8</u>	<u>W1: 0.7 and W2: 0.5 or 1.5</u>
Cu	<u>W1: 7.3 and W2: 7.0 or 54.8</u>	<u>W1: 7.9 and W2: 7.6 or 95.0</u>
Zn	<u>W1: 17.8 and W2: 22.3 or 120.0</u>	<u>W1: 19.3 and W2: 24.1 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.2 or 5.1</u>	<u>W1: 0.4 and W2: 0.3 or 8.7</u>
Ni	<u>W1: 2.6 and W2: 3.5 or 36.8</u>	<u>W1: 2.8 and W2: 3.8 or 71.3</u>
Pb	<u>W1: 1.4 and W2: 1.3 or 46.0</u>	<u>W1: 1.5 and W2: 1.4 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 15 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 14.2</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 15.3</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 7.9</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.6</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 2.43</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 2.56</u> Or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 3.2</u> or <u>24.0</u>	<u>W5: 3.5</u> or <u>40.7</u>
Cd	<u>W5: 0.3</u> or <u>0.8</u>	<u>W5: 0.3</u> or <u>1.5</u>
Cu	<u>W5: 7.8</u> or <u>54.8</u>	<u>W5: 8.4</u> or <u>95.0</u>
Zn	<u>W5: 21.5</u> or <u>120.0</u>	<u>W5: 23.3</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 3.0</u> or <u>36.8</u>	<u>W5: 3.2</u> or <u>71.3</u>
Pb	<u>W5: 1.1</u> or <u>46.0</u>	<u>W5: 1.2</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 15 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)								
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*				
W1	Fine	Moderate	09:32	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
				Middle	1	25.1	25.0	7.1	7.2	31.1	31.4	48.0	47.1	3.3	3.3	3.3	7.4	7.6	7.6	15.6	15.9	15.8			
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
W2	Fine	Moderate	09:45	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				Middle	1.4	24.9	24.9	7.4	7.4	30.4	29.7	39.3	41.5	40.4	2.7	2.8	2.8	8.1	8.1	8.1	14.8	14.8	14.8		
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W3	Fine	Moderate	09:53	Surface	1	25.7	25.7	7.4	7.4	28.5	26.4	27.5	48.7	49.0	48.9	3.4	3.4	3.4	7.2	7.8	7.5	6.8	6.9	6.9	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.4	25.4	25.2	25.3	7.6	7.2	7.4	28.2	27.2	27.7	48.9	48.8	48.9	3.4	3.4	3.4	9.9	9.2	9.6	6.2	6.2
W4	Fine	Moderate	10:12	Surface	1	25.7	25.7	7.5	7.5	29.3	28.2	28.2	106.8	108.0	108.0	7.4	7.6	7.6	4.0	3.2	3.6	7.3	7.6	7.5	
				Middle	3.5	25.3	25.4	25.4	7.5	7.5	30.5	25.6	28.1	105.4	108.5	107.0	7.3	7.5	7.5	4.3	4.9	4.6	13.3	12.7	13.0
				Bottom	6	25.2	25.3	25.3	7.6	7.6	26.8	26.1	26.5	107.2	110.9	109.1	7.7	7.8	7.8	4.6	4.3	4.5	12.9	12.7	12.8
W5	Fine	Moderate	10:27	Surface	1	25.3	25.5	7.6	7.6	29.2	28.6	28.6	104.0	104.3	104.3	7.2	7.3	7.3	4.2	3.9	4.1	13.5	13.1	13.3	
				Middle	4	25.1	25.0	25.1	7.6	7.6	28.0	28.9	27.4	104.5	105.4	105.4	7.3	7.4	7.5	3.9	5.1	5.1	13.3	13.3	13.6
				Bottom	7	24.5	24.9	24.7	7.6	7.6	27.1	26.1	26.6	103.8	104.8	104.3	7.4	7.5	7.5	3.3	4.0	3.7	11.0	10.5	10.8

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 15 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)									
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*					
W1	Fine	Moderate	15:32	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
				Middle	1	25.6	25.8	25.7	7.0	7.1	29.0	29.1	29.1	46.4	46.0	46.2	3.2	3.2	3.2	7.7	7.6	7.7	12.4	12.2	12.3	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
W2	Fine	Moderate	15:53	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.4	25.6	25.6	25.6	7.2	7.2	29.8	29.8	29.8	41.7	42.3	42.0	2.9	2.9	2.9	7.8	6.9	7.4	9.8	9.8	9.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	16:03	Surface	1	25.7	25.8	7.1	7.1	29.9	29.2	29.2	54.7	55.9	55.9	3.8	3.9	3.9	5.8	5.8	5.8	9.1	9.0	9.1		
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.4	25.5	25.7	25.6	7.1	7.1	27.2	27.3	27.3	55.0	56.6	55.8	3.9	4.0	4.0	9.1	9.1	9.1	7.3	7.2	7.3	
W4	Fine	Moderate	16:20	Surface	1	24.2	24.5	7.4	7.3	28.7	28.9	28.9	101.7	101.5	101.5	7.2	7.2	7.2	4.6	4.8	4.7	8.6	8.7	8.8		
				Middle	4	24.8	24.5	24.2	7.2	7.3	29.0	27.9	27.2	101.3	100.4	99.5	7.1	7.2	7.2	6.2	6.7	6.5	10.7	10.3	10.5	
				Bottom	7	23.7	24.3	24.0	7.4	7.4	27.5	27.4	27.5	97.4	101.5	99.5	7.0	7.2	7.2	6.8	6.4	6.6	4.4	4.4	4.4	
W5	Fine	Moderate	16:31	Surface	1	24.4	24.3	7.3	7.3	29.4	29.8	29.8	101.4	98.8	100.1	7.2	7.1	7.1	5.1	4.9	5.0	8.4	8.5	8.5		
				Middle	4	24.1	24.1	24.1	7.3	7.2	27.9	27.7	27.8	100.4	97.7	99.1	7.2	7.0	7.1	6.5	6.9	6.7	9.8	9.7	9.8	
				Bottom	7	23.8	23.6	23.7	7.3	7.2	28.1	27.8	28.0	98.4	98.5	98.5	7.1	7.1	7.1	8.0	7.9	8.0	11.8	11.7	11.8	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.00 2.02	2.01	0.5 0.5	2.5 2.5	6.1 6.1	0.3 0.3	2.2 2.1	1.1 1.2	0.2 0.2	15.1 14.6
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.04 2.00	2.02	0.4 0.4	2.2 2.2	6.0 5.7	0.2 0.2	2.9 2.9	1.1 1.1	<0.2 <0.2	18.9 18.2
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.04 2.03	2.04	0.3 0.3	1.3 1.3	5.4 5.2	<0.2 <0.2	2.9 3.0	1.0 1.0	<0.2 <0.2	9.2 9.1
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	1.87 1.92	1.90	0.1 0.1	1.1 1.1	6.2 6.1	0.2 0.2	1.1 1.1	1.4 1.4	<0.2 <0.2	11.4 11.5
W4	Surface	0.36 0.36	0.36	0.1 0.1	1.9 1.9	8.0 7.9	<0.2 <0.2	2.9 2.9	0.6 0.6	<0.2 <0.2	10.9 10.7
	Middle	0.28 0.27	0.28	0.2 0.2	2.7 2.8	5.0 4.9	0.2 0.2	1.7 1.7	0.9 0.9	<0.2 <0.2	8.3 8.2
	Bottom	0.34 0.34	0.34	0.3 0.3	2.6 2.6	7.6 7.6	<0.2 <0.2	2.8 2.8	0.9 0.9	<0.2 <0.2	22.3 23.2
W5	Surface	0.29 0.29	0.29	0.2 0.2	2.8 2.8	6.2 5.9	<0.2 <0.2	1.3 1.3	1.4 1.3	<0.2 <0.2	14.1 13.5
	Middle	0.36 0.37	0.37	0.3 0.3	1.3 1.4	7.9 7.7	0.2 0.2	1.3 1.3	0.6 0.6	<0.2 <0.2	11.7 11.6
	Bottom	0.83 0.82	0.83	0.5 0.5	1.9 1.8	6.2 6.0	0.2 0.2	1.9 1.9	0.6 0.5	<0.2 <0.2	16.2 16.0

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.02 1.91	1.97	0.2 0.2	2.4 2.4	5.5 5.4	0.2 0.2	1.3 1.2	0.8 0.9	<0.2 <0.2	11.9 11.6
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	2.15 2.01	2.08	0.3 0.3	2.7 2.7	5.8 6.1	0.2 0.2	2.8 2.8	0.7 0.7	<0.2 <0.2	20.1 20.1
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.08 1.89	1.99	0.1 0.1	2.5 2.4	7.7 7.6	<0.2 <0.2	1.1 1.1	0.9 1.0	0.2 0.2	14.5 14.5
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	2.03 2.05	2.04	0.5 0.5	2.4 2.4	5.6 5.3	<0.2 <0.2	2.6 2.5	0.9 0.9	<0.2 <0.2	19.1 19.1
W4	Surface	1.28 1.28	1.28	0.4 0.4	1.1 1.1	6.7 6.7	<0.2 <0.2	2.4 2.5	0.8 0.8	<0.2 <0.2	21.1 21.1
	Middle	1.29 1.30	1.30	0.1 0.1	2.4 2.4	5.1 5.3	0.2 0.2	2.5 2.4	0.8 0.8	<0.2 <0.2	17.7 17.3
	Bottom	1.28 1.27	1.28	0.3 0.3	2.5 2.5	6.3 6.3	0.2 0.2	1.6 1.5	1.1 1.1	0.2 0.2	11.8 11.3
W5	Surface	1.28 1.27	1.28	0.2 0.2	2.7 2.8	6.7 6.5	0.2 0.2	2.7 2.7	1.2 1.1	0.2 0.2	19.6 19.3
	Middle	1.27 1.28	1.28	0.3 0.3	2.6 2.5	5.2 5.2	0.2 0.2	2.8 2.8	0.5 0.5	0.2 0.2	19.0 18.7
	Bottom	1.28 1.28	1.28	0.3 0.3	2.7 2.7	7.6 7.6	0.3 0.3	1.9 1.9	1.1 1.1	<0.2 <0.2	15.5 15.4

Appendix D - Action and Limit Levels for Marine Water Quality on 18 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 12.0 and W2: 16.8</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 13.0 and W2: 18.2</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 8.5 and W2: 8.9</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 9.2 and W2: 9.6</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.28 and W2: 4.60</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 3.48 and W2: 4.91</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.6 and W2: 3.5 or 24.0</u>	<u>W1: 3.9 and W2: 3.8 or 40.7</u>
Cd	<u>W1: 0.4 and W2: 0.2 or 0.8</u>	<u>W1: 0.4 and W2: 0.3 or 1.5</u>
Cu	<u>W1: 8.0 and W2: 8.3 or 54.8</u>	<u>W1: 8.7 and W2: 9.0 or 95.0</u>
Zn	<u>W1: 24.4 and W2: 17.8 or 120.0</u>	<u>W1: 26.5 and W2: 19.3 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.2 or 5.1</u>	<u>W1: 0.4 and W2: 0.3 or 8.7</u>
Ni	<u>W1: 2.2 and W2: 2.0 or 36.8</u>	<u>W1: 2.3 and W2: 2.2 or 71.3</u>
Pb	<u>W1: 1.6 and W2: 1.4 or 46.0</u>	<u>W1: 1.7 and W2: 1.6 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 18 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 10.7</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 11.6</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.7</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.49</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.54</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.4</u> or <u>24.0</u>	<u>W5: 2.6</u> or <u>40.7</u>
Cd	<u>W5: 0.4</u> or <u>0.8</u>	<u>W5: 0.4</u> or <u>1.5</u>
Cu	<u>W5: 8.4</u> or <u>54.8</u>	<u>W5: 9.1</u> or <u>95.0</u>
Zn	<u>W5: 21.9</u> or <u>120.0</u>	<u>W5: 23.7</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.6</u> or <u>36.8</u>	<u>W5: 2.9</u> or <u>71.3</u>
Pb	<u>W5: 1.3</u> or <u>46.0</u>	<u>W5: 1.4</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 18 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
W1	Fine	Moderate	12:14	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.1	25.3 25.1	25.2	6.9 7.1	7.0	31.3 31.6	31.5	50.3 48.6	49.5	3.5 3.4	3.5	3.5	7.1	7.1	7.1	10.2 9.8	10.0	10.0	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	12:24	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.4	25.1 25.1	25.1	7.2 7.2	7.2	30.6 29.8	30.2	35.6 32.6	34.1	2.5 2.3	2.4	2.4	7.8 6.9	7.4	7.4	14.1 13.8	14.0	14.0	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	12:33	Surface	1	25.9 25.9	25.9	7.2 7.2	7.2	28.7 26.4	27.6	50.5 49.6	50.1	3.5 3.5	3.5	3.5	5.2 5.2	5.2	5.2	5.9 6.0	6.0	6.0	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.5	25.6 25.4	25.5	7.4 7.0	7.2	28.4 27.2	27.8	51.2 50.5	50.9	3.6 3.6	3.6	3.6	9.7 9.0	9.4	9.4	8.1 7.9	8.0	8.0	
W4	Fine	Moderate	12:48	Surface	1	25.9 25.8	25.9	7.3 7.3	7.3	29.5 27.2	28.4	98.7 101.1	99.9	6.8 7.1	7.0	7.1	3.5 3.5	3.5	3.5	3.1 3.2	3.2	3.2	
				Middle	4	25.5 25.6	25.6	7.3 7.3	7.3	30.5 25.6	28.1	102.2 100.4	101.3	7.0 7.1	7.1	7.1	4.2 4.8	4.5	4.5	4.4 4.5	4.5	4.5	
				Bottom	7	25.4 25.5	25.5	7.4 7.4	7.4	27.1 26.1	26.6	103.1 102.4	102.8	7.3 7.2	7.3	7.3	4.5 4.2	4.4	4.4	6.2 6.1	6.2	6.2	
W5	Fine	Moderate	13:00	Surface	1	25.5 25.9	25.7	7.4 7.4	7.4	29.4 28.2	28.8	94.8 94.3	94.6	6.6 6.5	6.6	6.7	4.1 3.8	4.0	4.0	9.9 10.0	10.0	10.0	
				Middle	4	25.3 25.2	25.3	7.4 7.4	7.4	29.1 25.8	27.5	98.1 92.3	95.2	6.8 6.6	6.7	6.7	4.9 5.0	5.0	5.0	5.5 5.4	5.4	5.4	
				Bottom	7	24.7 25.1	24.9	7.4 7.4	7.4	27.3 26.1	26.7	99.7 96.9	98.3	7.1 6.9	7.0	7.0	3.2 3.9	3.6	3.6	9.2 9.3	9.3	9.3	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 18 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
W1	Fine	Moderate	17:46	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.7 25.5	25.6	7.0 7.0	7.0	28.7 28.8	28.8	44.1 44.8	44.5	3.1 3.1	3.1	3.1	6.7 6.5	6.6	6.6	7.6 7.6	7.6	7.6	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	18:05	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.4	25.7 25.7	25.7	7.1 7.2	7.2	29.5 29.5	29.5	41.0 42.2	41.6	2.8 2.9	2.9	2.9	7.8 6.9	7.4	7.4	4.0 4.0	4.0	4.0	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	18:16	Surface	1	25.4 25.5	25.5	7.1 7.1	7.1	31.0 30.3	30.7	53.8 56.3	55.1	3.7 3.9	3.8	3.8	4.8 4.8	4.8	4.8	3.5 3.4	3.5	3.5	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.5	25.2 25.4	25.3	7.0 7.1	7.1	29.3 29.1	29.2	54.5 55.9	55.2	3.8 3.9	3.9	3.9	9.7 9.0	9.4	9.4	10.0 10.0	10.0	10.0	
W4	Fine	Moderate	18:31	Surface	1	23.9 23.8	23.9	7.4 7.2	7.3	30.5 30.8	30.7	99.8 98.7	99.3	7.1 7.0	7.1	7.1	6.5 6.8	6.7	6.7	3.3 3.3	3.3	3.3	
				Middle	4	23.5 23.5	23.5	7.4 7.2	7.3	28.3 29.0	28.7	97.1 96.9	97.0	7.0 7.0	7.0	7.0	5.1 5.4	5.3	5.3	4.0 4.0	4.0	4.0	
				Bottom	7	23.4 23.2	23.3	7.3 7.3	7.3	29.3 29.2	29.3	96.1 95.4	95.8	6.9 7.0	6.9	6.9	4.5 4.2	4.4	4.4	3.1 3.2	3.2	3.2	
W5	Fine	Moderate	18:42	Surface	1	24.1 23.9	24.0	7.3 7.1	7.2	31.1 31.9	31.5	99.8 97.5	98.7	7.0 6.9	7.0	7.0	5.9 5.9	5.9	5.9	4.8 4.9	4.9	4.9	
				Middle	4	23.8 23.8	23.8	7.2 7.0	7.1	29.7 29.5	29.6	98.5 96.4	97.5	7.0 6.9	7.0	7.0	6.7 6.8	6.8	6.8	5.8 5.9	5.9	5.9	
				Bottom	7	23.5 23.3	23.4	7.3 7.1	7.2	29.9 29.6	29.8	97.1 97.2	97.2	7.0 7.0	7.0	7.0	7.3 7.5	7.4	7.4	9.0 8.7	8.9	8.9	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	1.97 2.00	1.99	1.99	0.3 0.3	3.0 3.0	6.6 6.8	0.3 0.3	1.8 1.8	1.3 1.3	0.2 0.2	20.4 20.3
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	3.14 3.03	3.09	3.09	0.2 0.2	2.9 2.9	7.0 6.9	0.2 0.2	1.7 1.7	1.2 1.2	<0.2 <0.2	15.1 14.6
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	3.06 3.06	3.06	3.23	0.1 0.1	1.7 1.7	6.1 6.0	<0.2 <0.2	2.5 2.5	1.5 1.5	<0.2 <0.2	15.8 15.7
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	3.46 3.32	3.39	-	0.3 0.3	1.9 2.0	5.0 4.8	0.2 0.2	1.4 1.4	0.8 0.8	<0.2 <0.2	8.3 8.3
W4	Surface	0.56 0.56	0.56	0.56	<0.1 <0.1	1.2 1.2	6.1 6.3	0.2 0.2	2.1 2.1	1.1 1.2	<0.2 <0.2	15.3 15.8
	Middle	0.56 0.54	0.55	0.56	<0.1 <0.1	2.9 2.8	7.7 7.5	0.2 0.2	1.8 1.8	1.4 1.4	<0.2 <0.2	11.6 11.5
	Bottom	0.56 0.55	0.56	0.56	<0.1 <0.1	1.2 1.2	6.8 6.7	<0.2 <0.2	1.8 1.9	1.4 1.3	<0.2 <0.2	15.3 14.9
W5	Surface	0.57 0.56	0.57	0.57	0.1 0.1	1.3 1.3	8.2 8.5	0.2 0.2	1.3 1.3	0.9 0.9	<0.2 <0.2	10.0 10.0
	Middle	0.56 0.57	0.57	0.57	0.2 0.2	1.2 1.2	7.8 7.6	<0.2 <0.2	1.1 1.0	1.4 1.4	<0.2 <0.2	10.0 9.7
	Bottom	0.57 0.59	0.58	0.57	0.1 0.1	2.0 2.0	8.0 7.9	<0.2 <0.2	2.7 2.8	0.5 0.5	<0.2 <0.2	10.8 10.8

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.92 0.96	0.94	0.94	0.3 0.3	1.9 2.0	6.6 6.7	<0.2 <0.2	2.1 2.2	1.0 1.0	<0.2 <0.2	9.8 9.6
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	0.97 0.98	0.98	0.98	0.1 0.1	1.3 1.2	6.7 6.6	<0.2 <0.2	1.9 1.9	0.8 0.9	<0.2 <0.2	19.2 19.5
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	1.07 1.05	1.06	1.08	<0.1 <0.1	2.1 2.1	7.3 7.3	<0.2 <0.2	2.2 2.2	0.5 0.5	0.2 0.2	10.1 9.7
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	1.09 1.09	1.09	-	0.1 <0.1	1.7 1.7	7.2 7.1	0.2 0.2	1.3 1.2	1.3 1.3	<0.2 <0.2	23.1 23.8
W4	Surface	0.48 0.48	0.48	0.48	0.1 0.1	1.7 1.7	7.1 7.0	<0.2 <0.2	1.1 1.1	1.4 1.4	<0.2 <0.2	14.5 14.8
	Middle	0.46 0.46	0.46	0.48	0.2 0.2	1.1 1.1	7.9 7.9	<0.2 <0.2	1.9 1.9	0.7 0.7	<0.2 <0.2	13.5 12.9
	Bottom	0.50 0.52	0.51	0.48	0.2 0.2	2.5 2.5	5.4 5.2	<0.2 <0.2	2.3 2.2	1.5 1.4	<0.2 <0.2	14.3 13.9
W5	Surface	0.49 0.48	0.49	0.50	0.2 0.2	1.8 1.8	7.5 7.7	0.2 0.2	1.2 1.1	0.7 0.7	<0.2 <0.2	11.1 11.2
	Middle	0.50 0.50	0.50	0.50	0.2 0.2	1.6 1.6	6.2 6.1	0.3 0.3	2.7 2.6	1.2 1.1	0.2 0.2	22.5 22.1
	Bottom	0.50 0.50	0.50	0.50	0.5 0.5	2.7 2.7	7.3 7.0	<0.2 <0.2	2.8 2.8	1.3 1.3	0.2 0.2	21.2 21.2

Appendix D - Action and Limit Levels for Marine Water Quality on 20 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 13.2 and W2: 11.0</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 14.3 and W2: 12.0</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 13.3 and W2: 15.4</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 14.4 and W2: 16.6</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.67 and W2: 1.66</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.74 and W2: 1.73</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.1 and W2: 3.3 or 24.0</u>	<u>W1: 3.4 and W2: 3.6 or 40.7</u>
Cd	<u>W1: 0.6 and W2: 0.4 or 0.8</u>	<u>W1: 0.7 and W2: 0.4 or 1.5</u>
Cu	<u>W1: 9.6 and W2: 8.5 or 54.8</u>	<u>W1: 10.4 and W2: 9.2 or 95.0</u>
Zn	<u>W1: 18.1 and W2: 24.1 or 120.0</u>	<u>W1: 19.6 and W2: 26.1 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 2.6 and W2: 3.4 or 36.8</u>	<u>W1: 2.9 and W2: 3.6 or 71.3</u>
Pb	<u>W1: 1.4 and W2: 1.3 or 46.0</u>	<u>W1: 1.6 and W2: 1.4 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 20 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 12.8</u> Or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 13.9</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 7.7</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 8.3</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 2.89</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 3.06</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.8</u> or <u>24.0</u>	<u>W5: 3.0</u> or <u>40.7</u>
Cd	<u>W5: 0.4</u> or <u>0.8</u>	<u>W5: 0.4</u> or <u>1.5</u>
Cu	<u>W5: 7.2</u> or <u>54.8</u>	<u>W5: 7.8</u> or <u>95.0</u>
Zn	<u>W5: 23.9</u> or <u>120.0</u>	<u>W5: 25.8</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.2</u> or <u>36.8</u>	<u>W5: 2.4</u> or <u>71.3</u>
Pb	<u>W5: 1.2</u> or <u>46.0</u>	<u>W5: 1.3</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 20 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)			
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Fine	Moderate	13:27	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Middle	1.2	26.6 26.3	26.5	7.0 7.0	7.0	31.6 31.5	31.6	111.2 111.6	111.4	7.5 7.5	7.5	7.5	7.5	10.9 11.1	11.1	11.1	11.0 10.9	11.0
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	13:39	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Middle	1.2	26.5 26.2	26.4	7.0 7.0	7.0	33.1 32.4	32.8	108.3 107.8	108.1	7.2 7.3	7.3	7.3	12.8 12.7	12.8	12.8	9.1 9.2	9.2	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	13:47	Surface	1	26.3 26.6	26.5	7.0 7.0	7.0	31.5 31.8	31.7	92.1 95.9	94.0	6.2 6.4	6.3	6.3	5.9 5.7	5.8	5.8	5.2 5.3	5.3	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.5	26.4 26.5	26.5	7.0 7.0	7.0	31.6 31.9	31.8	94.6 96.9	95.8	6.4 6.5	6.5	6.5	4.6 4.5	4.6	4.6	5.9 5.9	5.9	
W4	Fine	Moderate	14:00	Surface	1	26.4 26.5	26.5	7.0 7.0	7.0	31.3 31.9	31.6	123.3 127.8	125.6	8.3 8.6	8.5	8.5	4.6 4.9	4.8	5.1	5.0 4.9	5.0	
				Middle	3.5	26.6 26.4	26.5	7.0 7.0	7.0	31.3 32.9	32.1	125.7 127.4	126.6	8.5 8.5	8.5	8.5	4.7 4.6	4.7	5.1	4.6 4.5	4.6	
				Bottom	6	26.2 26.3	26.3	7.0 7.0	7.0	31.2 32.5	31.9	124.9 128.8	126.9	8.5 8.7	8.6	8.6	5.7 5.7	5.7	5.1	7.7 7.7	7.7	
W5	Fine	Moderate	14:15	Surface	1	26.3 26.3	26.3	7.0 7.0	7.0	32.4 32.3	32.4	129.9 128.0	129.0	8.7 8.6	8.7	8.7	5.0 5.0	5.0	5.5	6.1 6.3	6.2	
				Middle	4	26.5 26.4	26.5	7.0 7.0	7.0	31.1 31.4	31.3	129.9 127.2	128.6	8.8 8.6	8.7	8.7	5.5 5.6	5.6	5.5	5.9 6.0	6.0	
				Bottom	7	26.5 26.5	26.5	7.0 7.0	7.0	32.1 32.7	32.4	129.5 128.1	128.8	8.7 8.6	8.7	8.7	5.7 6.2	6.0	5.5	6.8 6.7	6.8	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 20 May, 2015 (Mid-Flow Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)		
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*
W1	Fine	Moderate	07:02	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Middle	1.1	26.4 26.4	26.4	7.0 7.0	7.0	32.3 32.4	32.4	109.1 111.8	110.5	7.3 7.5	7.4	7.4	5.8 5.4	5.6	5.6	7.8 7.7	7.8
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Fine	Moderate	07:13	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Middle	1.2	26.3 26.2	26.3	7.0 7.0	7.0	33.1 31.1	32.1	107.6 106.8	107.2	7.2 7.3	7.3	7.3	6.8 7.1	7.0	7.0	4.6 4.7	4.7
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Fine	Moderate	07:20	Surface	1	26.3 26.3	26.3	7.0 7.0	7.0	32.6 31.8	32.2	91.0 91.0	91.0	6.1 6.1	6.1	6.1	7.0 6.9	7.0	7.1	5.8 5.6	5.7
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.1	26.4 26.5	26.5	7.0 7.0	7.0	32.8 31.3	32.1	89.7 90.3	90.0	6.0 6.1	6.1	6.1	7.3 7.0	7.2	7.1	6.3 6.2	6.3
W4	Fine	Moderate	07:33	Surface	1	26.3 26.6	26.5	7.0 7.0	7.0	32.3 32.8	32.6	122.2 126.9	124.6	8.2 8.5	8.4	8.5	8.0 7.4	7.7	6.8	5.4 5.1	5.3
				Middle	3.5	26.4 26.6	26.5	7.0 7.0	7.0	32.8 31.1	32.0	124.1 127.0	125.6	8.3 8.6	8.5	8.5	6.8 7.0	6.9	6.8	7.6 7.5	7.6
				Bottom	6	26.3 26.2	26.3	7.0 7.0	7.0	32.3 32.3	32.3	123.8 122.7	123.3	8.3 8.3	8.3	8.3	5.9 5.9	5.9	6.4	7.3 7.2	7.3
W5	Fine	Moderate	07:49	Surface	1	26.5 26.6	26.6	7.0 7.0	7.0	32.9 32.6	32.8	129.1 128.1	128.6	8.6 8.6	8.6	8.6	5.8 5.5	5.7	6.4	4.1 4.2	4.2
				Middle	4	26.3 26.6	26.5	7.0 7.0	7.0	32.4 32.0	32.2	125.9 125.1	125.5	8.5 8.4	8.5	8.5	6.5 6.5	6.5	6.4	4.8 5.0	4.9
				Bottom	7	26.3 26.5	26.4	7.0 7.0	7.0	32.0 32.3	32.2	125.7 124.1	124.9	8.5 8.3	8.4	8.4	7.2 7.0	7.1	6.4	10.7 10.7	10.7

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.66 0.63	0.65	0.5 0.5	2.6 2.6	7.9 8.1	0.3 0.3	2.2 2.2	1.2 1.2	0.2 0.2	15.3 14.8
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.65 0.62	0.64	0.3 0.3	2.7 2.8	7.1 7.1	0.3 0.3	2.8 2.8	1.1 1.1	0.2 0.2	20.0 20.1
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.62 0.61	0.62	0.3 0.3	1.3 1.2	5.2 5.2	<0.2 <0.2	1.4 1.4	0.8 0.8	<0.2 <0.2	9.1 8.7
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.65 0.67	0.66	0.2 0.2	2.7 2.6	6.4 6.5	0.2 0.2	2.6 2.6	0.9 0.9	<0.2 <0.2	16.5 16.6
W4	Surface	0.62 0.61	0.62	0.4 0.4	2.5 2.5	5.4 5.3	<0.2 <0.2	2.6 2.5	1.0 0.9	<0.2 <0.2	10.2 10.2
	Middle	0.80 0.79	0.80	0.1 0.1	2.3 2.3	7.9 7.7	0.2 0.2	2.2 2.2	1.4 1.4	0.2 <0.2	15.9 15.5
	Bottom	0.74 0.73	0.74	0.2 0.2	1.7 1.7	5.3 5.2	0.2 0.2	1.4 1.3	1.0 1.0	<0.2 <0.2	14.8 14.3
W5	Surface	0.81 0.78	0.80	0.2 0.2	3.1 3.1	7.5 7.4	<0.2 <0.2	2.7 2.6	0.7 0.6	<0.2 <0.2	15.0 15.4
	Middle	0.71 0.73	0.72	0.3 0.2	3.0 3.1	7.6 7.5	<0.2 <0.2	3.0 3.1	0.8 0.8	0.2 0.2	11.7 11.2
	Bottom	0.70 0.69	0.70	0.2 0.2	2.7 2.8	7.8 8.0	0.2 0.2	1.8 1.8	0.8 0.8	<0.2 <0.2	10.6 10.7

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.78 0.80	0.79	<0.1 <0.1	2.3 2.4	5.6 5.6	<0.2 <0.2	1.1 1.0	0.6 0.6	<0.2 <0.2	12.8 13.2
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.70 0.73	0.72	<0.1 <0.1	2.1 2.0	6.4 6.4	<0.2 <0.2	1.6 1.6	0.8 0.8	<0.2 <0.2	21.3 20.5
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	2.20 2.25	2.23	0.2 0.2	3.1 3.0	6.2 6.0	<0.2 <0.2	1.8 1.8	1.0 1.0	<0.2 <0.2	16.0 16.1
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	2.60 2.56	2.58	0.2 0.2	1.2 1.2	7.2 7.0	0.2 0.2	1.8 1.8	0.9 0.9	0.2 0.2	19.4 18.9
W4	Surface	2.12 2.02	2.07	<0.1 <0.1	1.3 1.3	6.6 6.6	<0.2 <0.2	2.2 2.2	0.8 0.8	<0.2 <0.2	16.9 16.6
	Middle	2.22 2.20	2.21	0.3 0.3	2.5 2.4	5.5 5.4	0.3 0.3	1.4 1.3	1.0 1.0	0.2 0.2	21.4 21.5
	Bottom	1.66 1.67	1.67	0.4 0.4	1.2 1.2	5.3 5.3	<0.2 <0.2	1.1 1.0	0.6 0.7	<0.2 <0.2	11.1 10.9
W5	Surface	1.69 1.74	1.72	0.3 0.3	2.5 2.6	5.6 5.6	0.2 0.2	3.0 2.9	1.0 1.0	0.2 0.2	16.0 15.9
	Middle	1.72 1.70	1.71	0.4 0.4	1.4 1.4	7.1 7.1	0.3 0.3	1.2 1.2	1.5 1.5	<0.2 <0.2	20.9 21.3
	Bottom	1.56 1.56	1.56	0.2 0.2	3.0 3.1	5.2 5.3	0.3 0.3	1.3 1.3	0.6 0.6	0.2 0.2	22.6 22.6

Appendix D - Action and Limit Levels for Marine Water Quality on 22 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 9.4 and W2: 10.4</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 10.1 and W2: 11.3</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 4.7 and W2: 4.9</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 5.1 and W2: 5.3</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 6.65 and W2: 6.76</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 7.13 and W2: 7.24</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 2.3 and W2: 2.3</u> or <u>24.0</u>	<u>W1: 2.5 and W2: 2.5</u> or <u>40.7</u>
Cd	<u>W1: 0.5 and W2: 0.5</u> or <u>0.8</u>	<u>W1: 0.5 and W2: 0.5</u> or <u>1.5</u>
Cu	<u>W1: 7.7 and W2: 8.5</u> or <u>54.8</u>	<u>W1: 8.4 and W2: 9.2</u> or <u>95.0</u>
Zn	<u>W1: 18.2 and W2: 23.5</u> or <u>120.0</u>	<u>W1: 19.7 and W2: 25.5</u> or <u>150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2</u> or <u>0.5</u>	<u>W1: 0.3 and W2: 0.3</u> or <u>0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4</u> or <u>5.1</u>	<u>W1: 0.4 and W2: 0.4</u> or <u>8.7</u>
Ni	<u>W1: 3.5 and W2: 2.8</u> or <u>36.8</u>	<u>W1: 3.8 and W2: 3.0</u> or <u>71.3</u>
Pb	<u>W1: 1.4 and W2: 1.7</u> or <u>46.0</u>	<u>W1: 1.6 and W2: 1.8</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 22 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 12.8</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 13.9</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 6.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 6.5</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 3.44</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 3.66</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.9</u> or <u>24.0</u>	<u>W5: 3.2</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.5</u> or <u>1.5</u>
Cu	<u>W5: 8.8</u> or <u>54.8</u>	<u>W5: 9.6</u> or <u>95.0</u>
Zn	<u>W5: 23.0</u> or <u>120.0</u>	<u>W5: 24.9</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.7</u> or <u>36.8</u>	<u>W5: 2.9</u> or <u>71.3</u>
Pb	<u>W5: 1.5</u> or <u>46.0</u>	<u>W5: 1.7</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 22 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*			
W1	Cloudy	Moderate	16:08	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1	25.6	25.6	7.6	7.5	11.9	11.6	21.3	22.3	1.6	1.7	1.7	3.5	3.9	3.9	7.9	7.6	7.8	7.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	15:54	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.3	25.5	25.6	7.5	7.5	18.9	19.4	37.6	34.8	2.8	2.6	2.6	4.2	4.0	4.1	4.1	8.7	8.6	8.7	8.7
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	15:48	Surface	1	25.5	25.3	7.6	7.7	21.0	21.0	47.7	43.5	3.5	3.2	3.2	4.3	4.5	4.4	4.3	8.1	8.0	6.8	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.2	24.9	24.6	7.8	7.9	30.4	30.6	36.0	36.0	2.5	2.5	2.5	4.2	3.9	4.1	4.1	5.5	5.4	5.5	6.8
W4	Cloudy	Moderate	15:38	Surface	1	24.3	24.3	8.1	8.1	31.2	31.2	74.7	74.5	5.2	5.2	5.2	3.7	3.7	3.7	3.7	9.1	8.7	8.9	
				Middle	3.5	24.3	24.3	8.1	8.1	31.4	31.5	73.9	74.0	5.2	5.2	5.2	3.6	3.9	3.9	3.9	4.2	4.2	4.2	
				Bottom	6	24.3	24.3	8.1	8.1	31.6	31.6	74.1	74.4	5.2	5.2	5.2	3.6	3.7	3.7	3.7	8.3	8.3	8.3	
W5	Cloudy	Moderate	15:29	Surface	1	24.3	24.3	8.0	8.1	31.1	31.2	73.8	74.4	5.2	5.2	5.2	3.4	3.5	3.5	3.4	7.2	6.9	7.1	
				Middle	4	24.3	24.3	8.1	8.1	31.3	31.5	74.9	74.0	5.2	5.2	5.2	3.5	3.8	3.8	3.8	8.1	8.1	8.1	
				Bottom	7	24.3	24.3	8.1	8.1	31.6	31.6	74.9	74.8	5.2	5.2	5.2	4.5	4.4	4.4	4.4	7.4	7.3	7.4	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 22 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)			Suspended Solids (mg/L)						
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*			
W1	Cloudy	Moderate	08:25	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.1	25.5	25.5	7.6	7.6	29.2	29.2	23.0	23.0	1.6	1.6	1.6	4.5	4.8	4.7	4.7	6.1	6.2	6.2	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	08:37	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				Middle	1.4	25.3	25.3	7.7	7.7	30.2	30.3	22.7	22.6	1.6	1.6	1.6	4.8	4.8	4.8	4.8	6.8	6.9	6.9	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	08:44	Surface	1	25.5	25.4	7.6	7.7	29.1	29.4	23.2	23.4	1.6	1.6	1.6	5.9	5.4	5.7	5.4	5.9	6.0	6.0	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.5	24.9	25.0	7.7	7.7	31.0	31.0	22.6	22.2	1.6	1.6	1.6	5.1	5.1	5.1	5.1	8.9	8.9	8.9	
W4	Cloudy	Moderate	08:52	Surface	1	24.4	24.4	8.1	8.1	31.6	31.7	82.4	82.9	5.8	5.8	5.8	3.3	3.4	3.4	3.4	8.4	8.6	8.5	
				Middle	4	24.4	24.4	8.1	8.1	31.7	31.7	85.4	84.0	6.0	5.9	5.9	3.6	3.7	3.7	3.7	6.3	6.3	6.3	
				Bottom	7	24.4	24.4	8.1	8.1	31.7	31.7	83.9	82.1	5.9	5.8	5.8	3.6	3.6	3.6	3.6	10.9	10.9	10.9	
W5	Cloudy	Moderate	09:00	Surface	1	24.4	24.4	8.1	8.1	31.7	31.7	82.0	81.2	5.7	5.7	5.7	6.5	6.8	6.7	6.7	7.0	7.0	7.0	
				Middle	4	24.4	24.4	8.1	8.1	31.6	31.7	81.2	81.0	5.7	5.7	5.7	4.0	3.9	4.0	4.0	7.0	7.1	7.1	
				Bottom	7	24.4	24.4	8.1	8.1	31.6	31.7	80.5	79.5	5.6	5.6	5.6	4.2	4.6	4.4	4.4	10.7	10.6	10.7	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	4.85 4.73	4.79	4.79	0.4 0.4	1.9 1.9	6.5 6.4	0.3 0.3	2.9 2.9	1.2 1.2	0.2 0.2	15.3 15.0
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	4.84 4.92	4.88	4.88	0.4 0.4	1.9 1.9	7.0 7.2	0.3 0.3	2.3 2.3	1.4 1.4	0.2 0.2	19.5 19.7
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	4.84 4.93	4.89	4.88	0.1 0.1	2.0 2.0	6.5 6.4	0.2 0.2	2.0 2.0	1.4 1.4	<0.2 <0.2	9.2 9.2
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	4.96 4.77	4.87	-	0.4 0.4	1.9 1.9	7.7 7.5	<0.2 <0.2	2.2 2.2	1.4 1.3	<0.2 <0.2	15.6 15.1
W4	Surface	2.12 2.12	2.12	2.11	<0.1 <0.1	1.8 1.7	5.8 5.5	0.3 0.2	1.8 1.8	0.7 0.7	0.2 0.2	9.9 9.9
	Middle	2.11 2.11	2.11	2.11	0.1 0.1	2.2 2.3	7.9 8.0	0.2 0.2	1.8 1.8	1.1 1.1	<0.2 <0.2	21.5 21.2
	Bottom	2.11 2.11	2.11	-	0.1 0.1	2.2 2.2	5.4 5.2	<0.2 <0.2	1.7 1.7	1.4 1.4	<0.2 <0.2	22.9 23.0
W5	Surface	2.11 2.11	2.11	2.11	<0.1 <0.1	1.2 1.2	5.3 5.3	<0.2 <0.2	3.0 2.8	0.7 0.7	<0.2 <0.2	10.4 10.0
	Middle	2.11 2.11	2.11	2.11	0.2 0.2	2.1 2.1	6.7 6.8	0.2 0.2	1.6 1.5	0.6 0.6	<0.2 <0.2	10.8 10.9
	Bottom	2.11 2.11	2.11	-	0.2 0.2	3.1 3.1	7.1 6.9	0.2 0.2	3.0 3.0	1.3 1.2	<0.2 <0.2	22.5 22.6

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L	
		Value	average									Average
W1	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	2.87 2.98	2.93	2.93	0.4 0.4	1.1 1.1	6.3 6.3	0.3 0.3	1.8 1.9	1.3 1.4	<0.2 <0.2	16.2 16.0
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-	
	Middle	2.86 2.72	2.79	2.79	0.2 0.2	1.4 1.4	7.1 7.1	0.2 0.2	2.0 2.1	1.5 1.5	<0.2 <0.2	15.4 15.1
	Bottom	-	-	-	-	-	-	-	-	-	-	-
W3	Surface	3.02 3.07	3.05	3.12	0.4 0.3	2.2 2.2	7.3 7.4	<0.2 <0.2	2.5 2.6	0.8 0.8	<0.2 <0.2	10.0 10.2
	Middle	-	-	-	-	-	-	-	-	-	-	-
	Bottom	3.12 3.26	3.19	-	0.4 0.3	1.4 1.4	7.9 7.9	<0.2 <0.2	1.6 1.6	1.3 1.4	<0.2 <0.2	18.1 17.1
W4	Surface	2.12 2.12	2.12	2.12	0.1 0.1	2.6 2.7	7.9 8.0	0.2 0.2	1.5 1.5	0.6 0.6	0.2 0.2	9.3 9.5
	Middle	2.12 2.12	2.12	2.12	0.3 0.3	1.2 1.2	7.1 6.8	0.2 0.2	1.1 1.1	1.5 1.5	<0.2 <0.2	12.5 12.6
	Bottom	2.11 2.11	2.11	-	0.4 0.4	1.9 1.9	7.7 7.7	0.2 0.2	1.2 1.2	1.2 1.2	<0.2 <0.2	9.6 9.8
W5	Surface	2.12 2.12	2.12	2.12	0.4 0.5	2.9 2.8	7.3 7.3	0.3 0.3	2.1 2.0	1.5 1.5	0.2 0.2	13.2 13.5
	Middle	2.12 2.12	2.12	2.12	0.5 0.5	2.9 2.8	6.6 6.6	0.2 0.2	1.8 1.8	1.1 1.1	0.2 0.2	21.6 20.9
	Bottom	2.12 2.12	2.12	-	0.3 0.3	1.6 1.7	8.1 8.3	0.3 0.3	2.9 2.9	1.2 1.3	<0.2 <0.2	22.8 22.8

Appendix D - Action and Limit Levels for Marine Water Quality on 26 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 23.8 and W2: 19.0</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 25.7 and W2: 20.5</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 13.7 and W2: 11.3</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 14.8 and W2: 12.2</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.59 and W2: 1.61</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 1.65 and W2: 1.67</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 3.7 and W2: 2.9 or 24.0</u>	<u>W1: 4.0 and W2: 3.2 or 40.7</u>
Cd	<u>W1: 0.4 and W2: 0.6 or 0.8</u>	<u>W1: 0.4 and W2: 0.7 or 1.5</u>
Cu	<u>W1: 8.0 and W2: 9.1 or 54.8</u>	<u>W1: 8.7 and W2: 9.9 or 95.0</u>
Zn	<u>W1: 23.0 and W2: 27.3 or 120.0</u>	<u>W1: 25.0 and W2: 29.6 or 150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2 or 0.5</u>	<u>W1: 0.3 and W2: 0.3 or 0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4 or 5.1</u>	<u>W1: 0.4 and W2: 0.4 or 8.7</u>
Ni	<u>W1: 3.0 and W2: 3.5 or 36.8</u>	<u>W1: 3.3 and W2: 3.8 or 71.3</u>
Pb	<u>W1: 1.9 and W2: 1.6 or 46.0</u>	<u>W1: 2.0 and W2: 1.7 or 82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 26 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 19.9</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 21.6</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 9.5</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 10.3</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.65</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.71</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 2.9</u> or <u>24.0</u>	<u>W5: 3.2</u> or <u>40.7</u>
Cd	<u>W5: 0.4</u> or <u>0.8</u>	<u>W5: 0.4</u> or <u>1.5</u>
Cu	<u>W5: 8.2</u> or <u>54.8</u>	<u>W5: 8.9</u> or <u>95.0</u>
Zn	<u>W5: 22.6</u> or <u>120.0</u>	<u>W5: 24.4</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 3.0</u> or <u>36.8</u>	<u>W5: 3.3</u> or <u>71.3</u>
Pb	<u>W5: 1.7</u> or <u>46.0</u>	<u>W5: 1.9</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 26 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
W1	Cloudy	Moderate	17:33	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.6	25.6	7.7	7.7	16.0	16.2	49.7	49.6	3.7	3.7	3.7	11.3	11.4	11.4	19.4	19.8	19.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	17:41	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	25.7	25.7	7.7	7.8	20.0	19.6	38.4	37.4	2.8	2.8	2.8	9.3	9.4	9.4	16.2	15.4	15.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	17:50	Surface	1	25.7	25.7	7.8	7.8	20.0	18.6	29.4	28.4	2.1	2.1	2.1	8.8	9.3	9.4	12.1	13.0	12.6	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.1	25.6	25.6	7.7	7.7	22.2	21.1	31.2	30.6	3.0	2.3	2.3	8.9	9.8	9.4	16.2	17.7	17.0	
W4	Cloudy	Moderate	17:58	Surface	1	25.8	25.8	8.0	8.0	26.4	26.3	70.9	69.6	5.0	4.9	4.9	6.4	6.4	6.4	5.8	5.7	5.8	
				Middle	3.5	25.8	25.8	8.0	8.0	27.6	27.8	69.6	69.0	4.9	4.9	4.9	5.7	5.6	5.6	14.0	14.5	14.3	
				Bottom	6	25.8	25.8	8.0	8.0	28.4	28.4	68.7	68.2	4.8	4.8	4.8	5.1	5.2	5.2	13.8	13.6	13.7	
W5	Cloudy	Moderate	18:10	Surface	1	25.8	25.8	8.0	8.0	25.4	26.2	67.7	67.4	4.8	4.8	4.8	5.7	5.4	5.4	14.1	14.1	14.1	
				Middle	4	25.8	25.8	8.0	8.0	27.6	27.8	67.4	67.3	4.7	4.7	4.7	5.1	5.0	5.0	11.7	11.7	11.8	
				Bottom	7	25.8	25.8	8.0	8.0	28.5	28.3	67.6	67.3	4.7	4.7	4.7	4.7	4.6	4.6	7.9	7.8	7.9	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 26 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)			Turbidity (NTU)			Suspended Solids (mg/L)				
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*		
W1	Cloudy	Moderate	11:20	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.1	25.6	25.6	7.7	7.8	11.8	10.3	39.8	39.3	3.0	3.0	3.0	7.6	7.7	7.7	13.3	13.7	13.5	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	11:28	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.1	25.6	25.7	7.7	7.7	13.4	12.8	54.9	55.9	4.2	4.3	4.3	7.9	8.0	8.0	15.8	17.1	16.5	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	11:35	Surface	1	25.6	25.6	7.8	7.8	16.4	16.2	47.8	48.0	3.6	3.6	3.6	6.3	6.5	6.5	4.8	4.7	4.8	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.1	25.5	25.5	7.8	7.8	24.4	24.4	45.7	45.8	3.3	3.3	3.3	4.9	4.8	4.8	11.5	10.6	11.1	
W4	Cloudy	Moderate	11:46	Surface	1	25.7	25.7	7.7	7.7	13.3	13.2	43.6	43.1	3.3	3.3	3.3	2.8	2.7	2.7	4.9	4.9	4.9	
				Middle	3.5	25.6	25.6	7.7	7.8	20.0	20.8	44.9	44.7	3.3	3.3	3.3	2.5	2.6	2.6	5.0	5.1	5.1	
				Bottom	6	25.6	25.6	7.8	7.8	21.0	21.8	45.9	45.4	3.3	3.3	3.3	2.1	2.3	2.3	6.8	6.8	6.8	
W5	Cloudy	Moderate	11:55	Surface	1	25.8	25.8	8.0	8.0	28.1	28.2	84.2	84.2	5.9	5.5	5.5	9.8	9.5	9.5	6.7	6.7	6.7	
				Middle	4	25.7	25.7	8.0	8.0	28.7	28.8	78.9	78.9	5.5	5.3	5.3	7.4	7.1	7.1	6.0	5.8	5.9	
				Bottom	7	25.6	25.6	8.0	8.0	29.2	29.5	76.1	73.1	5.3	5.2	5.2	7.1	7.0	7.0	16.4	16.8	16.6	

Mid-Ebb Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.57 0.58	0.58	0.3 0.3	3.1 3.0	6.7 6.7	0.3 0.3	2.5 2.5	1.5 1.6	<0.2 <0.2	19.1 19.3
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.58 0.60	0.59	0.5 0.5	2.4 2.5	7.7 7.5	0.3 0.3	3.0 2.9	1.3 1.3	<0.2 <0.2	22.8 22.7
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.58 0.58	0.58	<0.1 <0.1	1.5 1.5	6.5 6.4	<0.2 <0.2	2.0 2.0	0.6 0.6	<0.2 <0.2	10.7 10.7
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.56 0.56	0.56	0.3 0.3	3.0 3.0	7.7 8.0	0.2 0.2	1.4 1.4	0.9 0.9	<0.2 <0.2	15.7 16.0
W4	Surface	0.54 0.53	0.54	0.1 0.1	1.5 1.5	6.0 5.9	0.2 0.2	2.2 2.1	1.0 1.0	<0.2 <0.2	18.1 17.8
	Middle	0.61 0.61	0.61	0.1 0.1	2.6 2.5	5.2 5.1	0.2 0.2	1.8 1.8	1.0 1.0	<0.2 <0.2	18.1 17.5
	Bottom	0.56 0.55	0.56	0.3 0.3	1.1 1.1	5.0 4.8	0.2 0.2	2.1 2.1	1.6 1.6	<0.2 <0.2	12.2 12.1
W5	Surface	0.56 0.55	0.56	<0.1 <0.1	1.2 1.2	6.9 7.0	0.2 0.2	1.6 1.6	1.1 1.1	<0.2 <0.2	13.8 13.6
	Middle	0.53 0.52	0.53	0.1 0.1	1.2 1.2	7.6 7.9	<0.2 <0.2	2.0 2.0	1.0 0.9	<0.2 <0.2	21.9 21.2
	Bottom	0.51 0.51	0.51	0.1 0.1	1.4 1.4	5.9 5.9	0.2 0.2	1.4 1.4	0.9 0.9	<0.2 <0.2	22.5 23.1

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.55 0.57	0.56	0.1 0.1	2.5 2.6	6.1 6.2	<0.2 <0.2	2.9 2.8	0.7 0.7	<0.2 <0.2	14.9 15.3
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.56 0.58	0.57	0.3 0.3	1.1 1.1	5.4 5.3	<0.2 <0.2	1.6 1.5	1.0 1.0	<0.2 <0.2	15.7 15.6
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.57 0.54	0.56	<0.1 <0.1	1.5 1.4	5.8 5.8	0.2 0.2	1.7 1.7	0.7 0.7	<0.2 <0.2	21.0 19.9
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.56 0.54	0.55	0.2 0.2	2.9 2.7	6.2 6.4	<0.2 <0.2	2.2 2.4	0.9 0.9	<0.2 <0.2	21.3 20.8
W4	Surface	0.58 0.59	0.59	0.1 0.1	1.5 1.5	5.1 5.0	<0.2 <0.2	1.1 1.1	1.4 1.4	<0.2 <0.2	11.0 10.5
	Middle	0.58 0.56	0.57	0.3 0.3	1.2 1.2	6.2 6.3	<0.2 <0.2	1.6 1.6	1.0 1.0	<0.2 <0.2	13.8 13.7
	Bottom	0.58 0.56	0.57	0.4 0.4	1.6 1.6	7.7 7.3	<0.2 <0.2	1.5 1.5	0.7 0.7	0.2 0.2	12.7 12.8
W5	Surface	0.60 0.61	0.61	0.3 0.3	2.4 2.4	7.9 7.6	<0.2 <0.2	2.0 2.0	1.5 1.6	<0.2 <0.2	18.8 19.3
	Middle	0.67 0.66	0.67	0.2 0.2	3.0 2.9	6.2 6.2	0.3 0.3	3.0 3.0	1.5 1.5	<0.2 <0.2	18.2 19.0
	Bottom	0.61 0.61	0.61	0.4 0.4	2.0 2.0	6.7 6.6	<0.2 <0.2	2.5 2.5	1.3 1.3	0.2 0.2	19.0 18.5

Appendix D - Action and Limit Levels for Marine Water Quality on 28 May 2015 (Mid-Ebb Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W1: 15.7 and W2: 10.6</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W1: 17.0 and W2: 11.4</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W1: 4.0 and W2: 4.0</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W1: 4.3 and W2: 4.3</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 5.38 and W2: 2.94</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W1: 5.75 and W2: 3.11</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day or	130% of upstream control station's level at the same tide of the same day or
Cr	<u>W1: 2.5 and W2: 3.8</u> or <u>24.0</u>	<u>W1: 2.7 and W2: 4.1</u> or <u>40.7</u>
Cd	<u>W1: 0.6 and W2: 0.4</u> or <u>0.8</u>	<u>W1: 0.7 and W2: 0.4</u> or <u>1.5</u>
Cu	<u>W1: 8.3 and W2: 9.5</u> or <u>54.8</u>	<u>W1: 9.0 and W2: 10.3</u> or <u>95.0</u>
Zn	<u>W1: 20.3 and W2: 24.0</u> or <u>120.0</u>	<u>W1: 22.0 and W2: 26.0</u> or <u>150.0</u>
Ag	<u>W1: 0.2 and W2: 0.2</u> or <u>0.5</u>	<u>W1: 0.3 and W2: 0.3</u> or <u>0.8</u>
Hg	<u>W1: 0.4 and W2: 0.4</u> or <u>5.1</u>	<u>W1: 0.4 and W2: 0.4</u> or <u>8.7</u>
Ni	<u>W1: 2.3 and W2: 3.7</u> or <u>36.8</u>	<u>W1: 2.5 and W2: 4.0</u> or <u>71.3</u>
Pb	<u>W1: 1.9 and W2: 1.5</u> or <u>46.0</u>	<u>W1: 2.1 and W2: 1.6</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Appendix D - Action and Limit Levels for Marine Water Quality on 28 May 2015 (Mid-Flood Tide)

Parameters	Action Level	Limit Level
DO in mg/L (Bottom)	0.01	0.01
SS in mg/L (Bottom)	120% of upstream control station's SS at the same tide of the same day <u>W5: 11.8</u> or <u>20.4</u>	130% of upstream control station's SS at the same tide of the same day <u>W5: 12.7</u> or <u>29.3</u>
Turbidity in NTU	120% of upstream control station's turbidity at the same tide of the same day <u>W5: 6.2</u> or <u>21.9</u>	130% of upstream control station's turbidity at the same tide of the same day <u>W5: 6.8</u> or <u>29.7</u>
Nitrate-Nitrogen in mg/L (depth average)	120% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.89</u> or <u>5.9</u>	130% of upstream control station's nitrate-nitrogen (depth average) at the same tide of the same day + 0.9mg/L of anticipated increase due to nitrate injection <u>W5: 1.97</u> or <u>7.1</u>
Heavy metals	120% of upstream control station's level at the same tide of the same day	130% of upstream control station's level at the same tide of the same day
Cr	<u>W5: 3.4</u> or <u>24.0</u>	<u>W5: 3.7</u> or <u>40.7</u>
Cd	<u>W5: 0.5</u> or <u>0.8</u>	<u>W5: 0.5</u> or <u>1.5</u>
Cu	<u>W5: 7.4</u> or <u>54.8</u>	<u>W5: 8.0</u> or <u>95.0</u>
Zn	<u>W5: 21.3</u> or <u>120.0</u>	<u>W5: 23.1</u> or <u>150.0</u>
Ag	<u>W5: 0.2</u> or <u>0.5</u>	<u>W5: 0.3</u> or <u>0.8</u>
Hg	<u>W5: 0.3</u> or <u>5.1</u>	<u>W5: 0.3</u> or <u>8.7</u>
Ni	<u>W5: 2.4</u> or <u>36.8</u>	<u>W5: 2.6</u> or <u>71.3</u>
Pb	<u>W5: 1.5</u> or <u>46.0</u>	<u>W5: 1.6</u> or <u>82.6</u>

Note:

- For SS & turbidity non-compliance of the water quality limits occur when monitoring result is higher than the limits.
- All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary
- For stations that only the mid depth sample was taken, the results at mid depth will be treated as SS (Bottom)

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 28 May, 2015 (Mid-Ebb Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Cloudy	Moderate	08:54	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	26.0	26.0	7.7	7.7	26.0	26.3	54.5	52.1	3.8	3.7	-	-	-	13.0	13.1	13.1	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	09:12	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.4	25.8	25.8	7.8	7.8	26.7	26.7	47.0	47.1	3.3	3.3	3.3	3.2	3.3	8.9	8.7	8.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	09:20	Surface	1	25.9	25.8	7.7	7.7	26.1	26.6	47.9	48.3	3.4	3.4	2.9	2.9	-	9.6	9.2	9.4	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.3	25.6	25.7	7.6	7.6	28.4	28.2	27.1	25.4	1.9	1.8	3.3	3.3	3.3	8.0	8.3	8.2	
W4	Cloudy	Moderate	09:28	Surface	1	26.1	26.1	7.9	7.9	26.6	26.5	63.0	59.3	4.4	4.2	1.8	1.8	-	8.9	8.6	8.8	
				Middle	4	26.0	26.1	7.9	7.9	27.4	27.2	57.7	55.5	4.0	3.9	1.8	1.8	-	7.4	7.4	7.4	
				Bottom	7	25.9	25.9	8.0	8.0	28.3	28.3	57.0	55.3	4.0	3.9	1.8	1.9	2.0	7.2	7.0	7.1	
W5	Cloudy	Moderate	09:41	Surface	1	26.3	26.3	7.9	7.9	25.1	25.1	48.7	49.2	3.4	3.5	2.0	2.0	-	6.0	5.8	5.9	
				Middle	4	26.1	26.1	7.9	7.9	27.2	27.3	48.8	48.1	3.4	3.4	1.8	1.9	1.9	7.9	7.9	7.9	
				Bottom	7	25.9	25.9	8.0	8.0	28.4	28.3	49.2	48.6	3.4	3.4	1.8	1.8	1.8	9.3	9.7	9.5	

Contract No. KL/2010/02
Kai Tak Development – Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Water Quality Monitoring Results on 28 May, 2015 (Mid-Flood Tide)

Location	Weather Condition	Sea Condition*	Sampling Time	Depth (m)	Temp (°C)		pH		Salinity (ppt)		DO Saturation (%)		Dissolved Oxygen (mg/L)		Turbidity (NTU)		Suspended Solids (mg/L)					
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	DA*	Value	Average	DA*	Value	Average	DA*	
W1	Cloudy	Moderate	14:37	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1	29.1	29.1	7.1	7.1	6.6	6.6	88.4	89.0	6.6	6.6	6.6	5.9	6.0	9.6	9.9	9.8	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W2	Cloudy	Moderate	14:53	Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Middle	1.4	26.2	26.2	7.7	7.7	25.8	25.8	60.9	60.3	4.3	4.3	4.3	4.3	4.4	6.4	6.6	6.5	
				Bottom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W3	Cloudy	Moderate	14:59	Surface	1	26.6	26.7	7.6	7.6	23.3	23.3	84.6	83.7	6.0	5.9	4.7	5.1	-	6.8	6.7	6.8	
				Middle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Bottom	3.7	25.7	25.7	7.3	7.3	26.6	27.6	66.4	65.7	4.7	4.6	4.1	4.5	4.5	6.9	6.7	6.8	
W4	Cloudy	Moderate	15:10	Surface	1	26.3	26.3	7.9	7.9	26.6	26.7	67.4	63.0	4.7	4.4	3.5	3.5	-	8.0	7.8	7.9	
				Middle	4	26.0	26.0	7.9	7.9	27.7	27.8	66.0	63.2	4.6	4.4	4.2	4.4	4.2	9.1	9.2	9.2	
				Bottom	7	25.4	25.5	7.9	7.9	30.1	30.0	57.4	57.1	4.0	4.0	4.5	4.5	4.5	8.4	8.4	8.4	
W5	Cloudy	Moderate	15:18	Surface	1	26.6	26.6	7.9	7.9	26.2	26.2	64.7	62.2	4.5	4.3	4.5	4.5	-	7.7	7.6	7.7	
				Middle	4	26.1	26.0	7.9	7.9	27.6	28.2	63.3	61.2	4.4	4.3	4.6	4.6	4.6	4.1	4.1	4.1	
				Bottom	7	24.9	25.0	8.0	8.0	31.9	31.7	54.4	51.5	3.8	3.6	6.9	6.1	6.5	9.8	9.8	9.8	

Mid-Ebb Tide

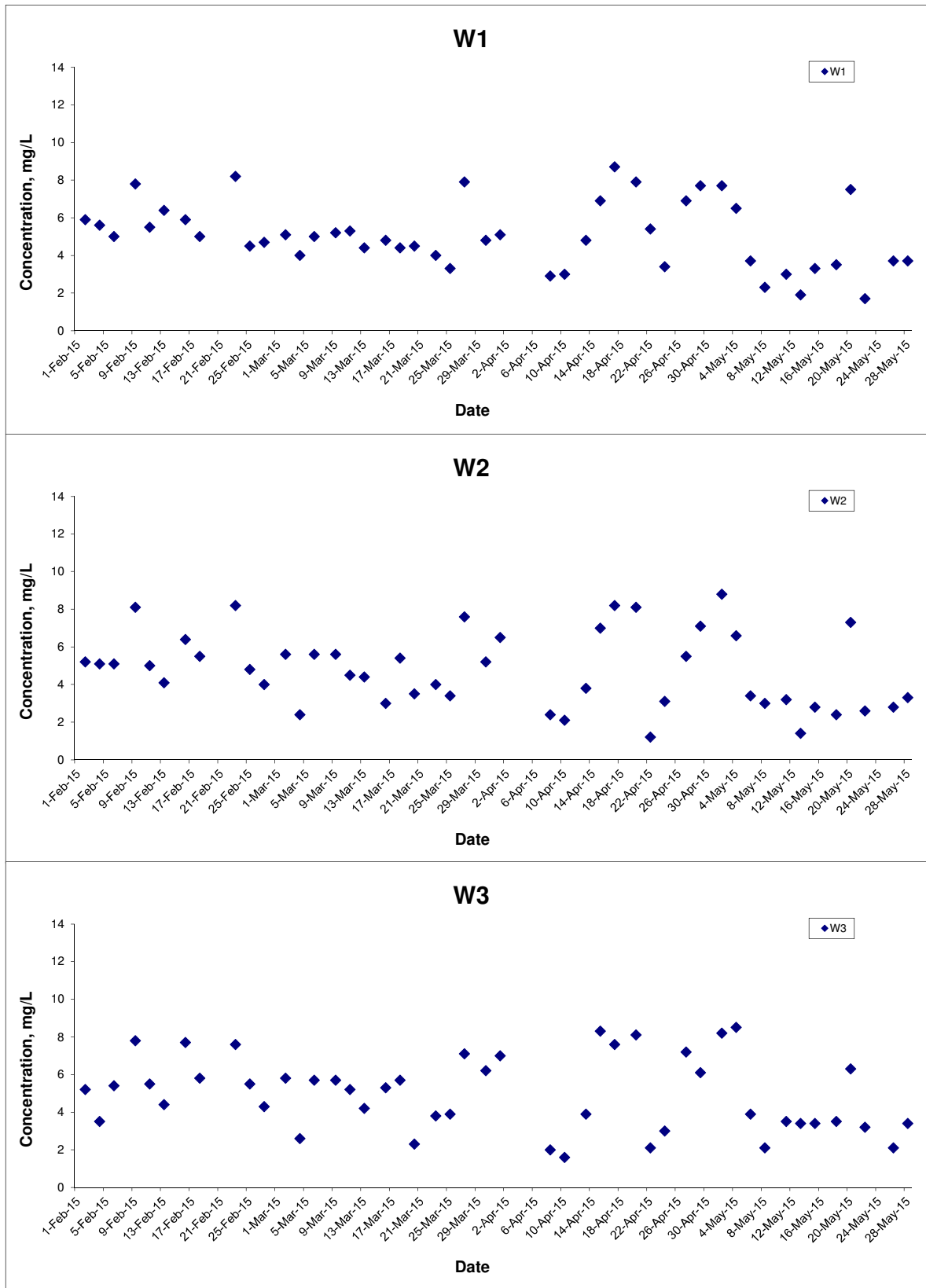
Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	3.77 3.69	3.73	0.5 0.5	2.1 2.1	7.0 6.9	0.3 0.3	1.9 2.0	1.6 1.6	0.2 0.2	17.0 16.8
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	1.70 1.70	1.70	0.3 0.3	3.1 3.2	8.0 7.9	0.3 0.3	3.0 3.1	1.3 1.2	0.2 0.2	19.9 20.1
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	0.42 0.42	0.42	0.2 0.2	1.8 1.7	5.4 5.5	0.2 0.2	1.5 1.4	0.6 0.6	<0.2 <0.2	15.0 14.5
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	2.21 2.18	2.20	0.4 0.4	3.1 3.0	8.2 8.2	<0.2 <0.2	1.1 1.1	0.7 0.7	0.2 0.2	8.3 8.6
W4	Surface	0.71 0.69	0.70	0.5 0.5	3.0 3.0	8.2 7.8	<0.2 <0.2	2.1 2.2	0.6 0.7	0.2 0.2	21.0 21.0
	Middle	0.44 0.43	0.44	0.4 0.4	1.6 1.6	7.7 7.5	<0.2 <0.2	2.2 2.1	0.9 0.8	0.2 0.2	13.3 13.6
	Bottom	0.26 0.26	0.26	<0.1 <0.1	1.1 1.0	5.8 5.8	0.2 0.2	1.2 1.2	1.0 1.0	<0.2 <0.2	13.9 14.0
W5	Surface	0.47 0.47	0.47	0.1 0.1	1.9 1.9	6.4 6.5	<0.2 <0.2	1.5 1.5	0.6 0.6	<0.2 <0.2	15.0 14.7
	Middle	0.42 0.41	0.42	0.2 0.2	1.1 1.1	5.1 4.8	<0.2 <0.2	2.4 2.4	0.9 0.9	0.2 0.2	12.8 12.7
	Bottom	0.31 0.31	0.31	0.5 0.4	1.4 1.3	6.5 6.4	0.2 0.2	2.3 2.4	1.5 1.6	<0.2 <0.2	9.7 9.8

Mid-Flood Tide

Location	Depth	Nitrate-Nitrogen,mg NO3-N/L		Cadmium µg/L	Chromium µg/L	Copper µg/L	Mercury µg/L	Nickel µg/L	Lead µg/L	Silver µg/L	Zinc µg/L
		Value	average								
W1	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.76 0.73	0.75	0.4 0.4	2.1 2.1	6.9 6.8	<0.2 <0.2	1.0 1.0	0.9 0.9	<0.2 <0.2	10.8 10.5
	Bottom	-	-	-	-	-	-	-	-	-	-
W2	Surface	-	-	-	-	-	-	-	-	-	-
	Middle	0.77 0.73	0.75	0.3 0.3	1.6 1.6	5.1 4.9	<0.2 <0.2	2.1 2.2	0.9 0.9	<0.2 <0.2	15.0 15.4
	Bottom	-	-	-	-	-	-	-	-	-	-
W3	Surface	1.51 1.45	1.48	0.5 0.5	2.9 2.8	6.4 6.3	<0.2 <0.2	1.8 1.7	1.4 1.4	<0.2 <0.2	20.7 21.4
	Middle	-	-	-	-	-	-	-	-	-	-
	Bottom	0.75 0.77	0.76	0.3 0.4	1.1 1.1	5.3 5.5	<0.2 <0.2	1.8 1.9	1.3 1.3	<0.2 <0.2	18.6 17.8
W4	Surface	0.81 0.83	0.82	0.3 0.5	1.6 1.6	7.5 7.4	<0.2 <0.2	2.7 2.8	0.7 0.7	<0.2 <0.2	18.0 18.4
	Middle	0.80 0.80	0.80	0.3 0.3	1.1 1.0	6.6 6.9	<0.2 <0.2	1.7 1.7	1.2 1.2	0.2 0.2	9.4 9.1
	Bottom	0.77 0.75	0.76	0.4 0.4	1.4 1.4	5.9 6.0	<0.2 <0.2	1.5 1.5	1.1 1.1	<0.2 <0.2	10.0 9.9
W5	Surface	0.81 0.82	0.82	0.4 0.4	2.6 2.6	6.6 6.4	<0.2 <0.2	2.1 2.0	1.1 1.1	<0.2 <0.2	17.7 17.6
	Middle	0.84 0.82	0.83	0.3 0.3	2.8 2.8	6.1 6.1	<0.2 <0.2	1.1 1.1	1.3 1.3	0.2 0.2	13.5 13.5
	Bottom	0.83 0.83	0.83	0.5 0.5	3.1 3.0	5.8 5.8	0.3 0.3	2.8 2.7	1.3 1.3	<0.2 <0.2	22.1 22.2

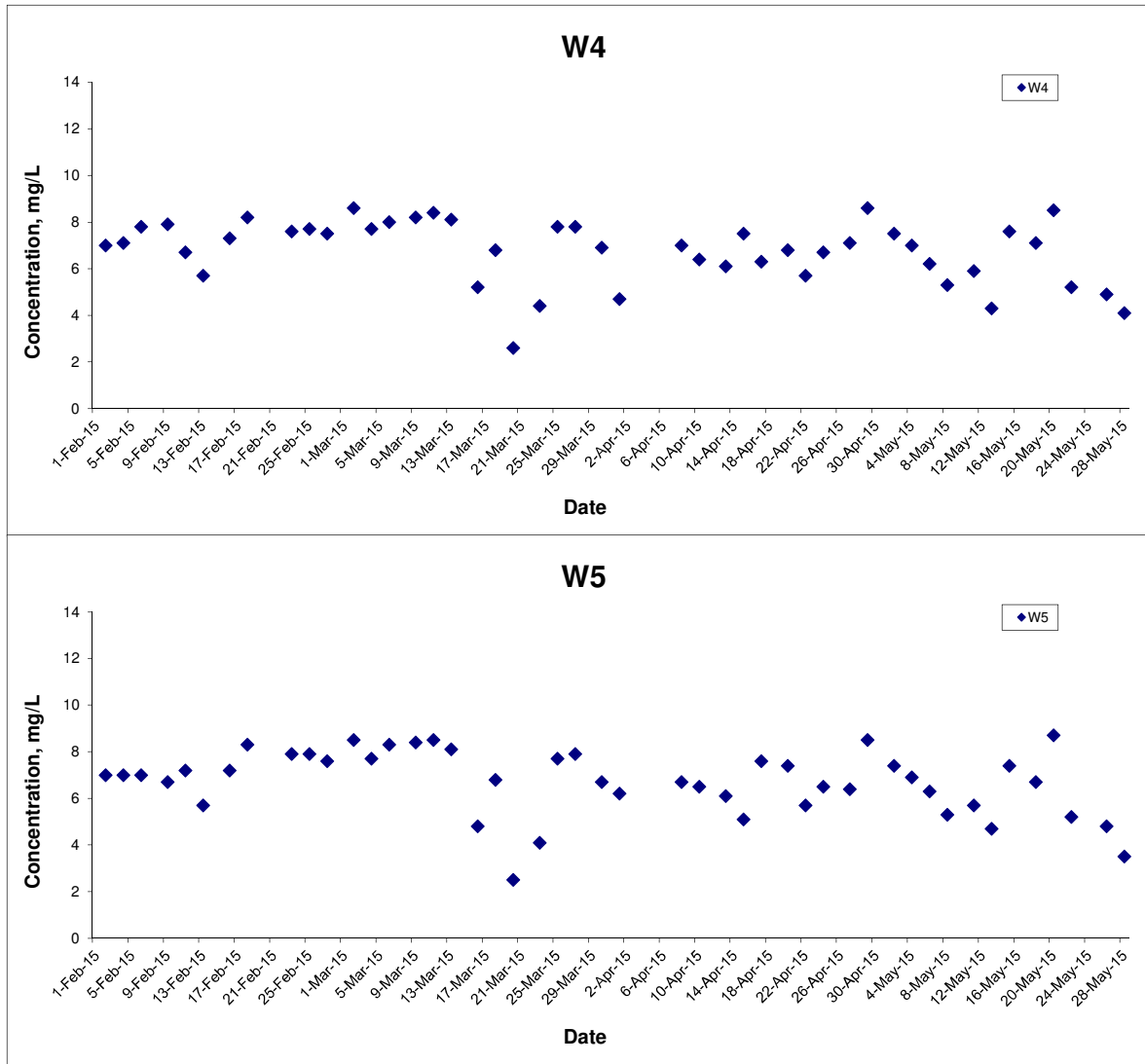
**APPENDIX E
GRAPHICAL PRESENTATION FOR
WATER QUALITY MONITORING
RESULTS**

Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



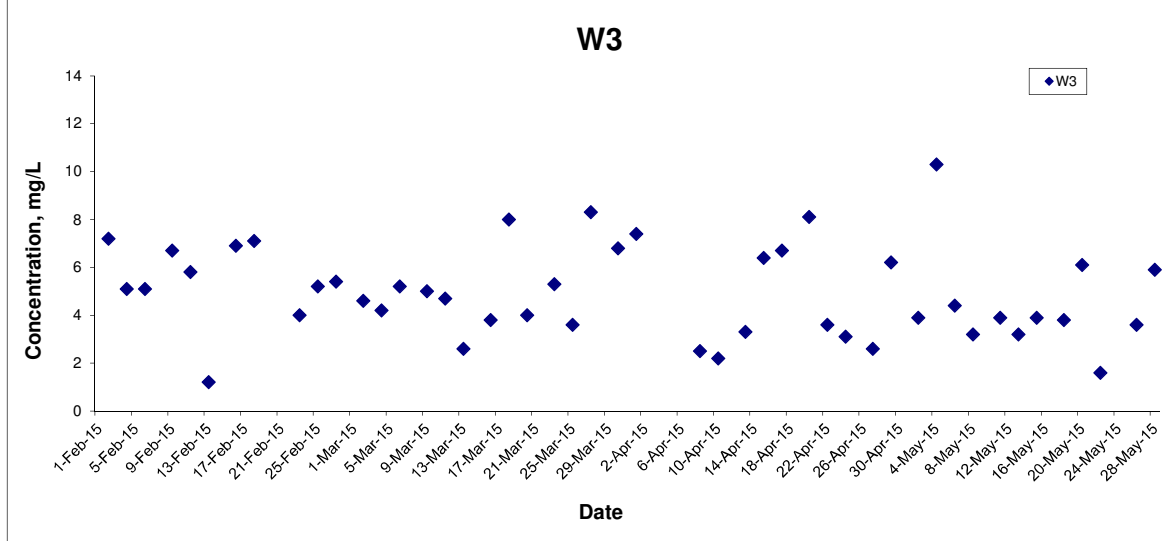
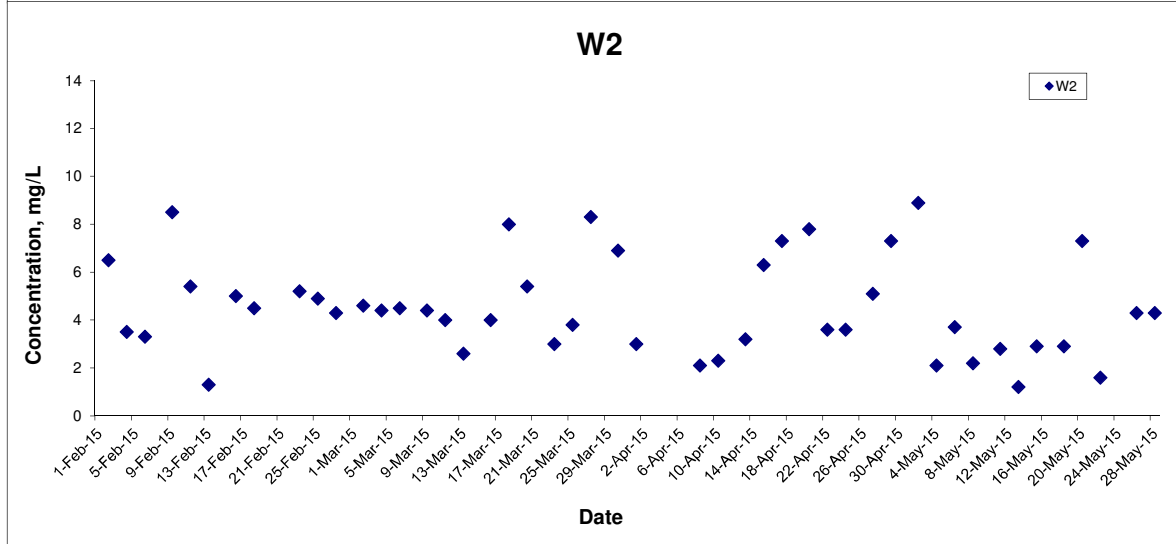
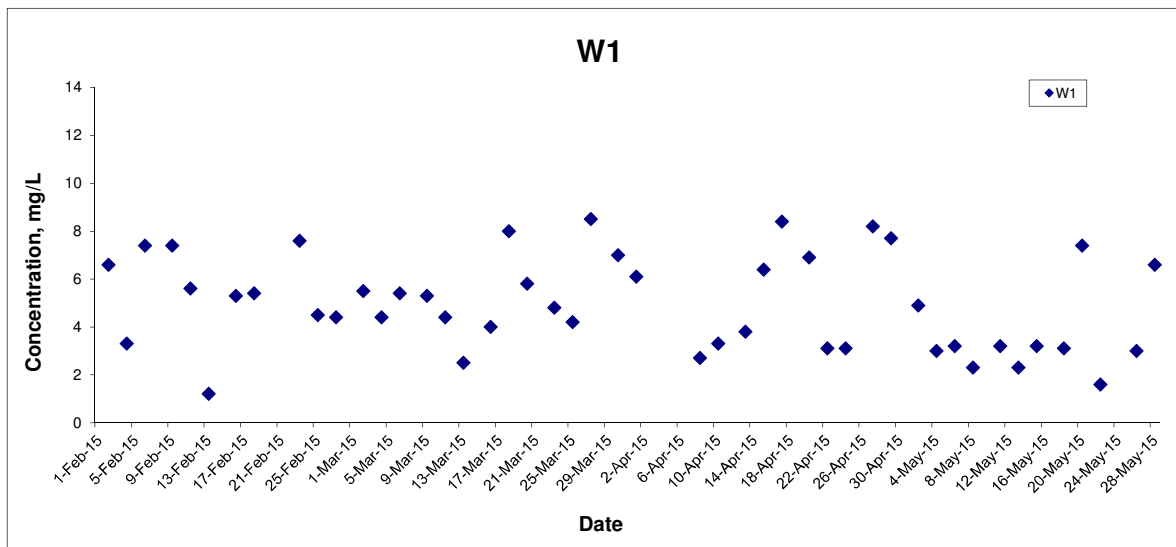
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

Dissolved Oxygen (Surface & Middle) at Mid-Ebb Tide



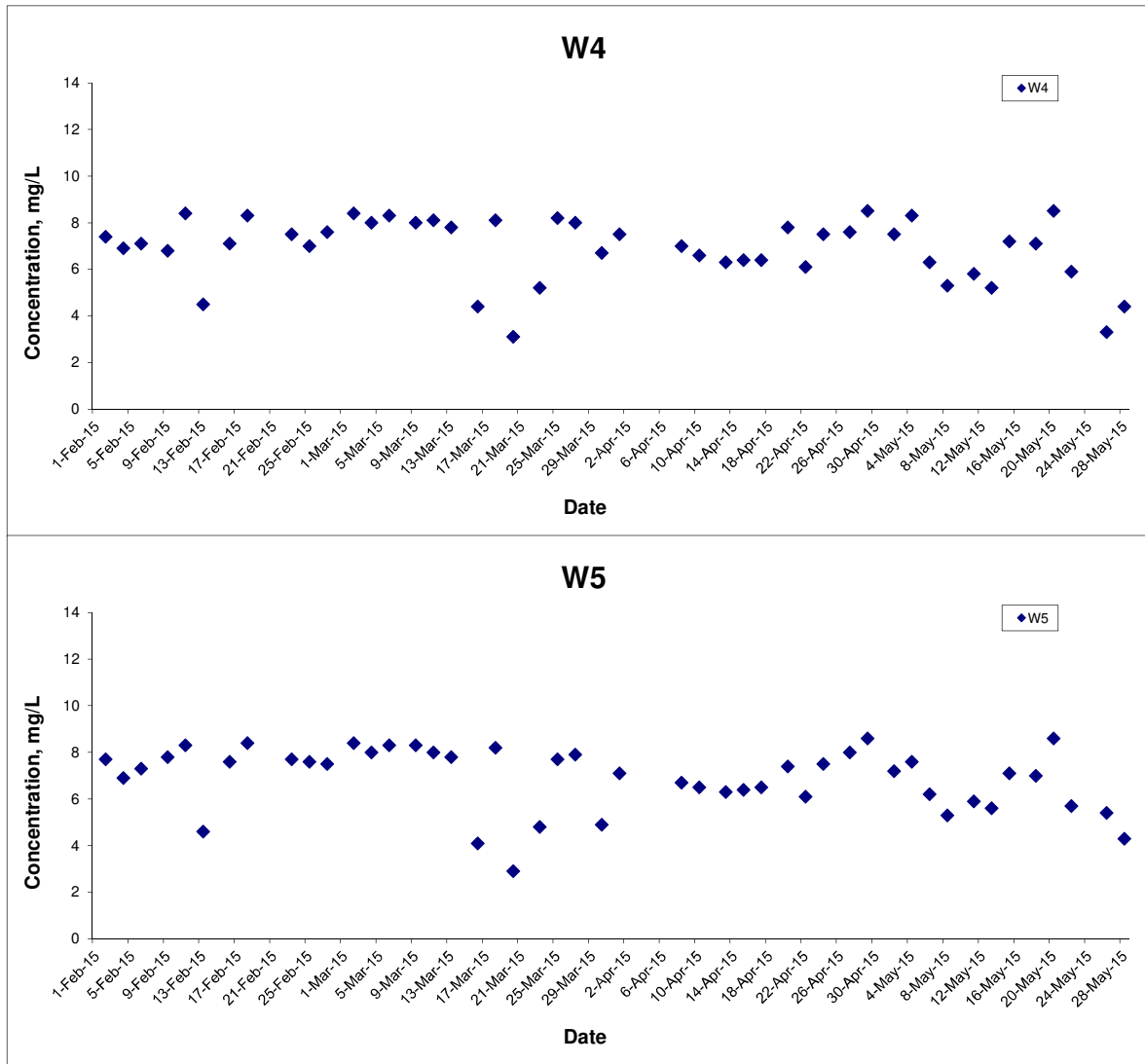
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	Date	May 15	Appendix E	

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



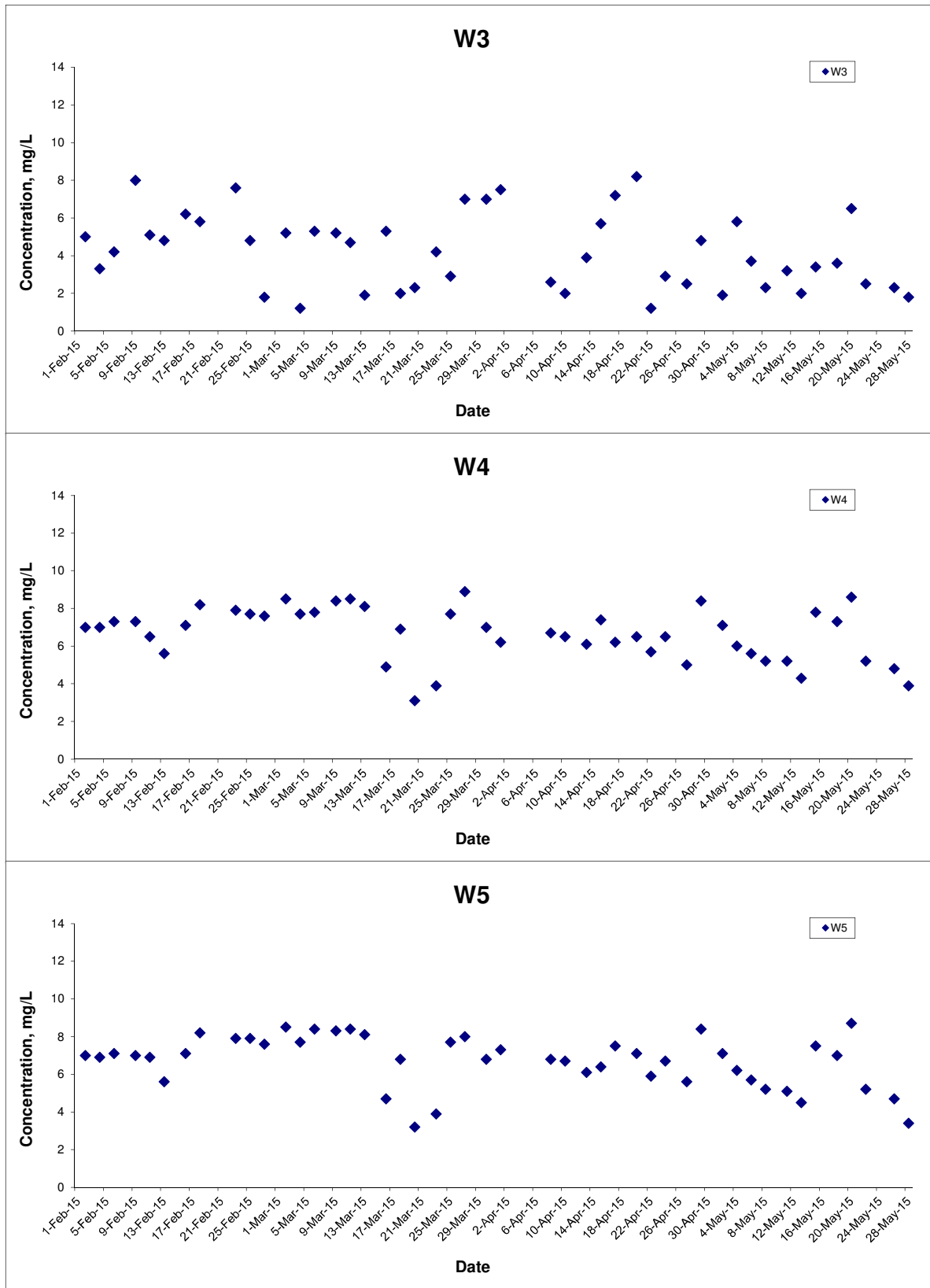
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	Date May 15	Appendix E	

Dissolved Oxygen (Surface & Middle) at Mid-Flood Tide



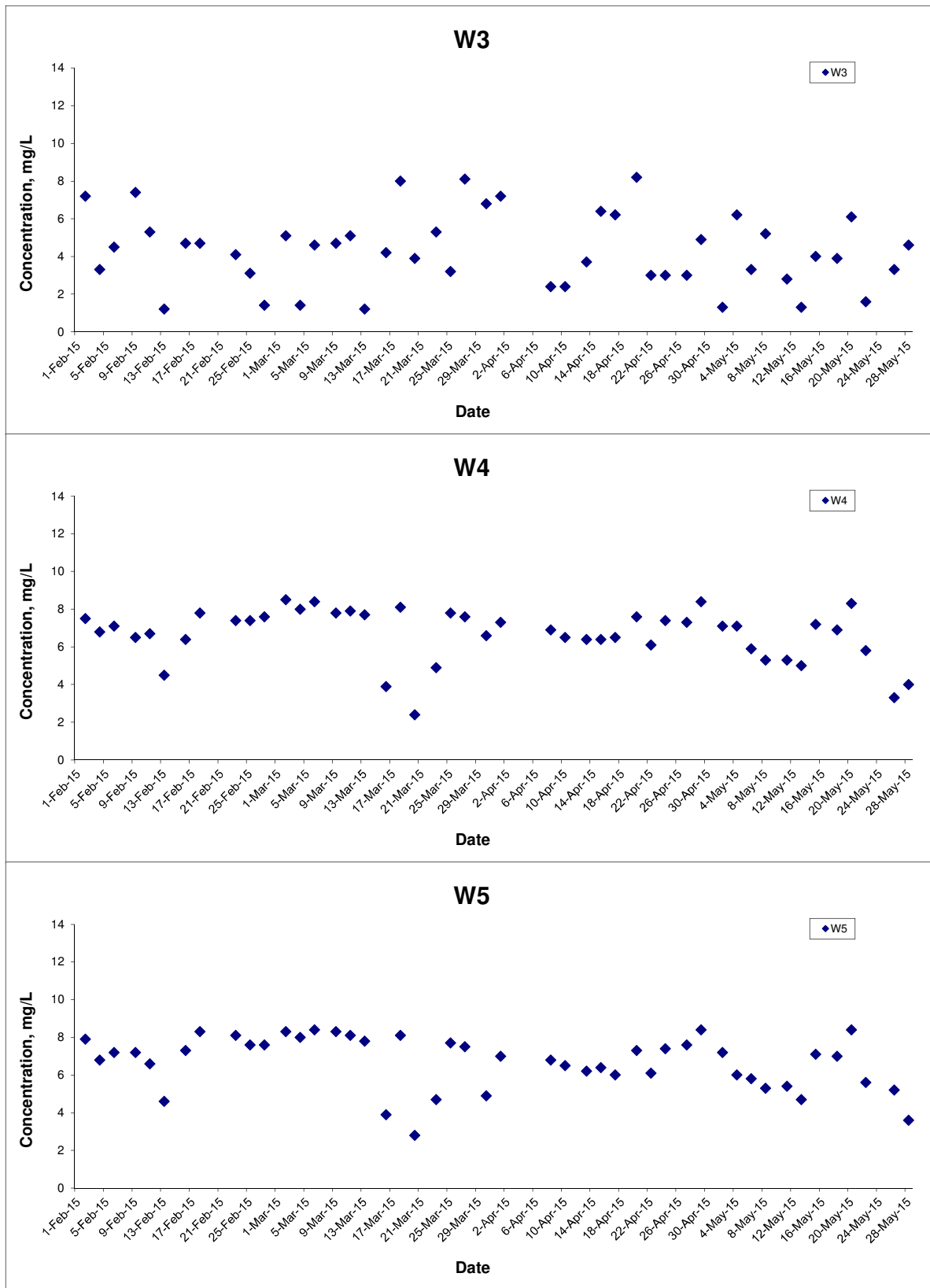
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	Date May 15	Appendix E	

Dissolved Oxygen (Bottom) at Mid-Ebb Tide



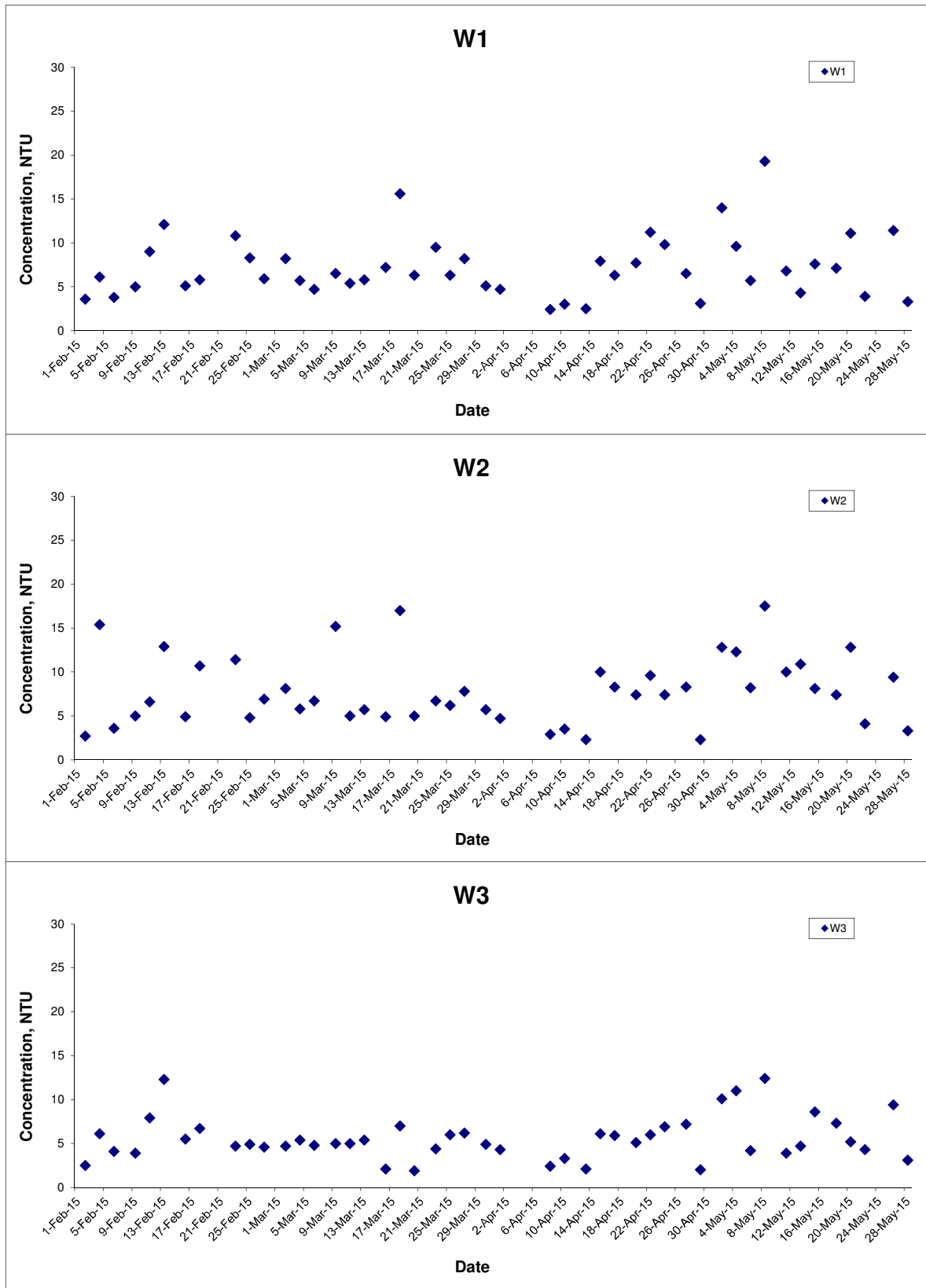
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	Date May 15	Appendix E	

Dissolved Oxygen (Bottom) at Mid-Flood Tide



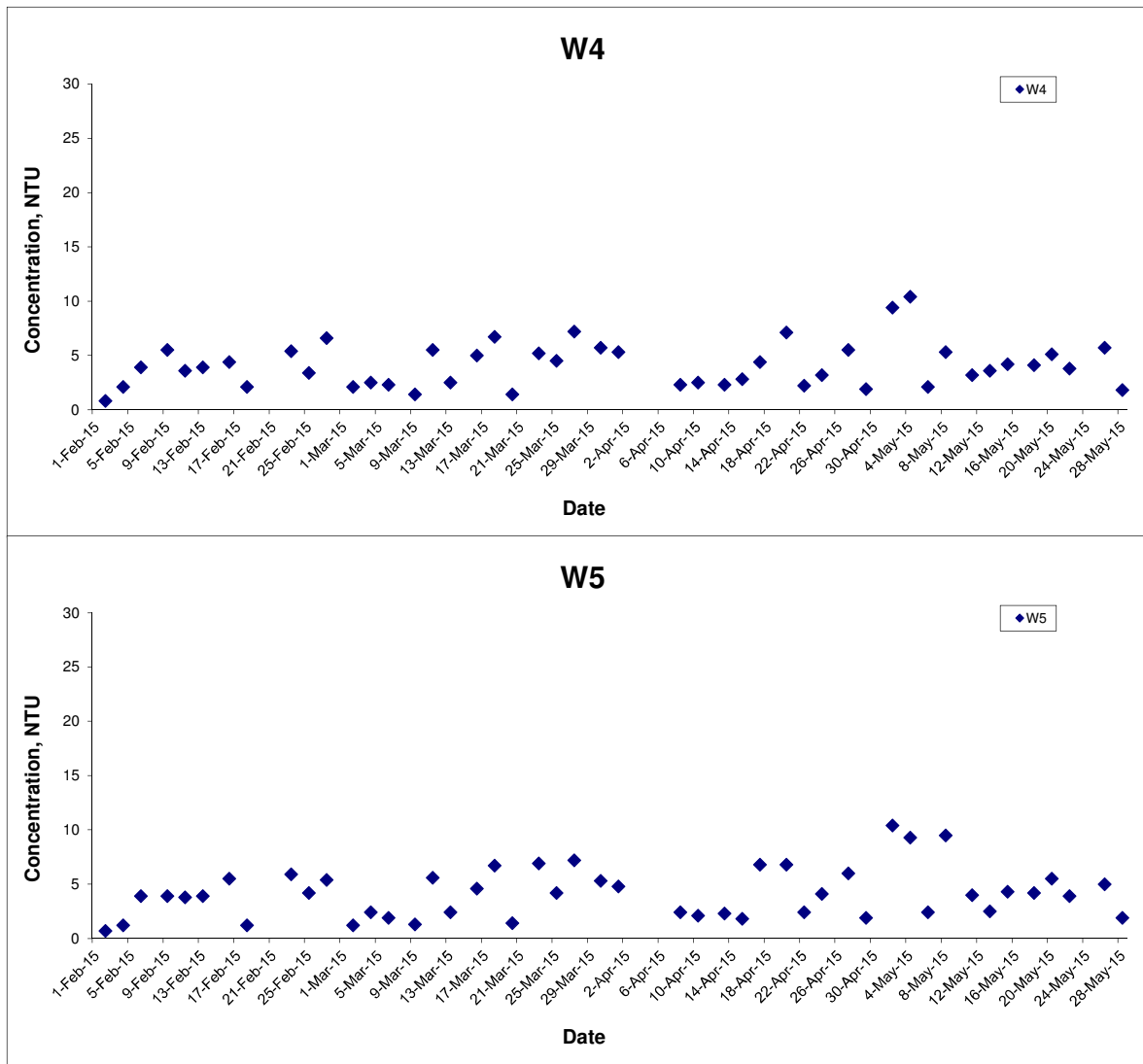
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Turbidity (Depth-averaged) at Mid-Ebb Tide



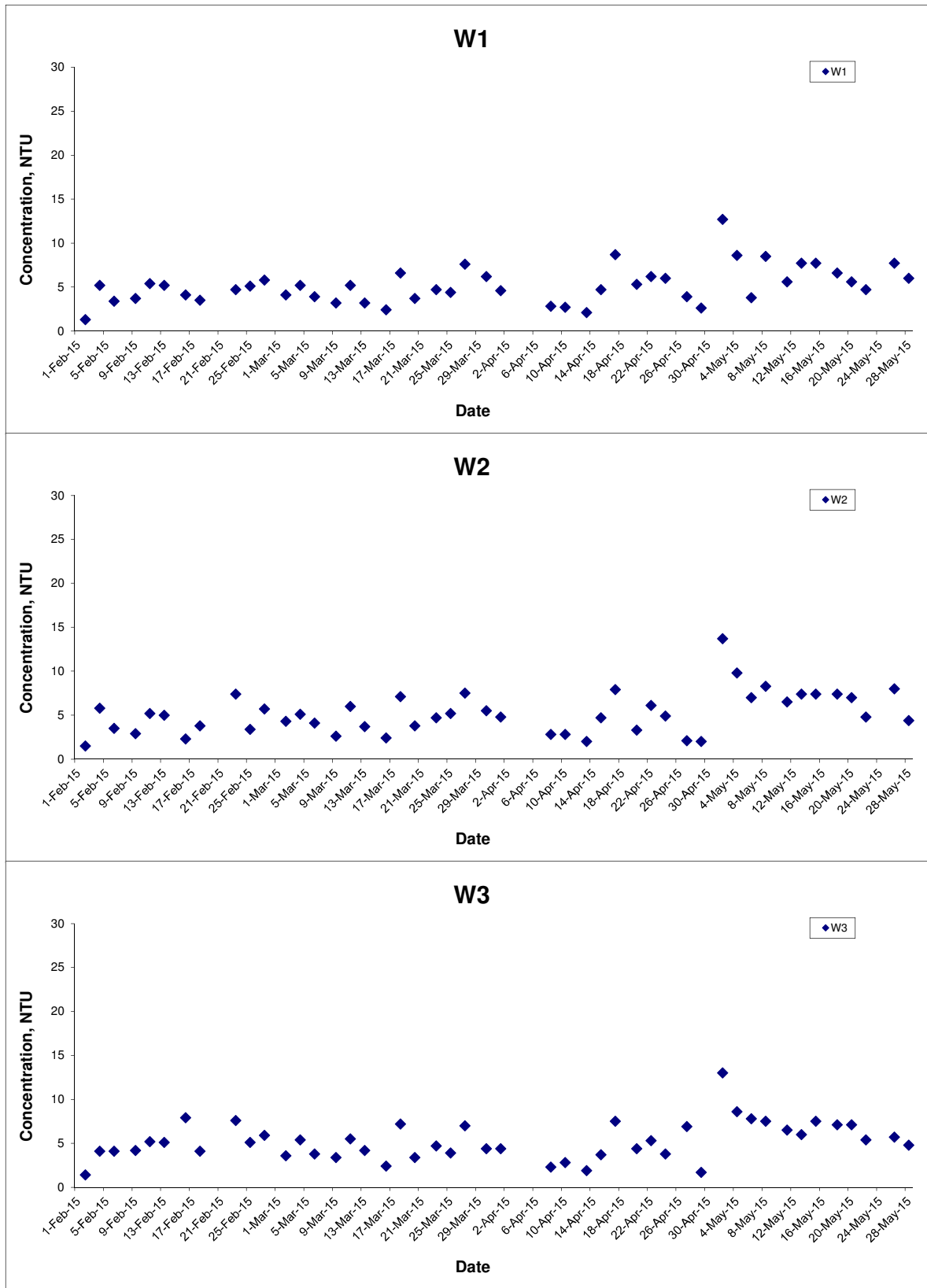
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	Date	May 15	Appendix E	

Turbidity (Depth-averaged) at Mid-Ebb Tide



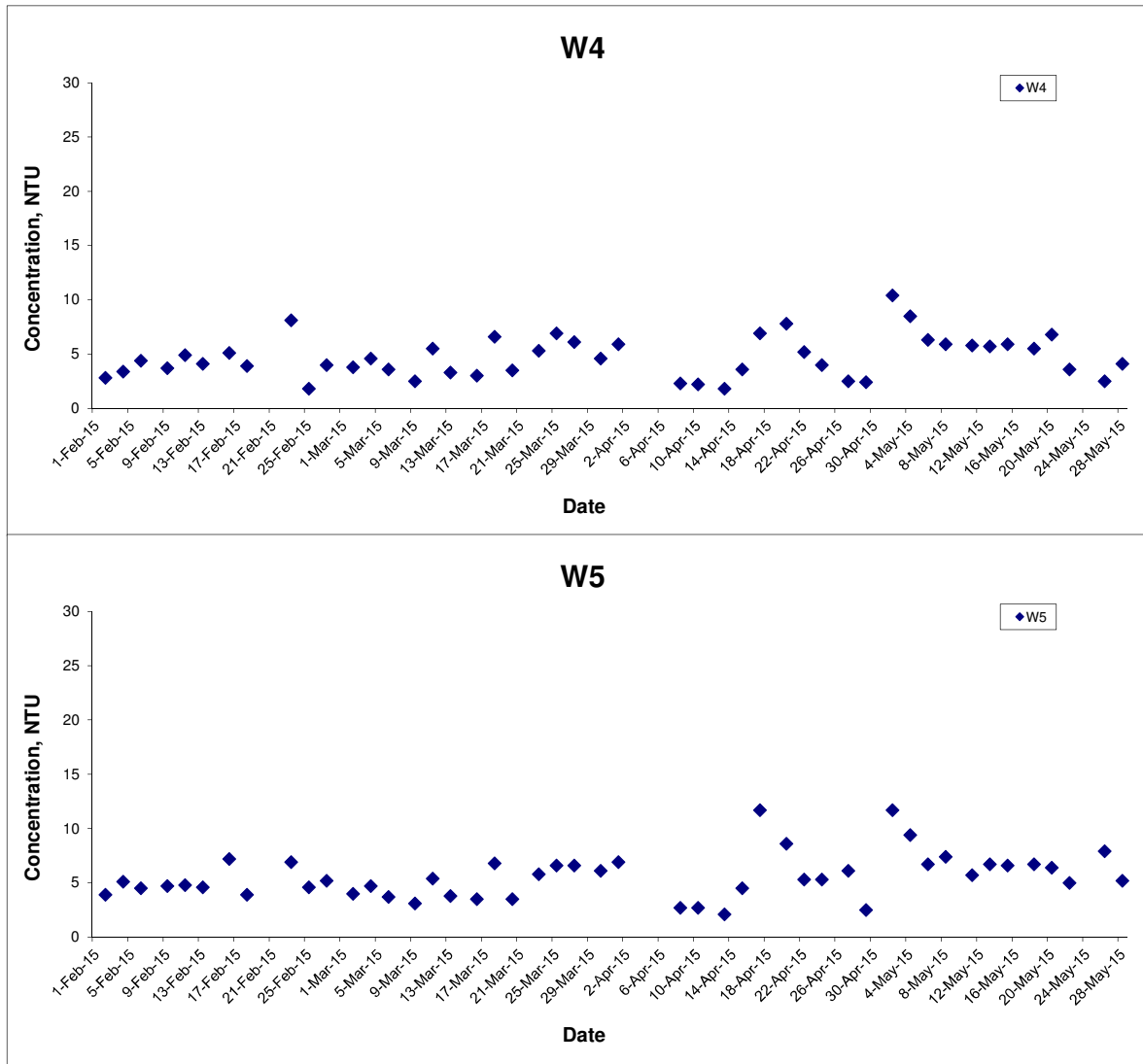
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Turbidity (Depth-averaged) at Mid-Flood Tide



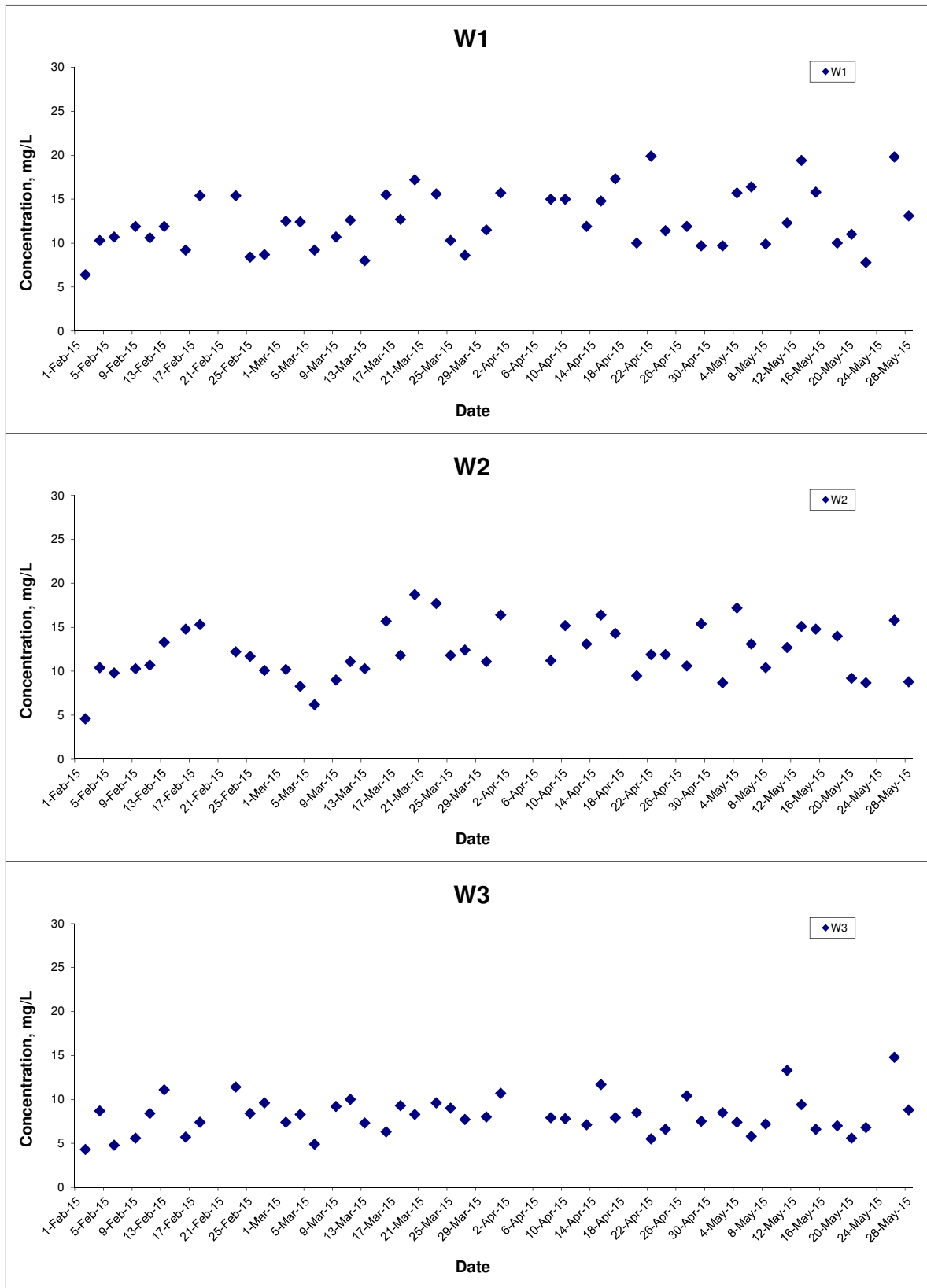
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	Date	May 15	Appendix E	

Turbidity (Depth-averaged) at Mid-Flood Tide



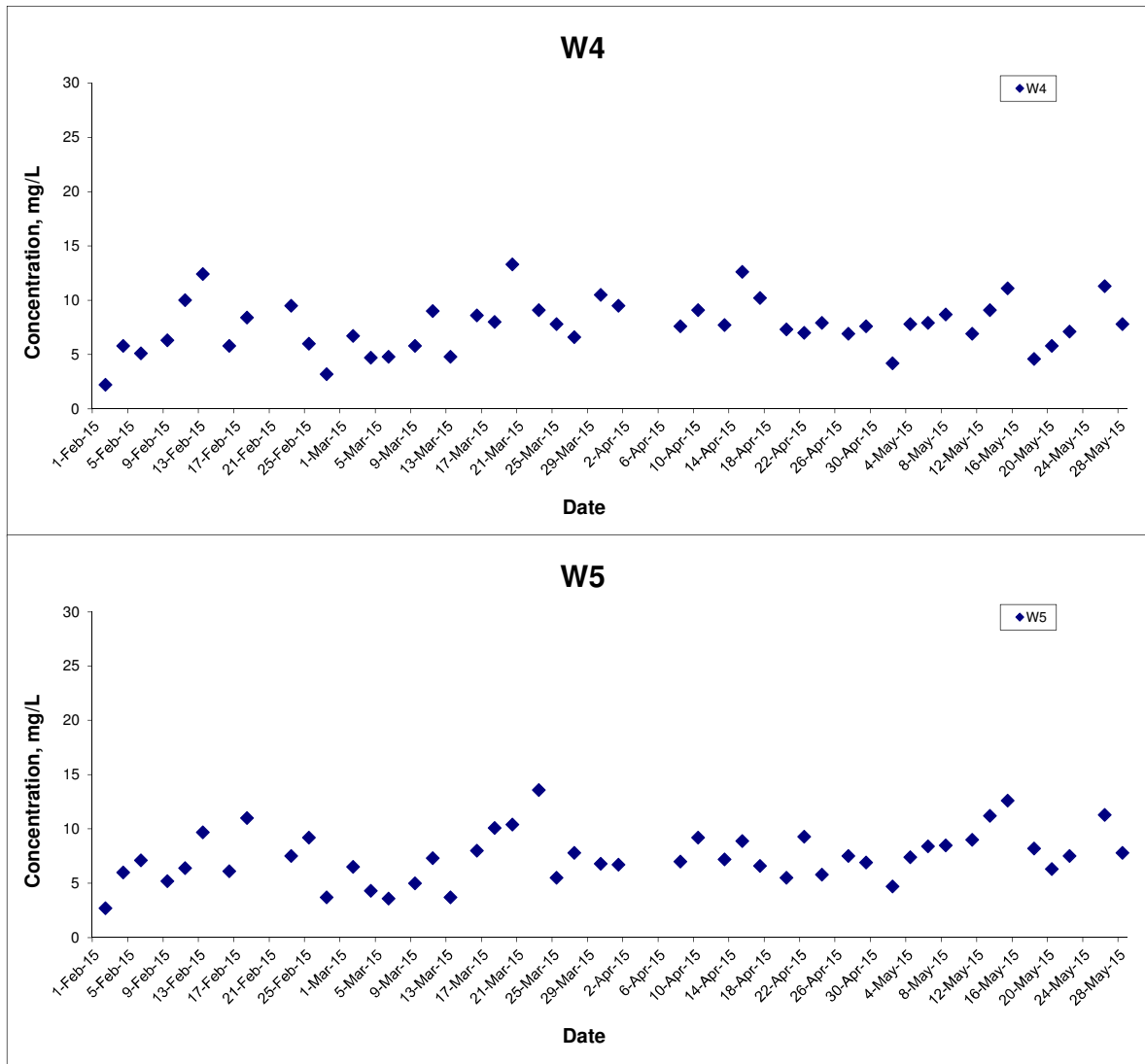
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Suspended Solids (Depth-averaged) at Mid-Ebb Tide



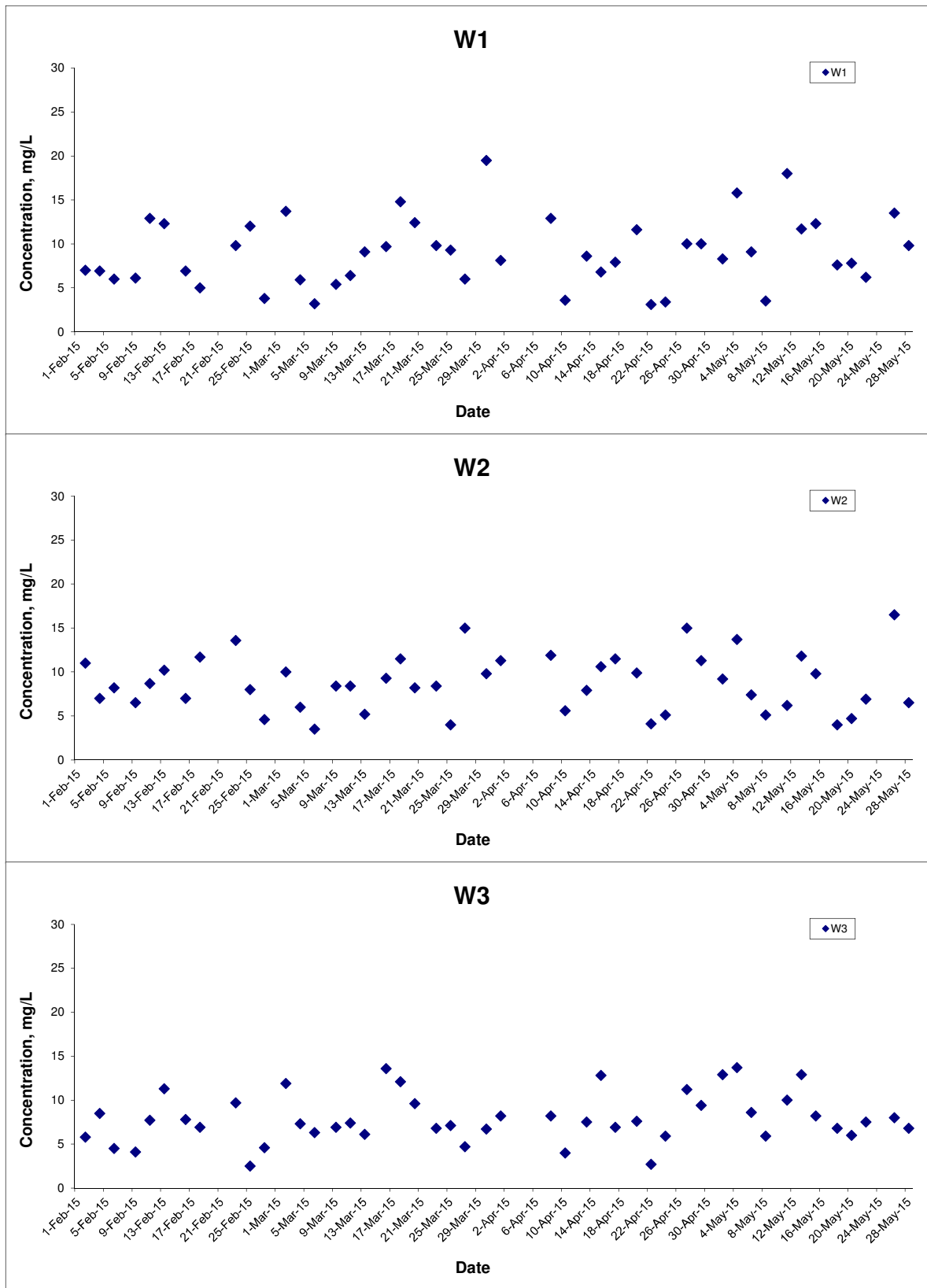
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	Date	May 15	Appendix E	

Suspended Solids (Depth-averaged) at Mid-Ebb Tide



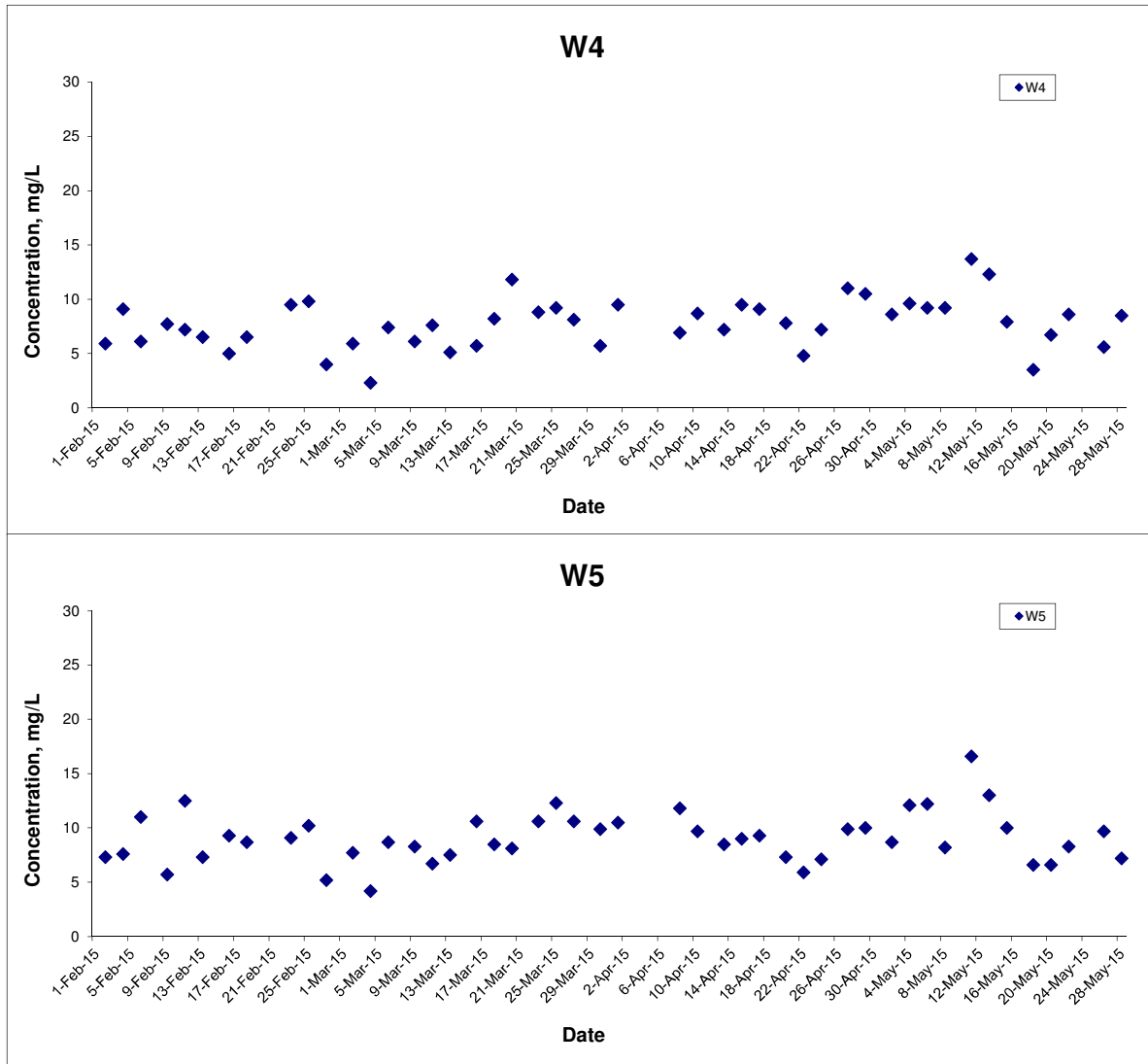
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	Date May 15	Appendix E	

Suspended Solids (Depth-averaged) at Mid-Flood Tide



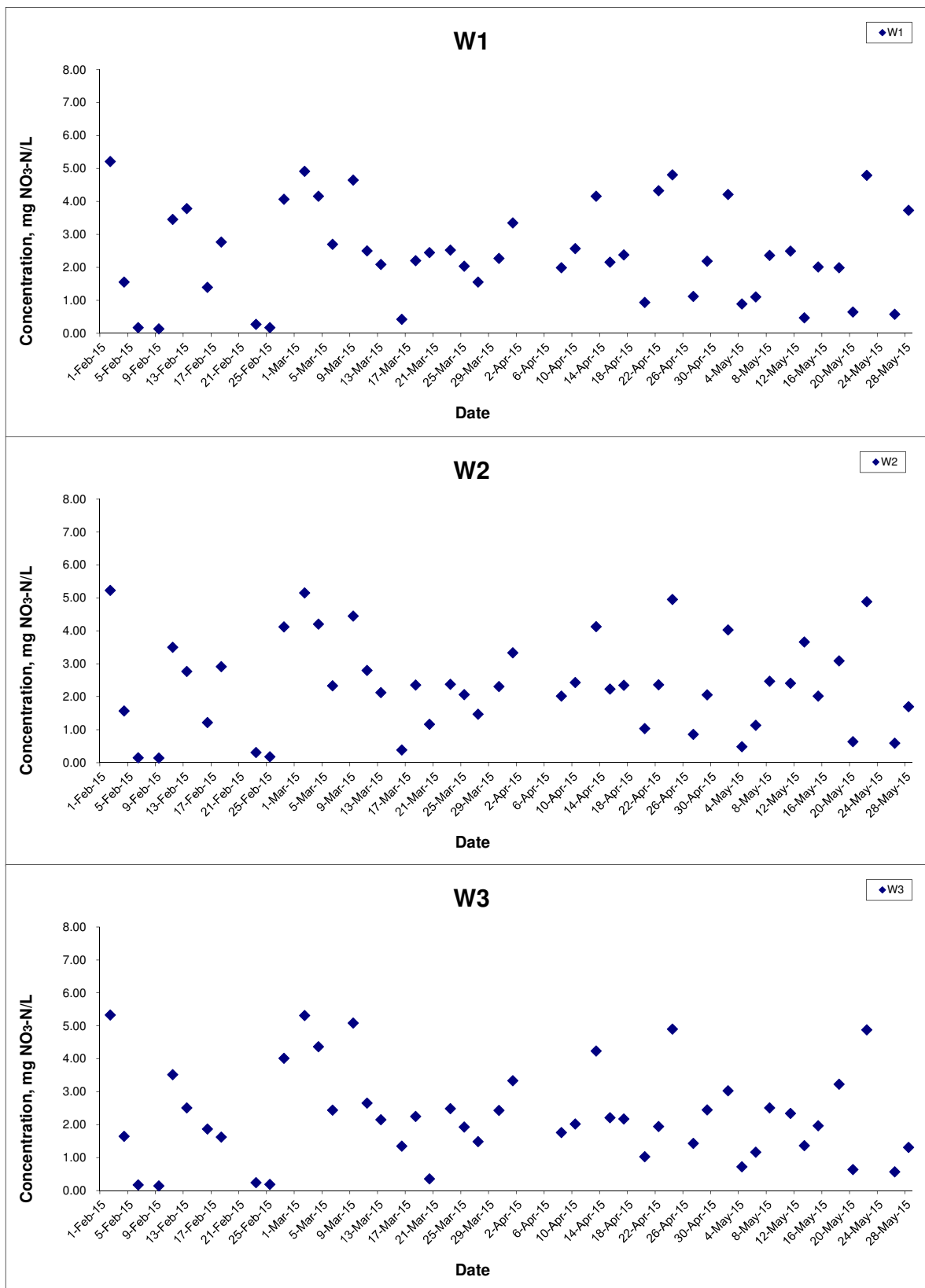
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Suspended Solids (Depth-averaged) at Mid-Flood Tide



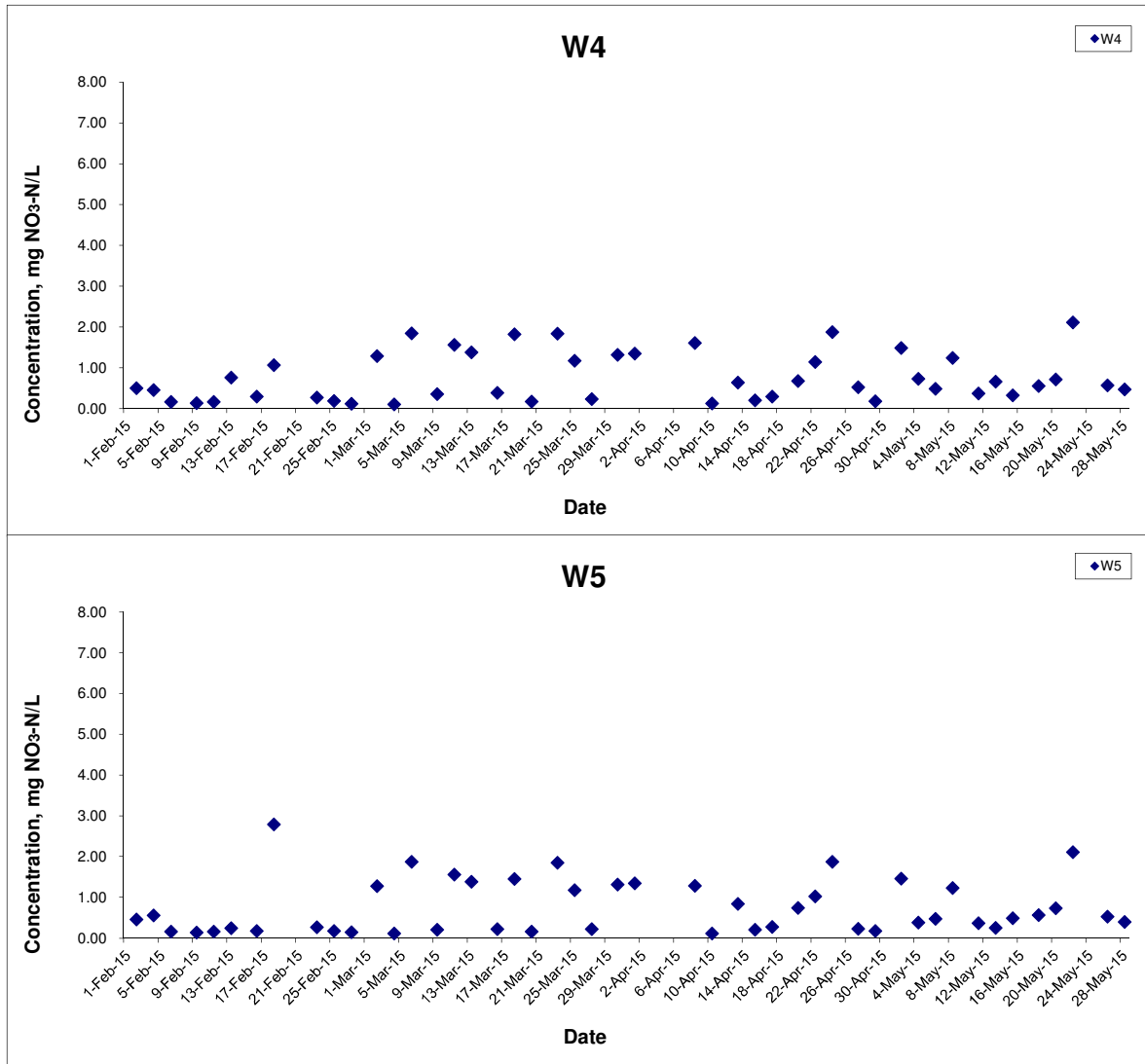
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Nitrate-Nitrogen (Depth-averaged) at Mid-Ebb Tide



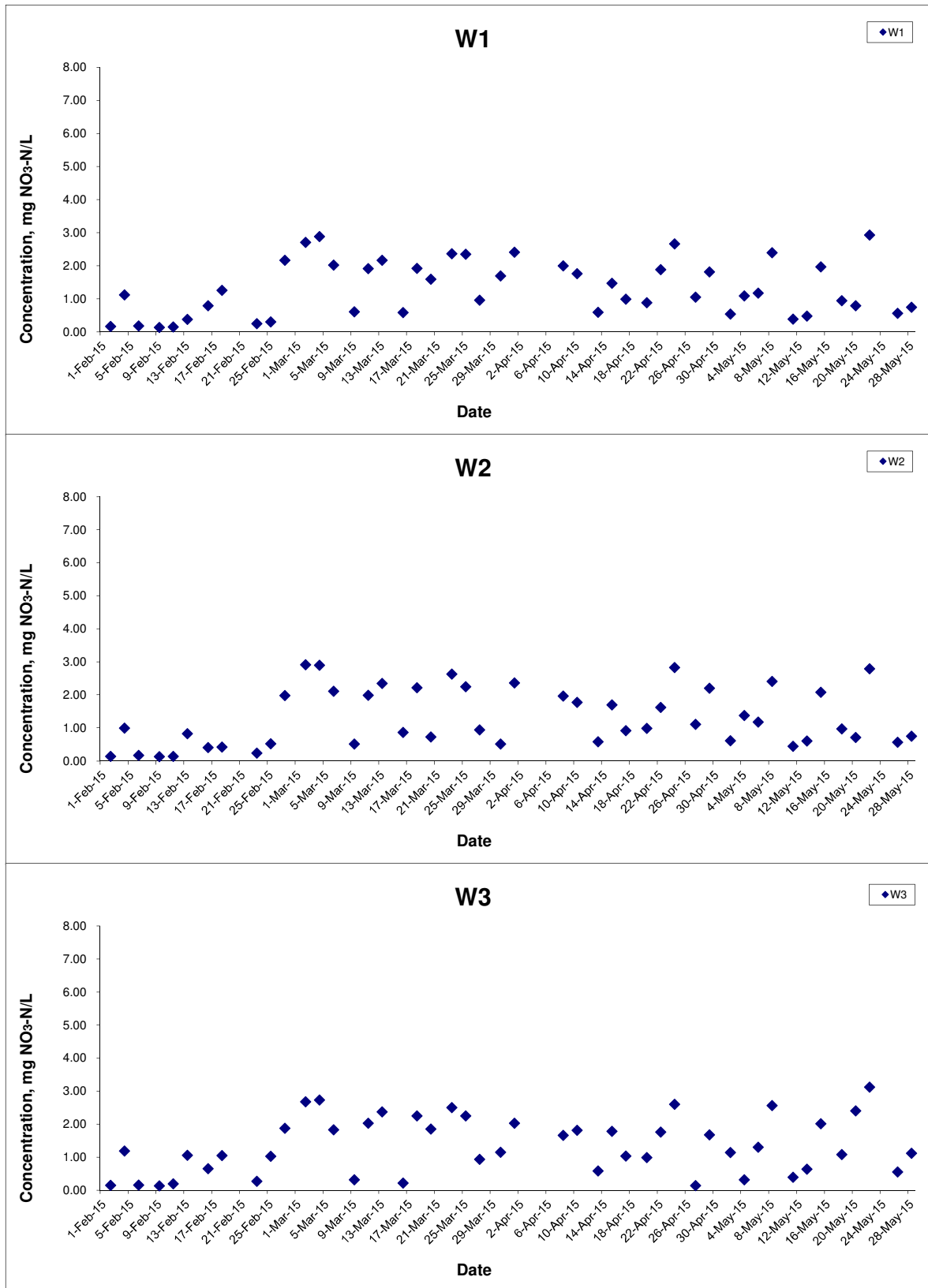
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Nitrate-Nitrogen (Depth-averaged) at Mid-Ebb Tide



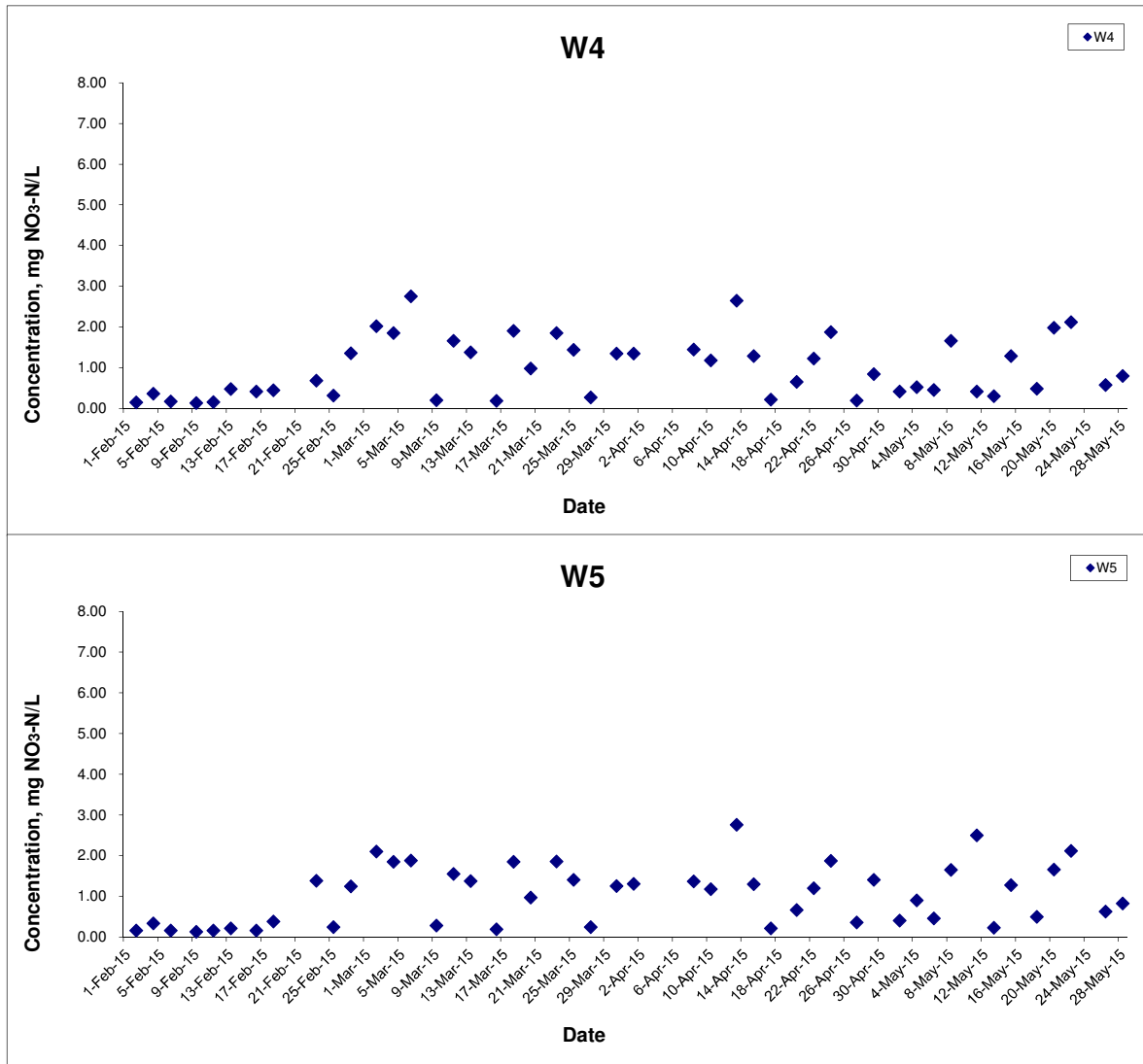
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No. MA11017	CINOTECH
	Date	May 15	Appendix E	

Nitrate-Nitrogen (Depth-averaged) at Mid-Flood Tide



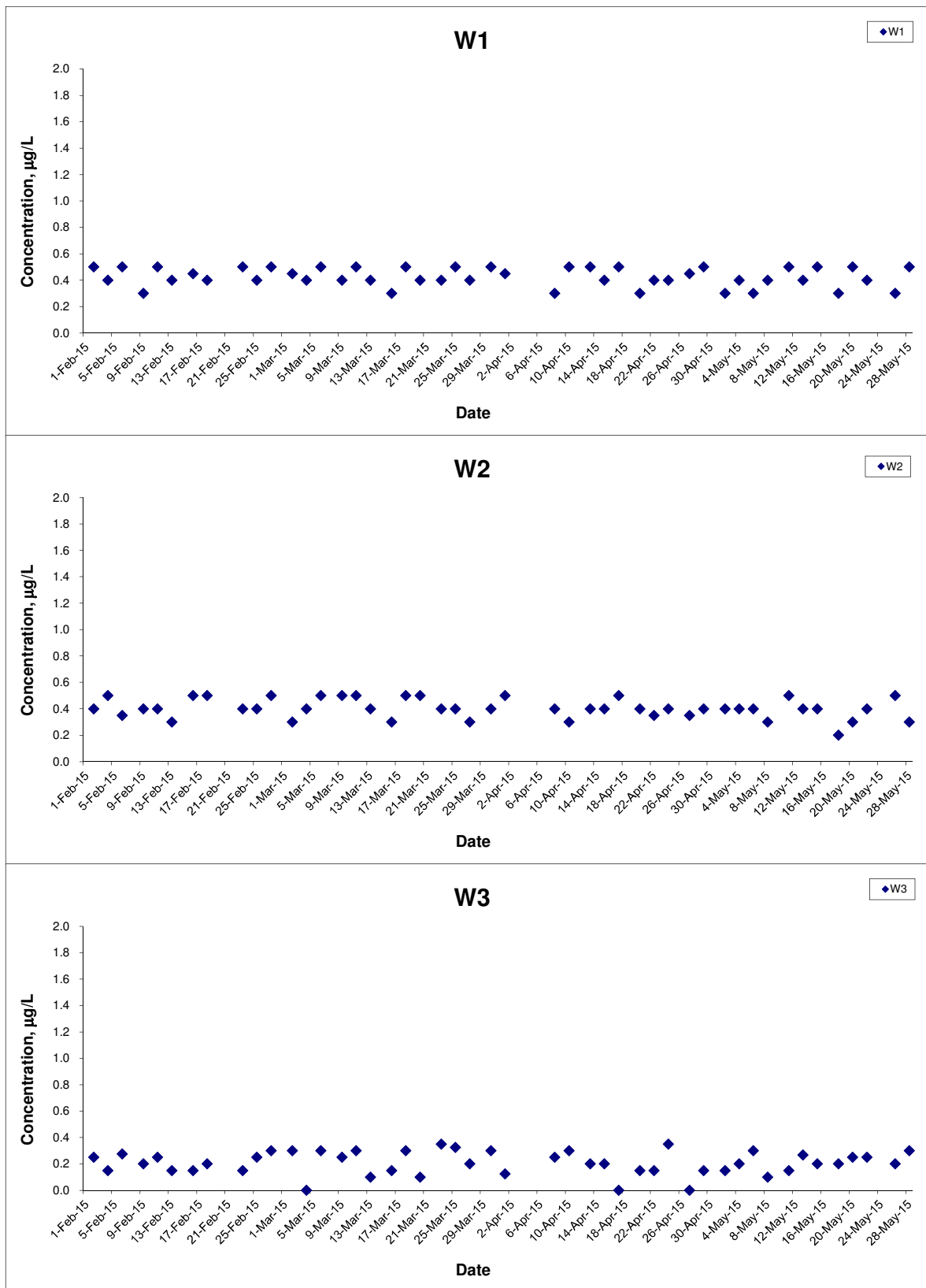
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No. MA11017	CINOTECH
	Date	May 15	Appendix E	

Nitrate-Nitrogen (Depth-averaged) at Mid-Flood Tide



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No. MA11017	CINOTECH
	Date	May 15	Appendix E	

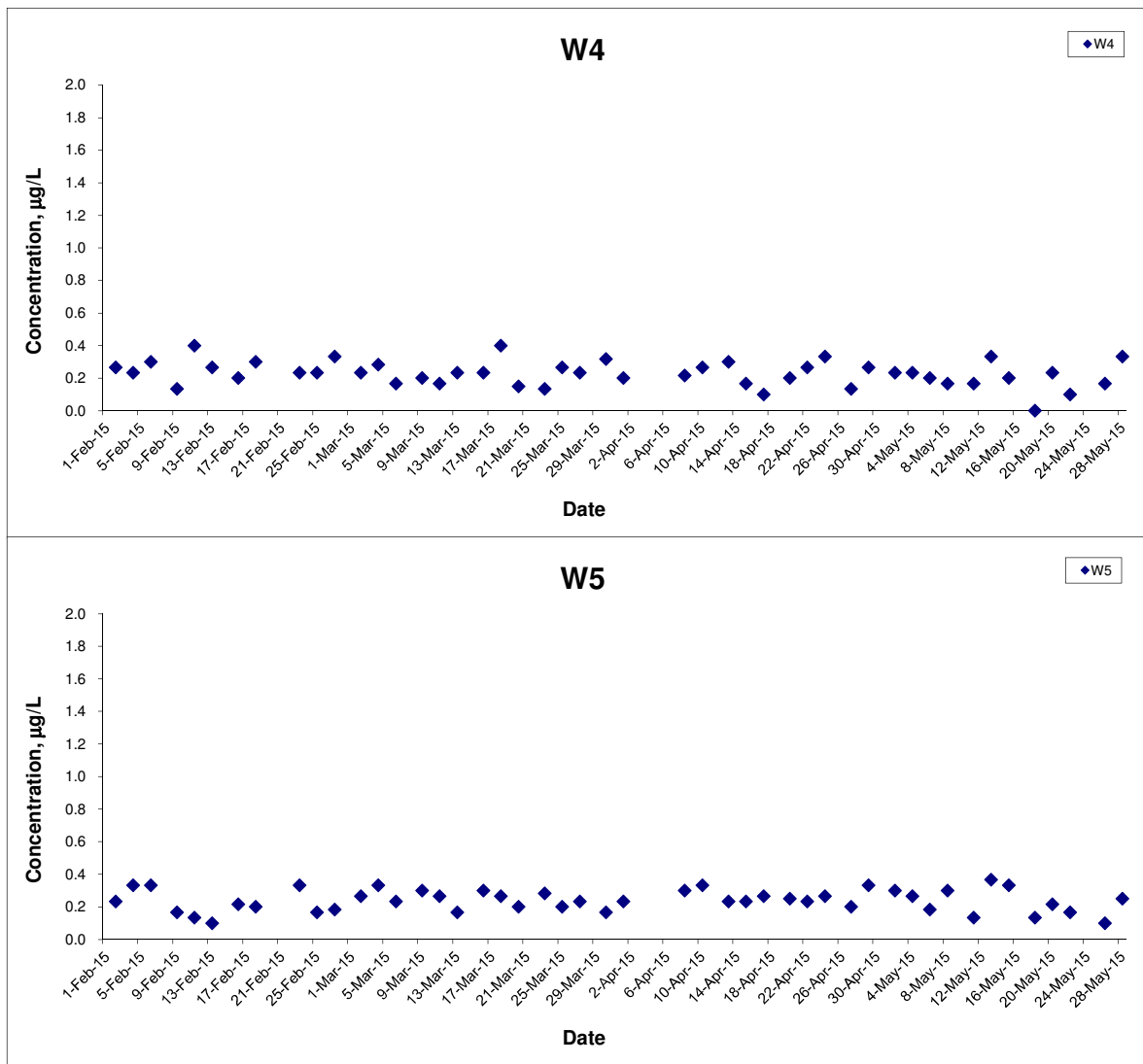
Cadmium (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.1µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

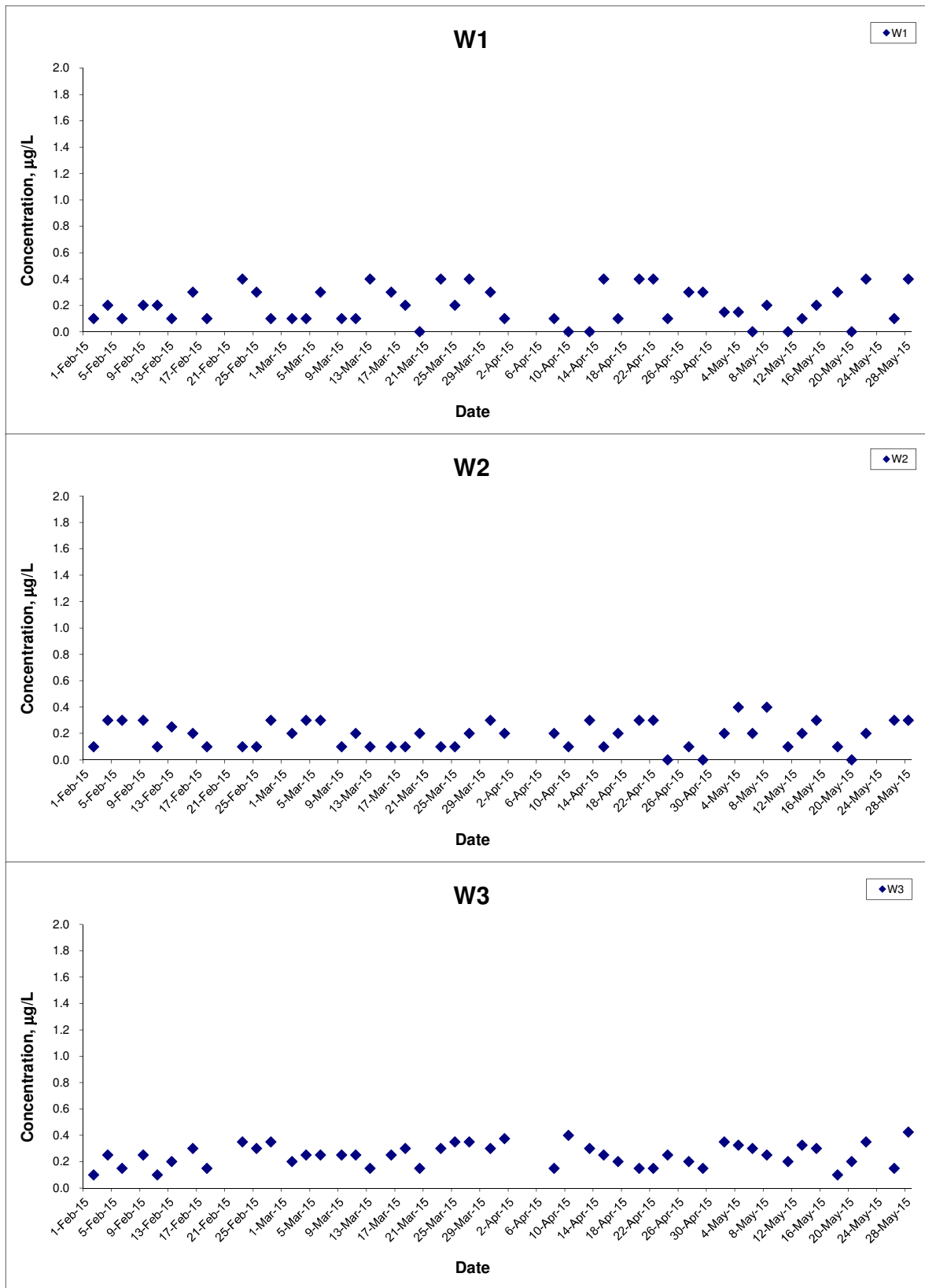
Cadmium (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.1µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

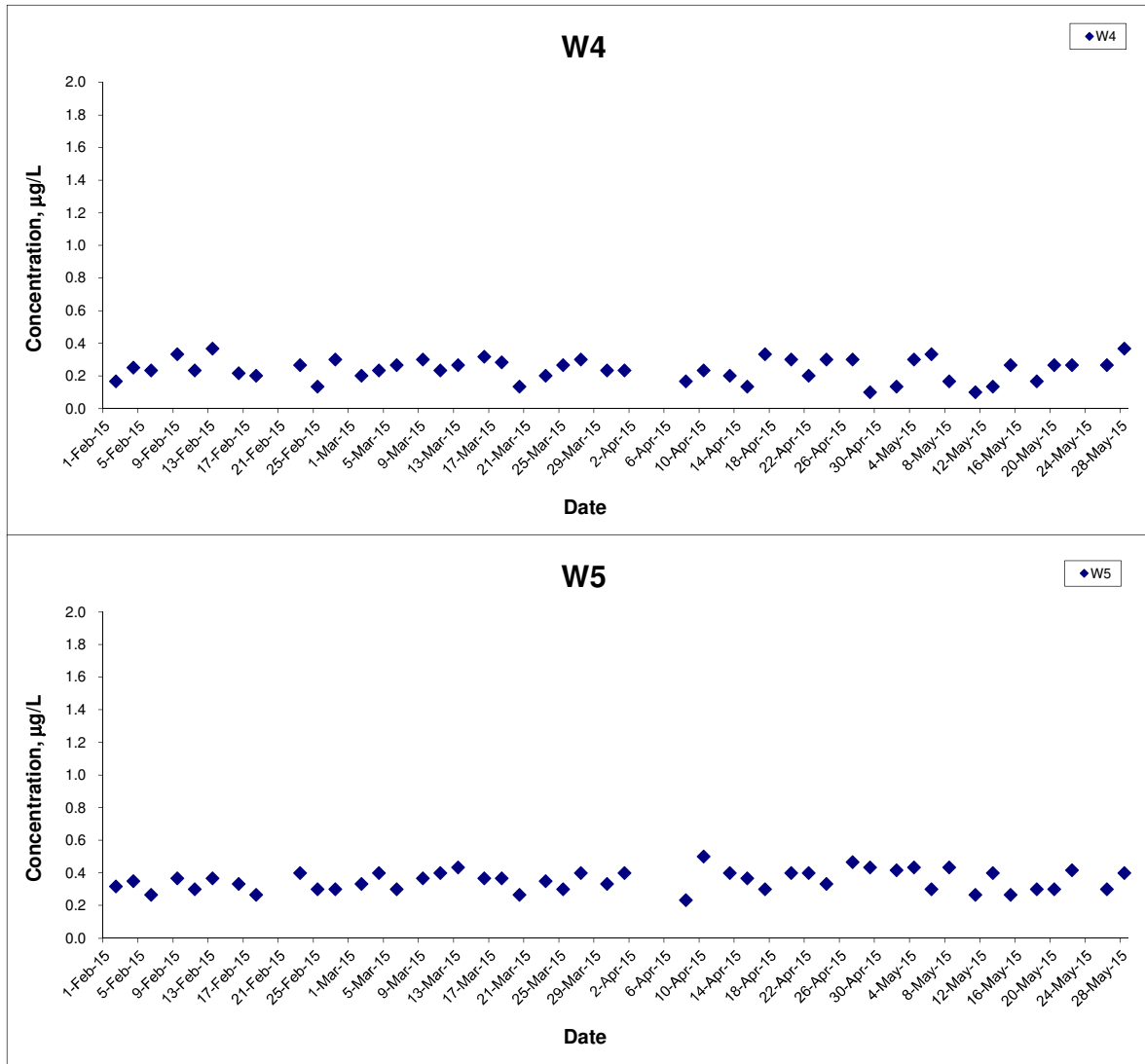
Cadmium (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <0.1µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
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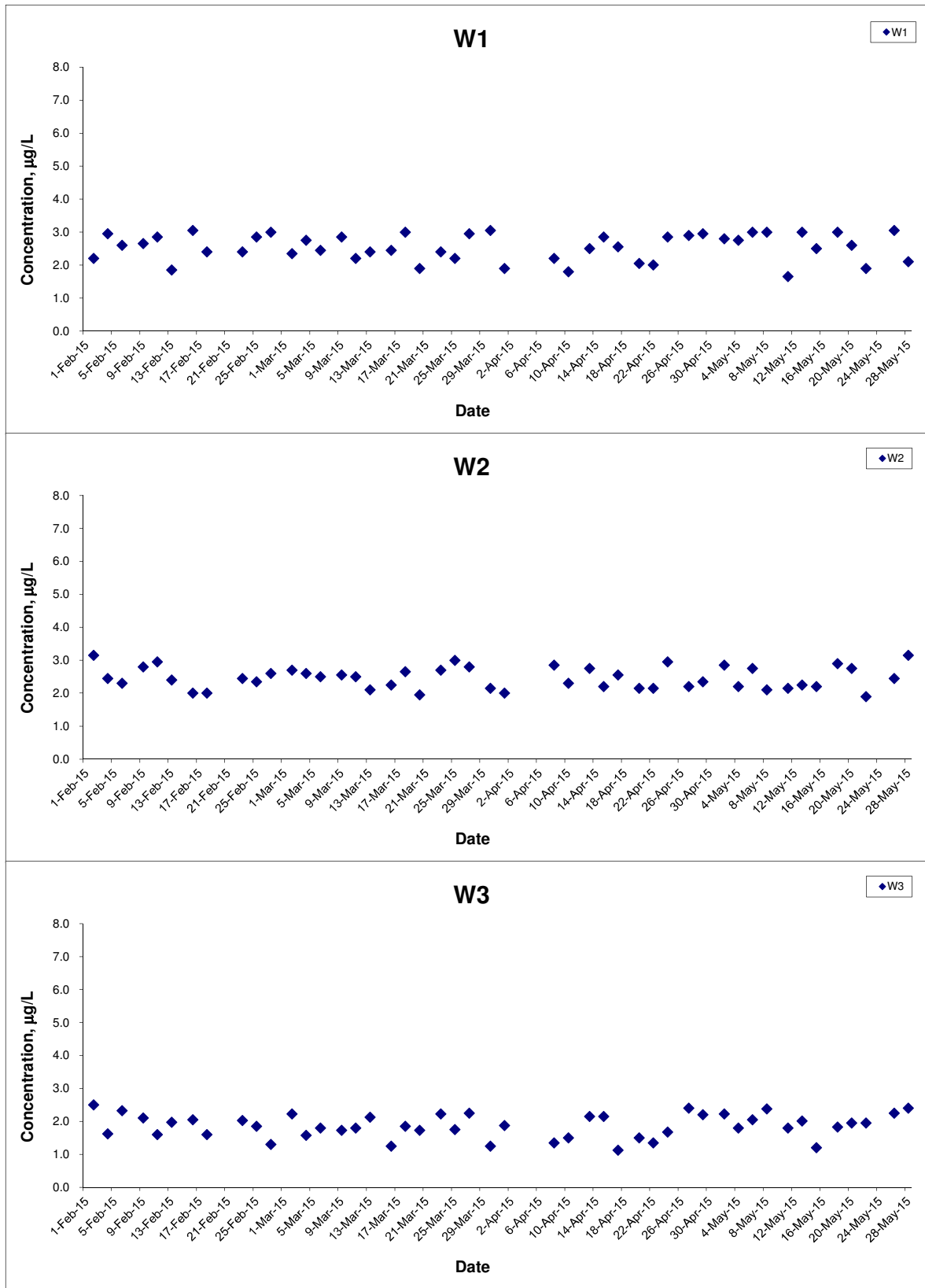
Cadmium (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <0.1µg/L

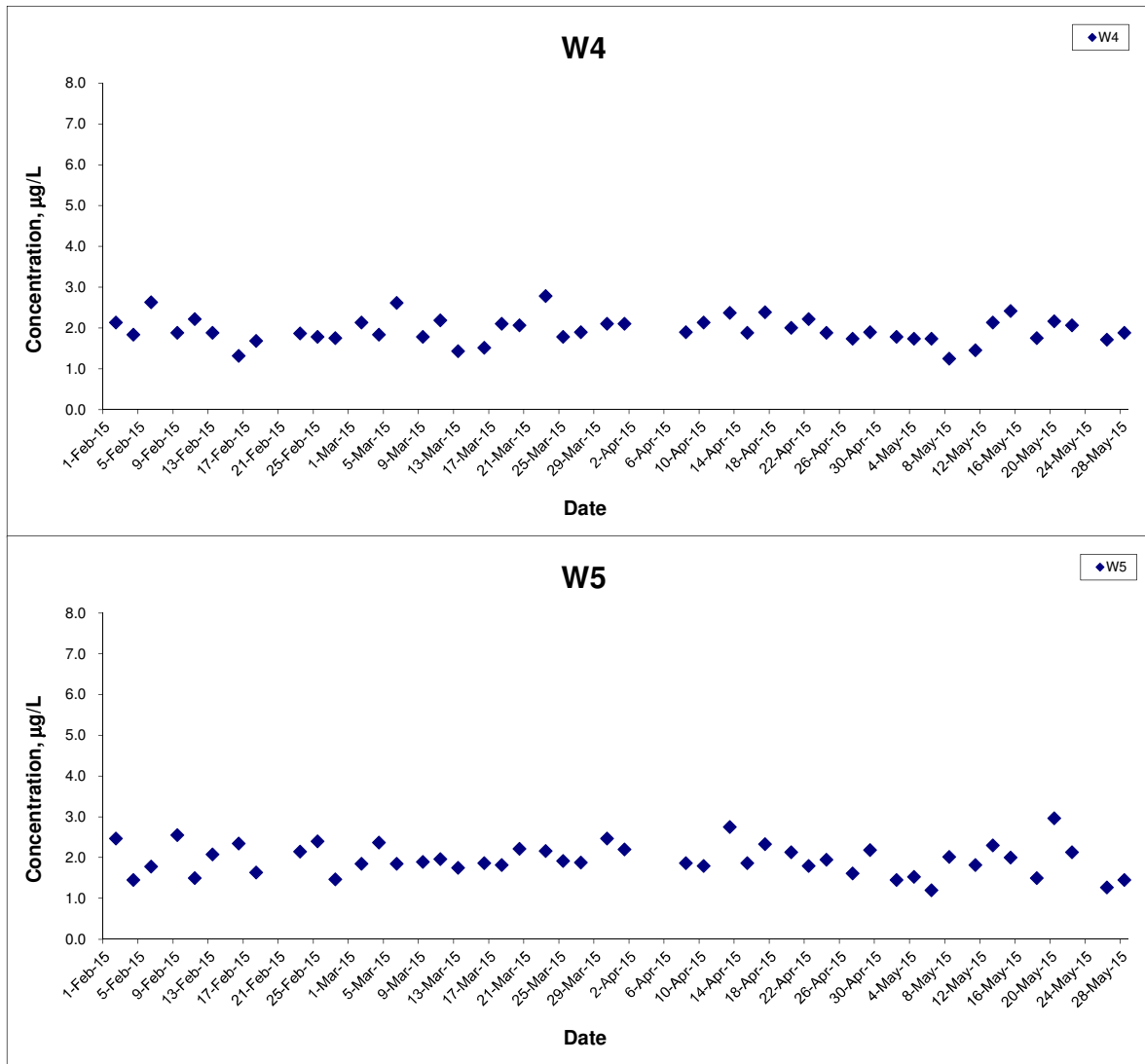
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Chromium (Depth-averaged) at Mid-Ebb Tide



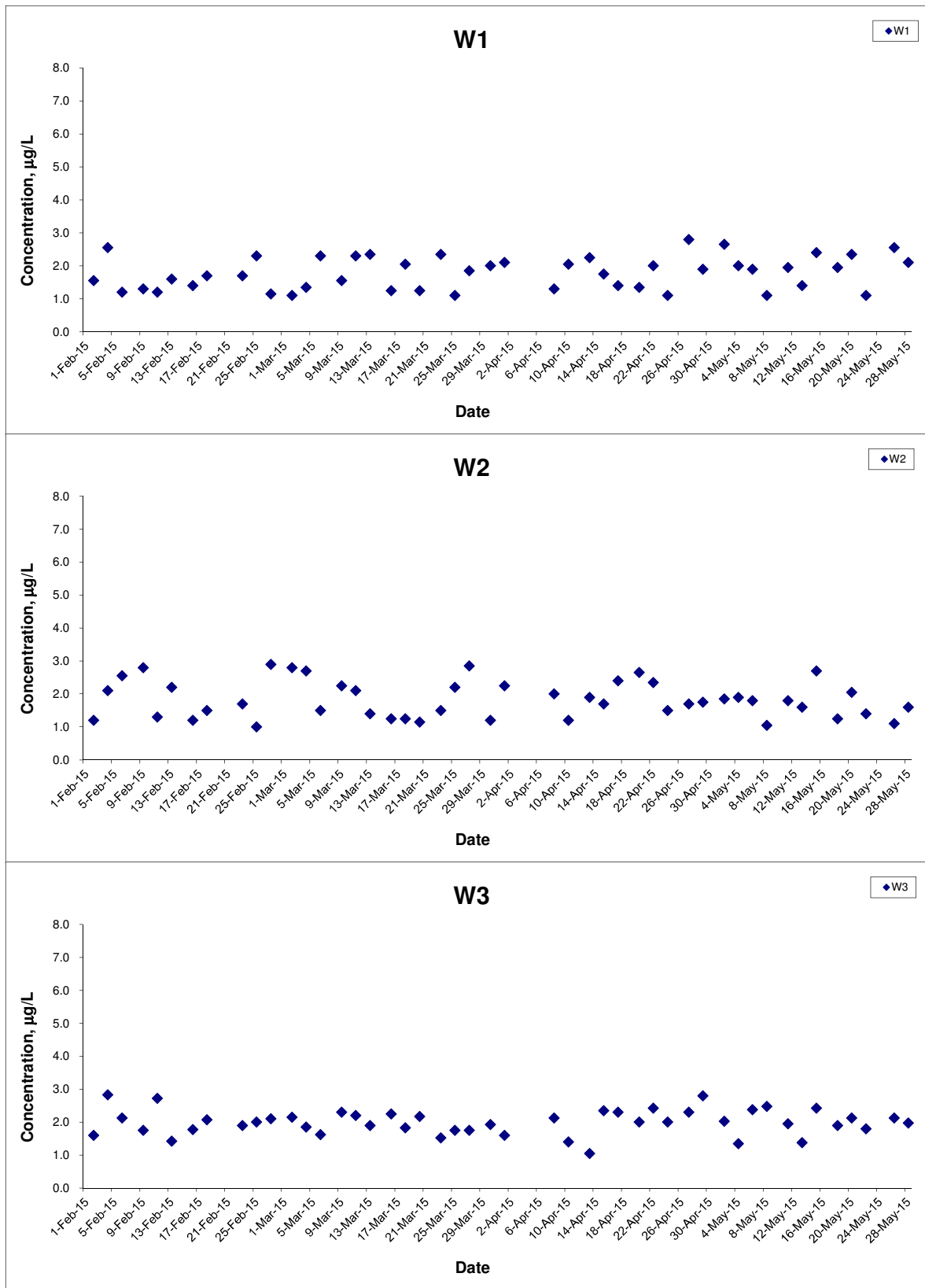
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Chromium (Depth-averaged) at Mid-Ebb Tide



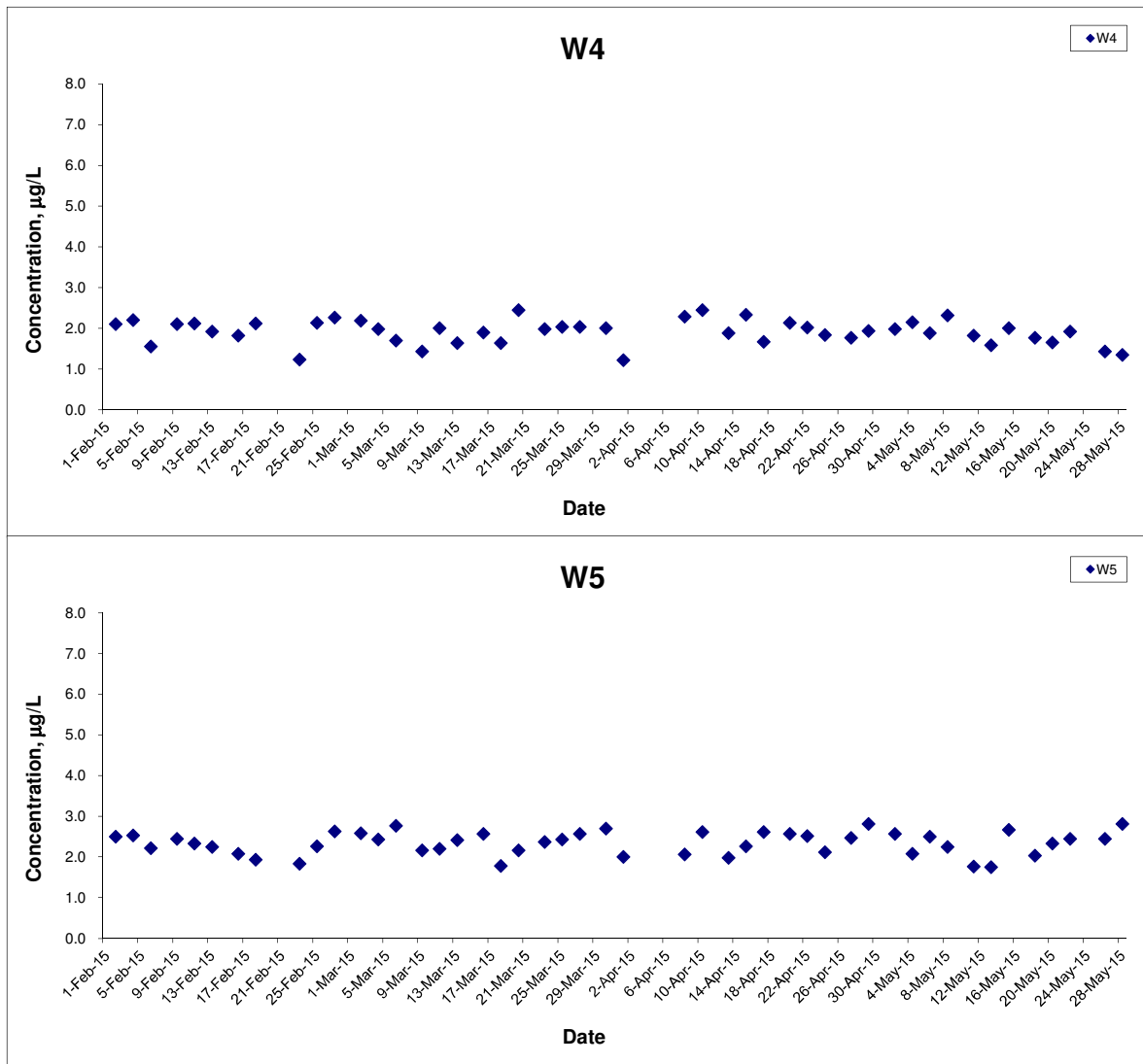
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
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Chromium (Depth-averaged) at Mid-Flood Tide



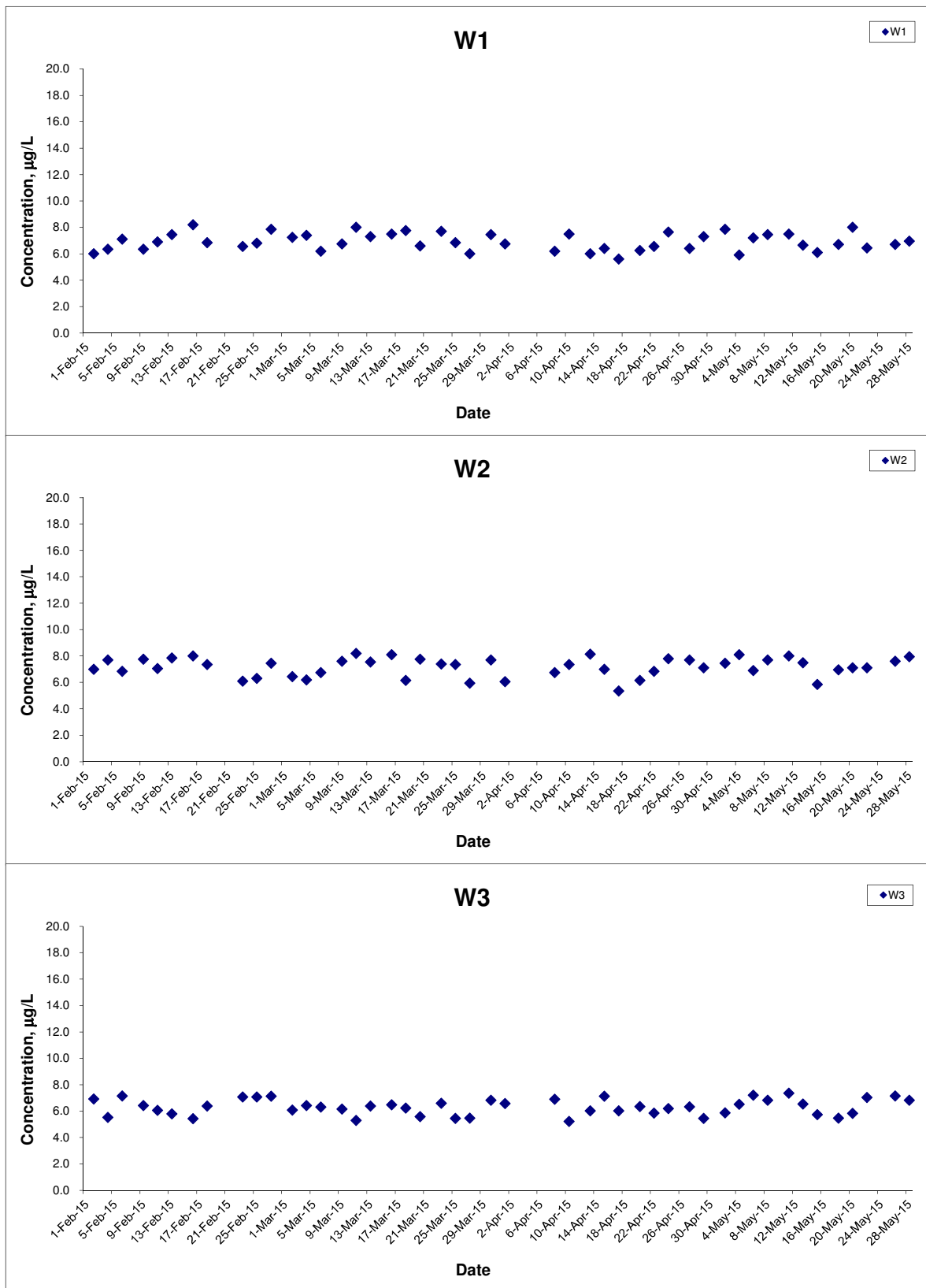
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Chromium (Depth-averaged) at Mid-Flood Tide



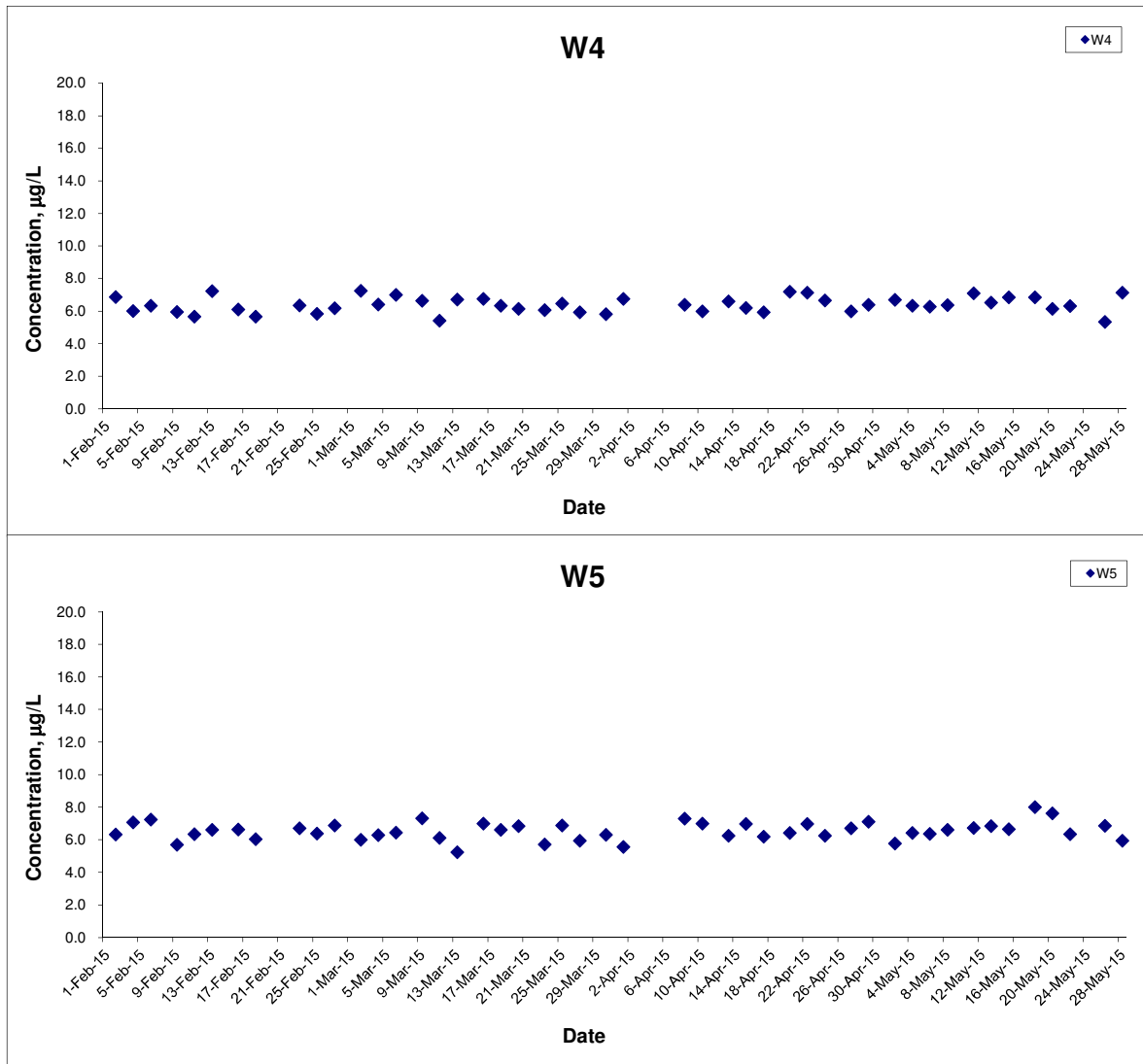
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Copper (Depth-averaged) at Mid-Ebb Tide



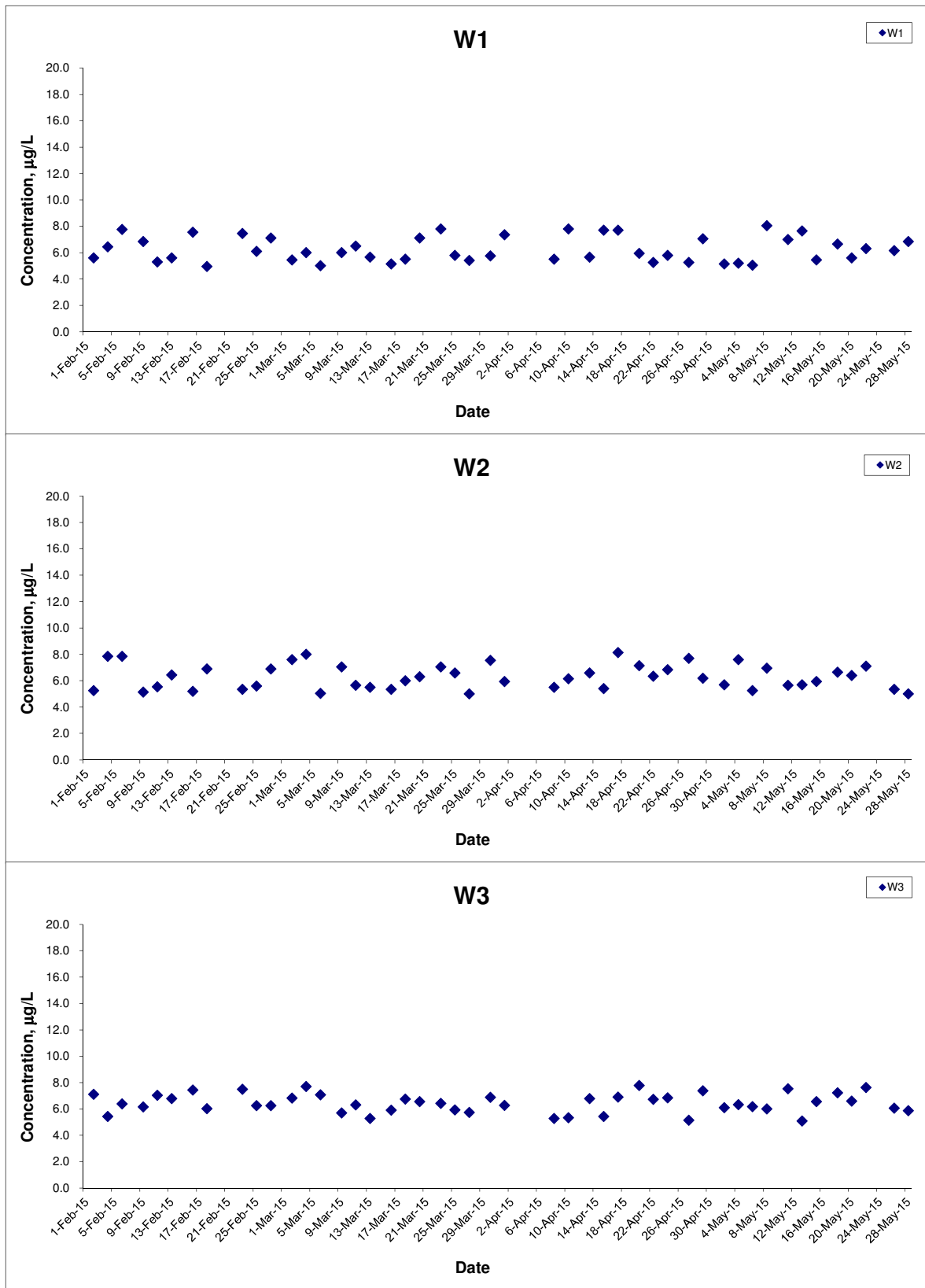
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

Copper (Depth-averaged) at Mid-Ebb Tide



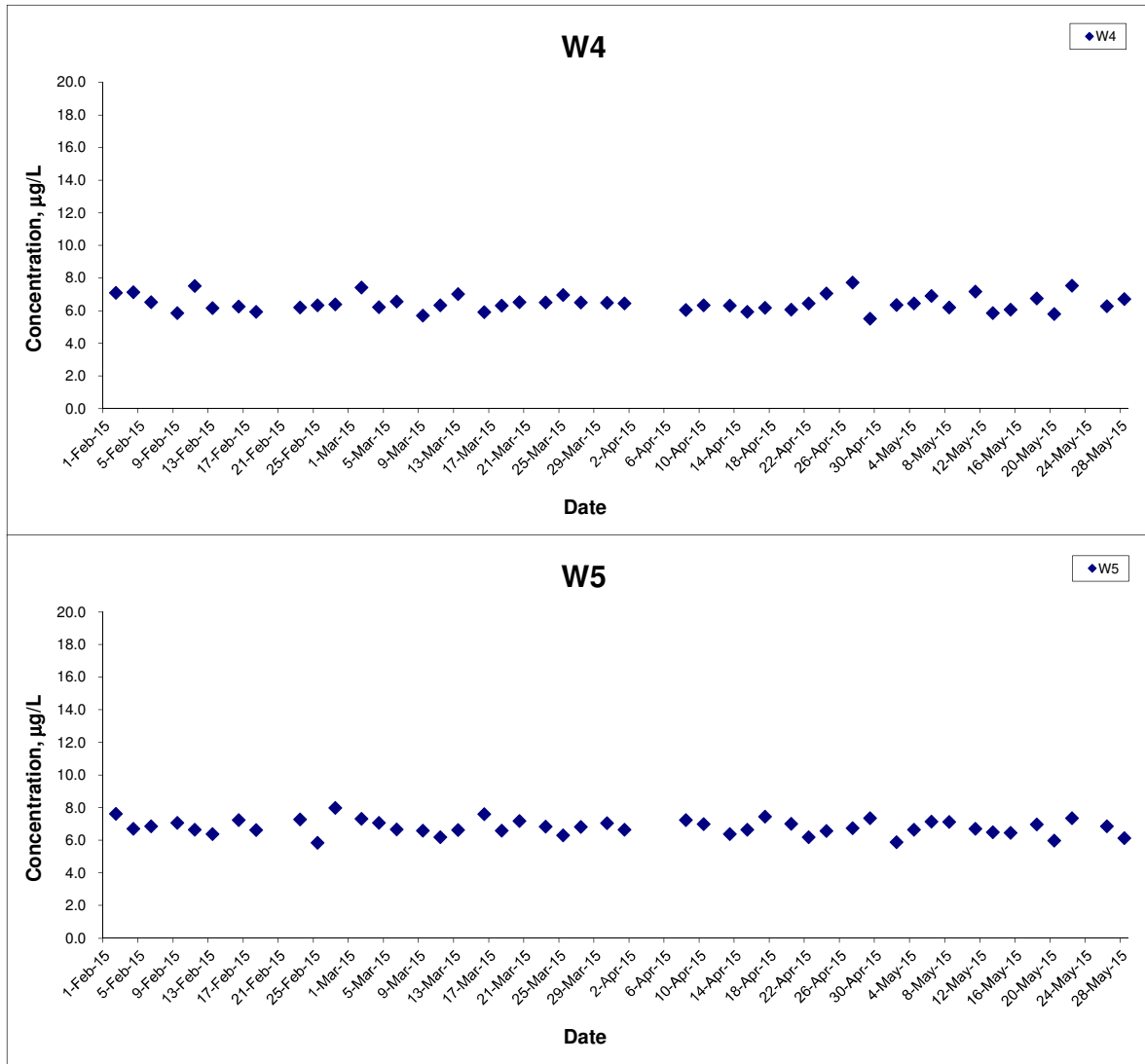
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

Copper (Depth-averaged) at Mid-Flood Tide



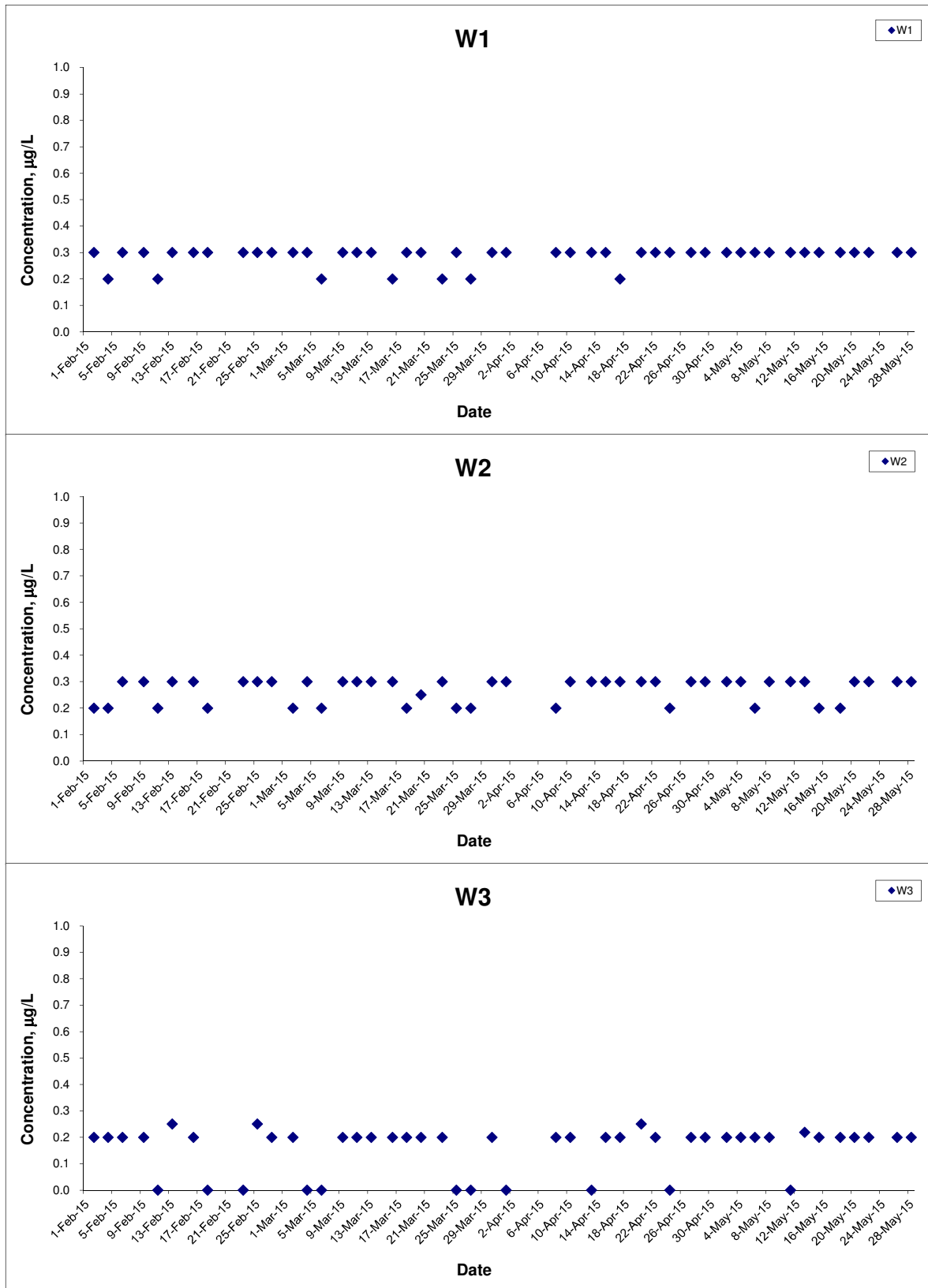
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
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Copper (Depth-averaged) at Mid-Flood Tide



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
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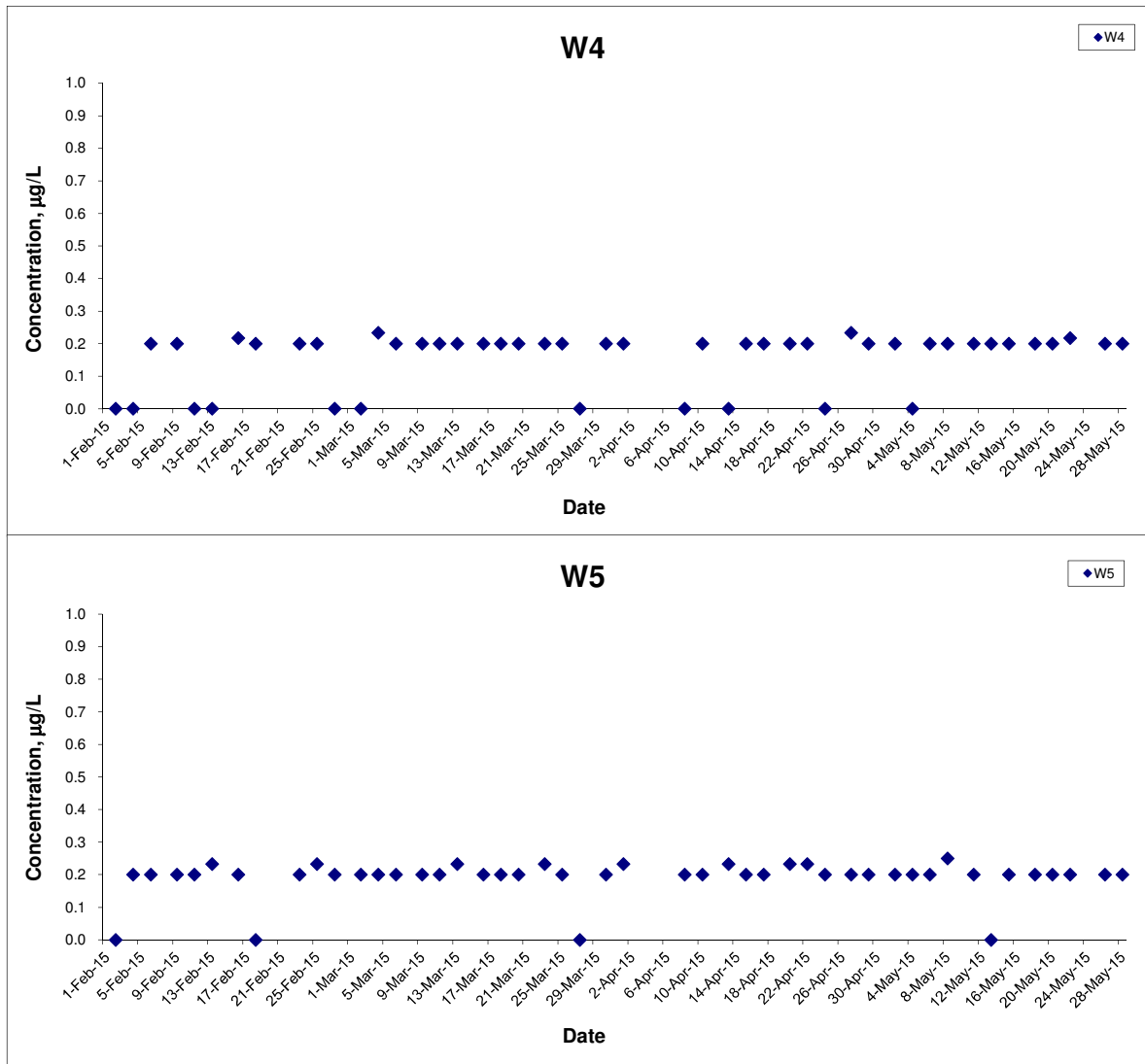
Mercury (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

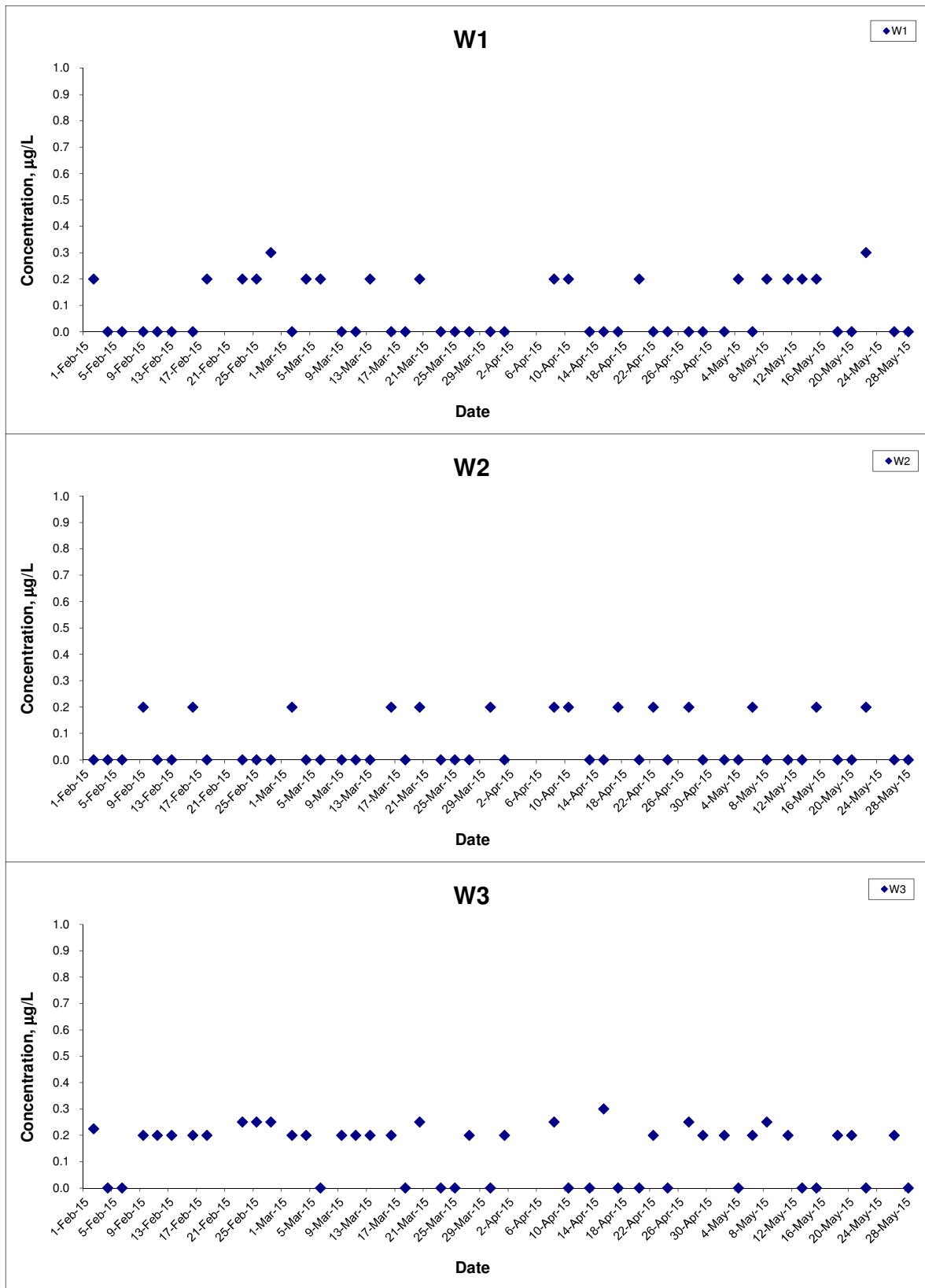
Mercury (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

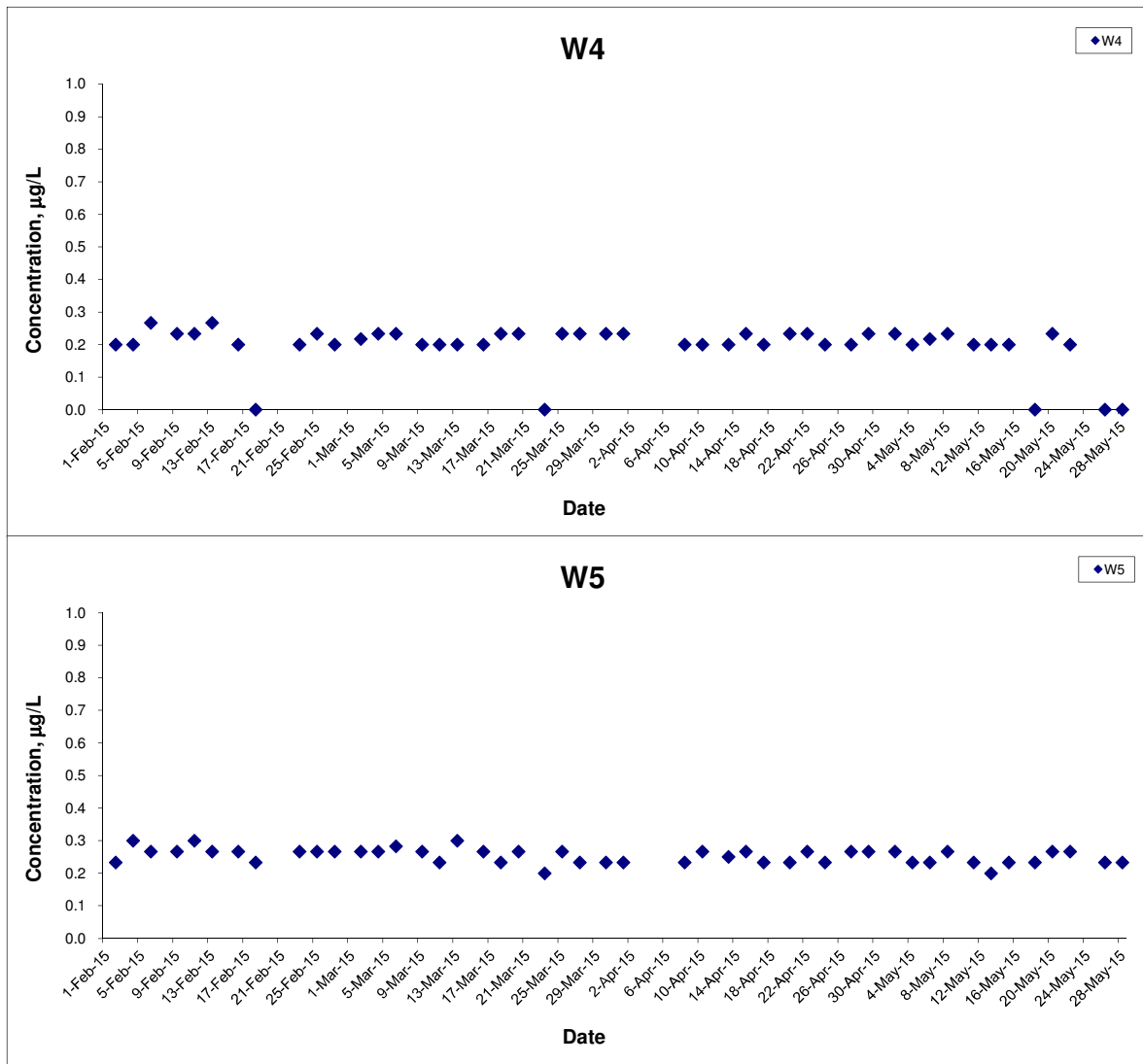
Mercury (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

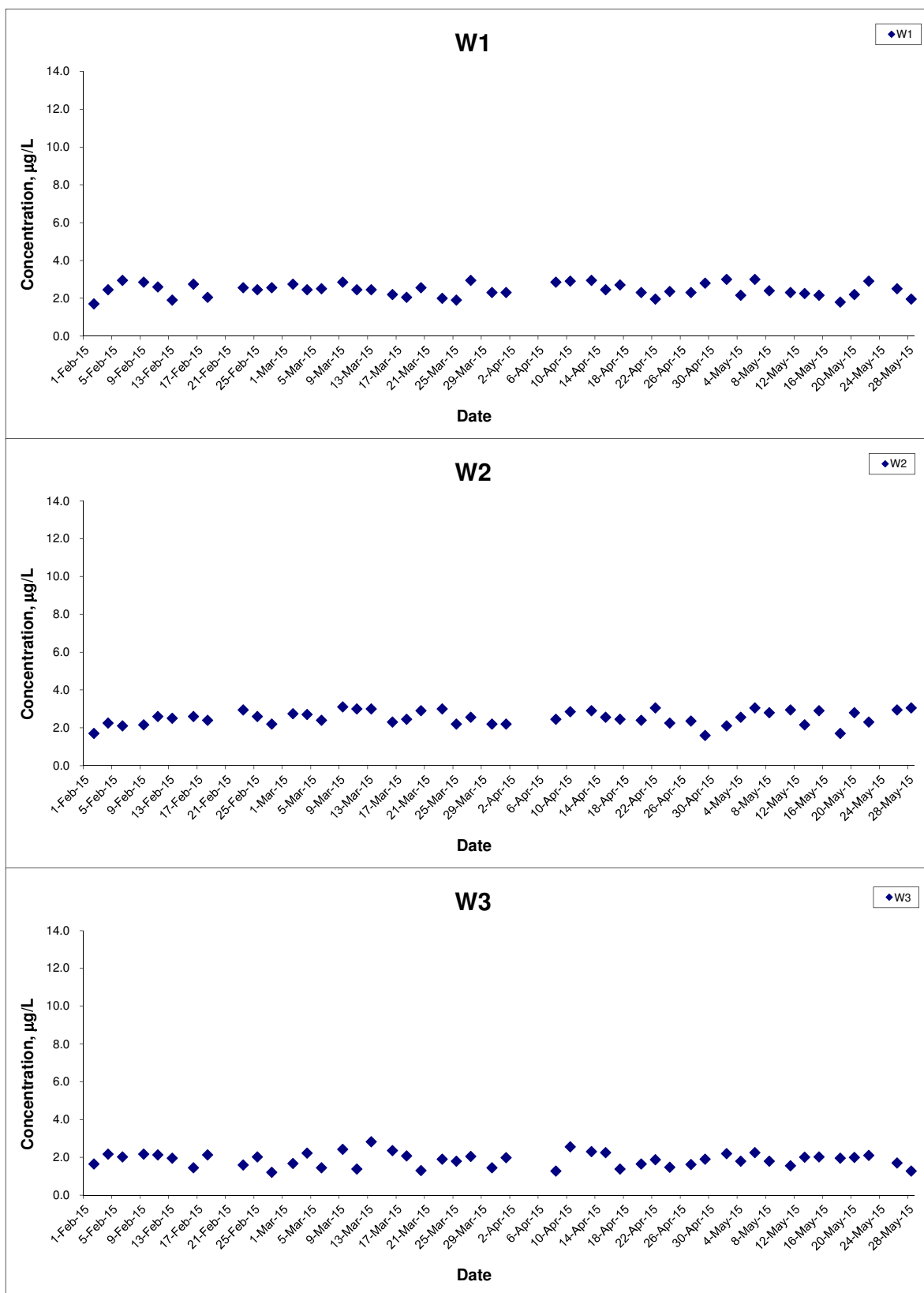
Mercury (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

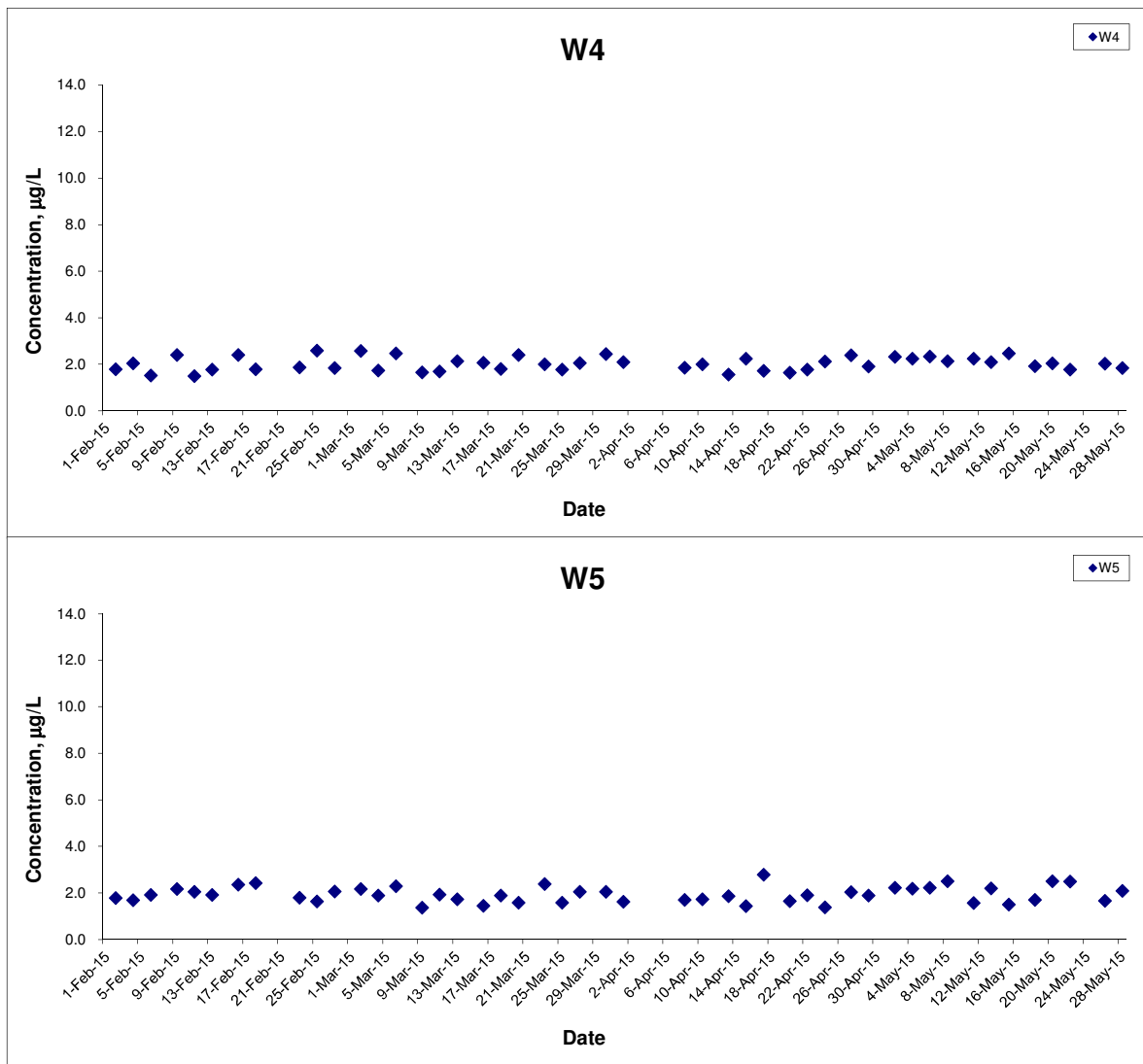
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

Nickel (Depth-averaged) at Mid-Ebb Tide



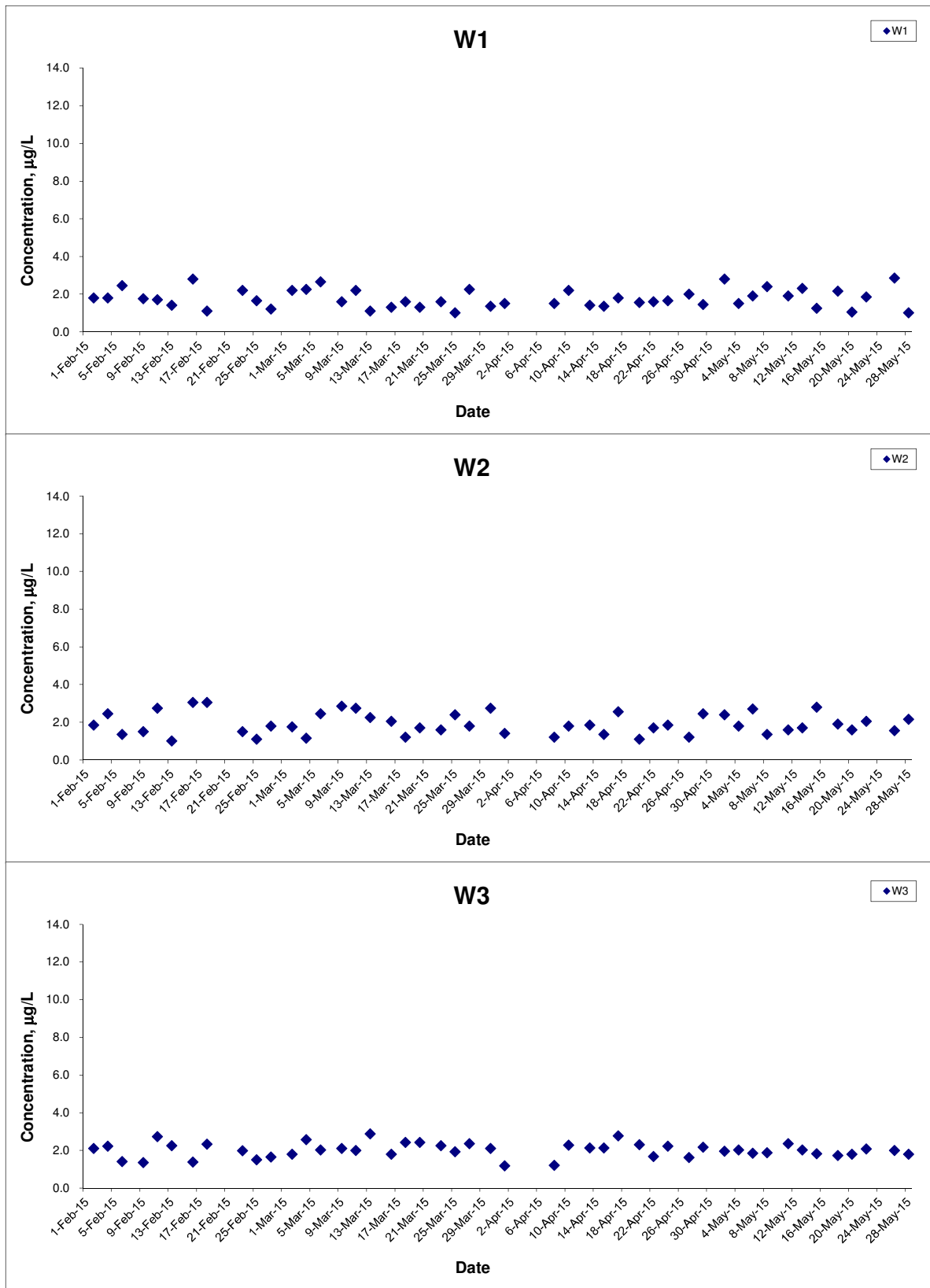
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Nickel (Depth-averaged) at Mid-Ebb Tide



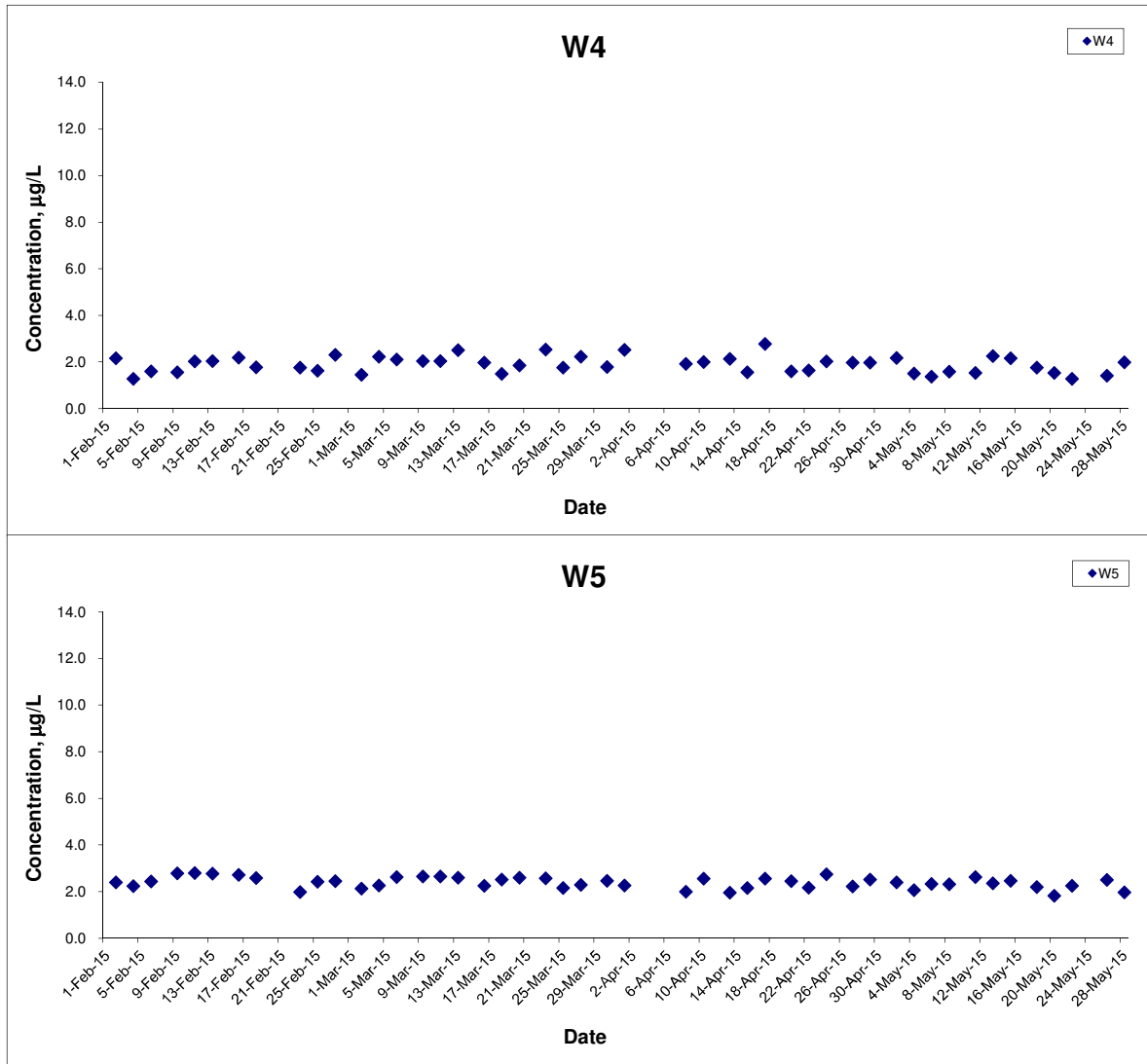
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Nickel (Depth-averaged) at Mid-Flood Tide



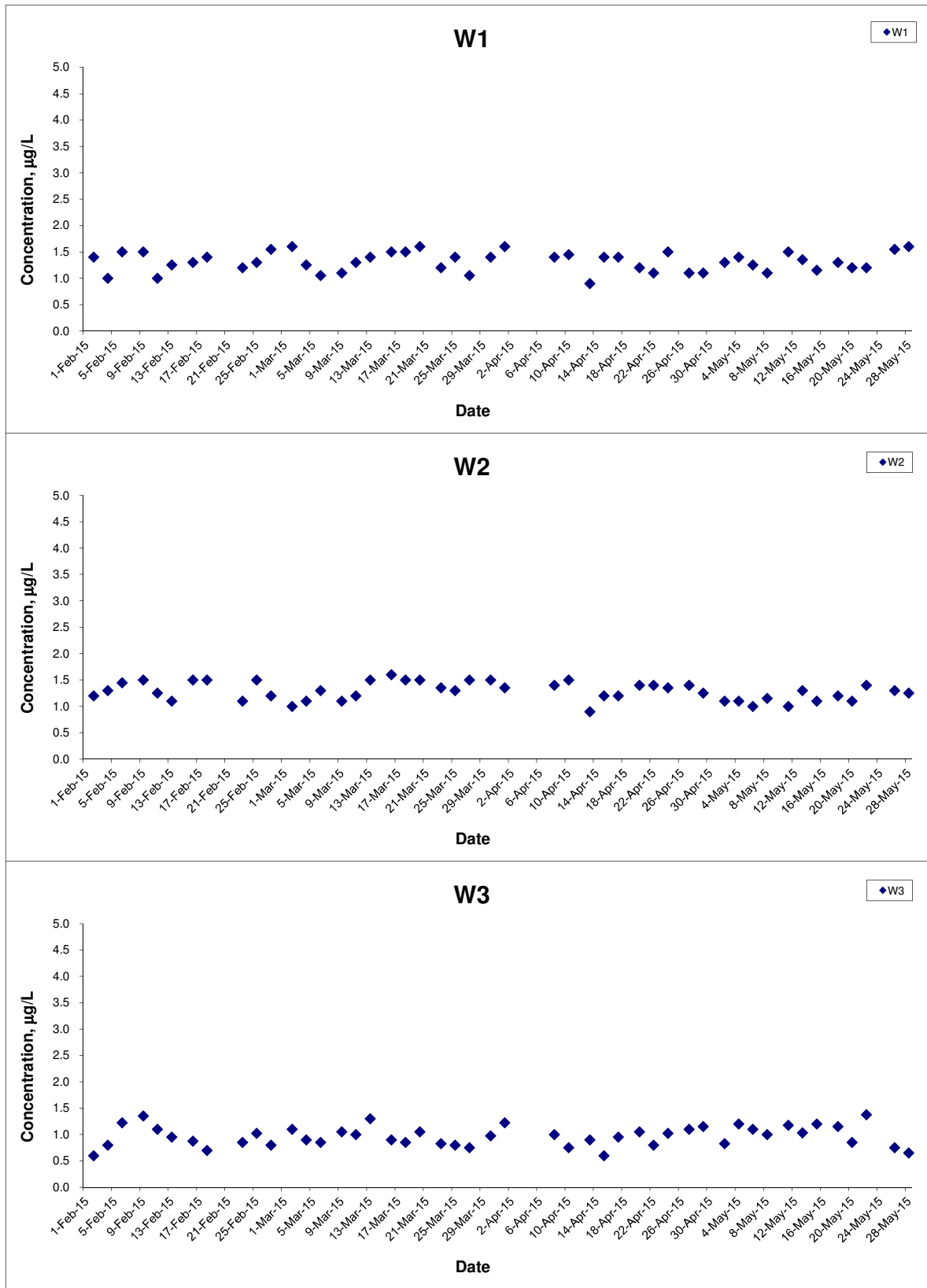
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No. MA11017	CINOTECH
	Date	May 15	Appendix E	

Nickel (Depth-averaged) at Mid-Flood Tide



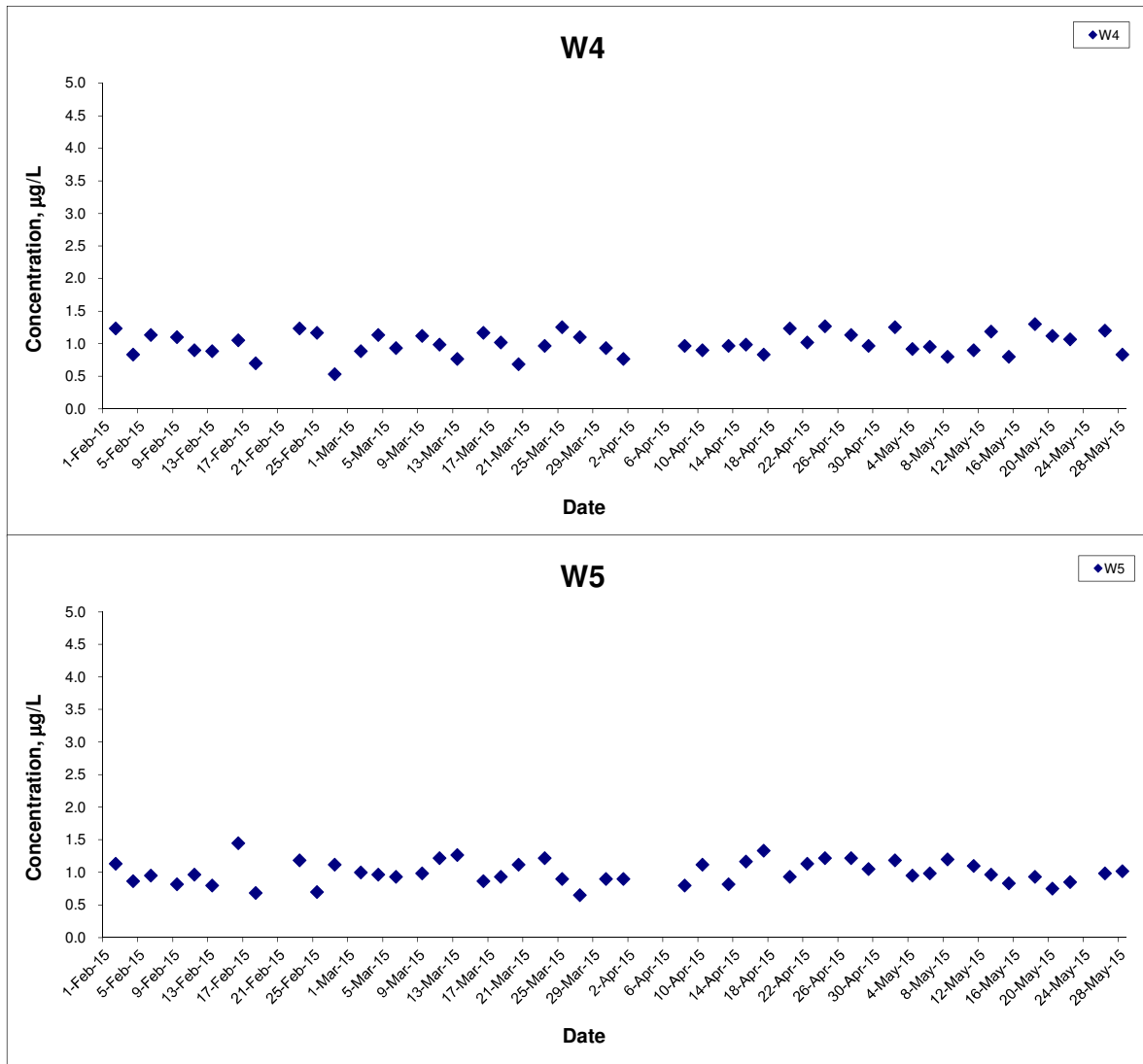
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Lead (Depth-averaged) at Mid-Ebb Tide



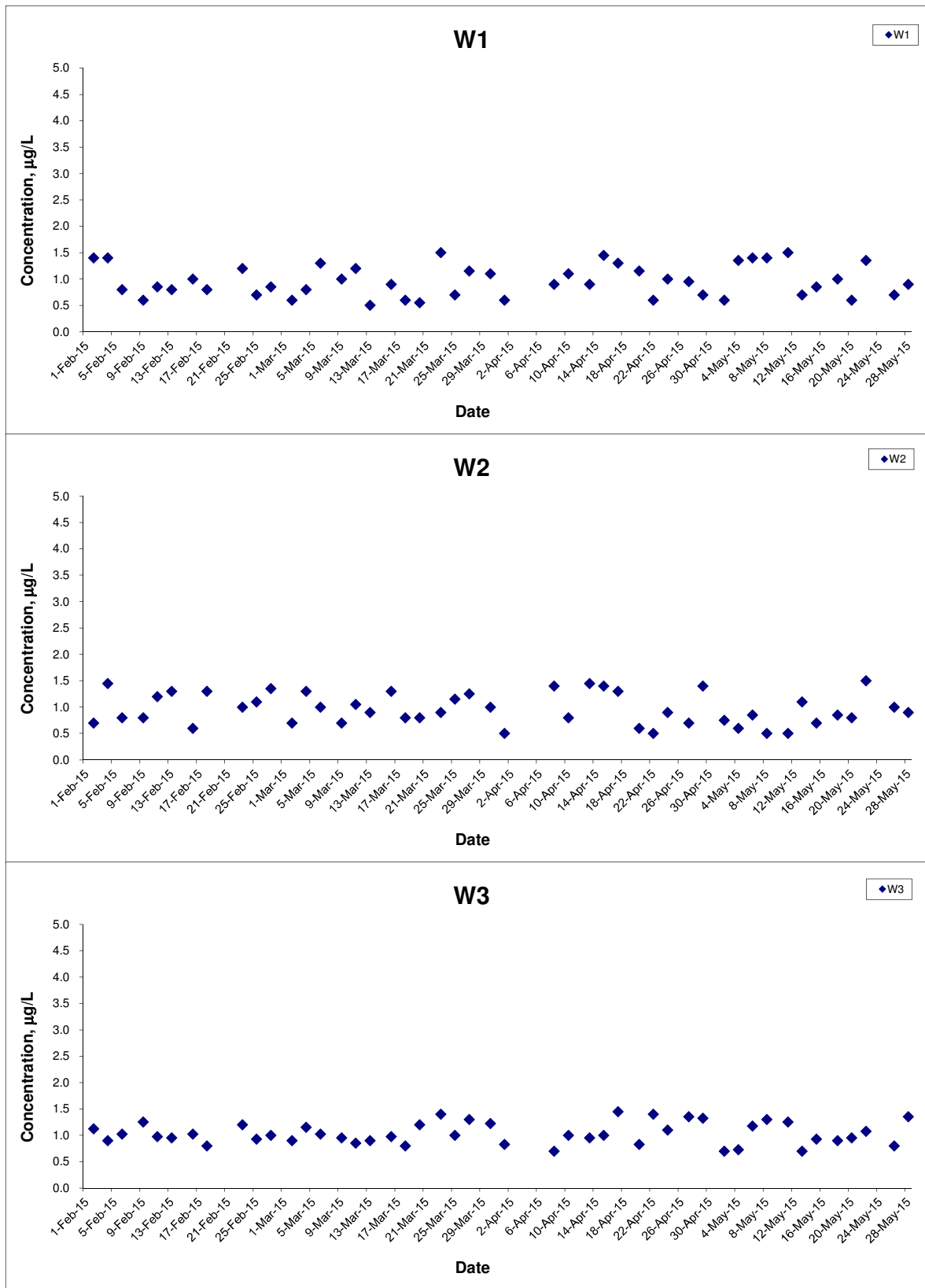
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Lead (Depth-averaged) at Mid-Ebb Tide



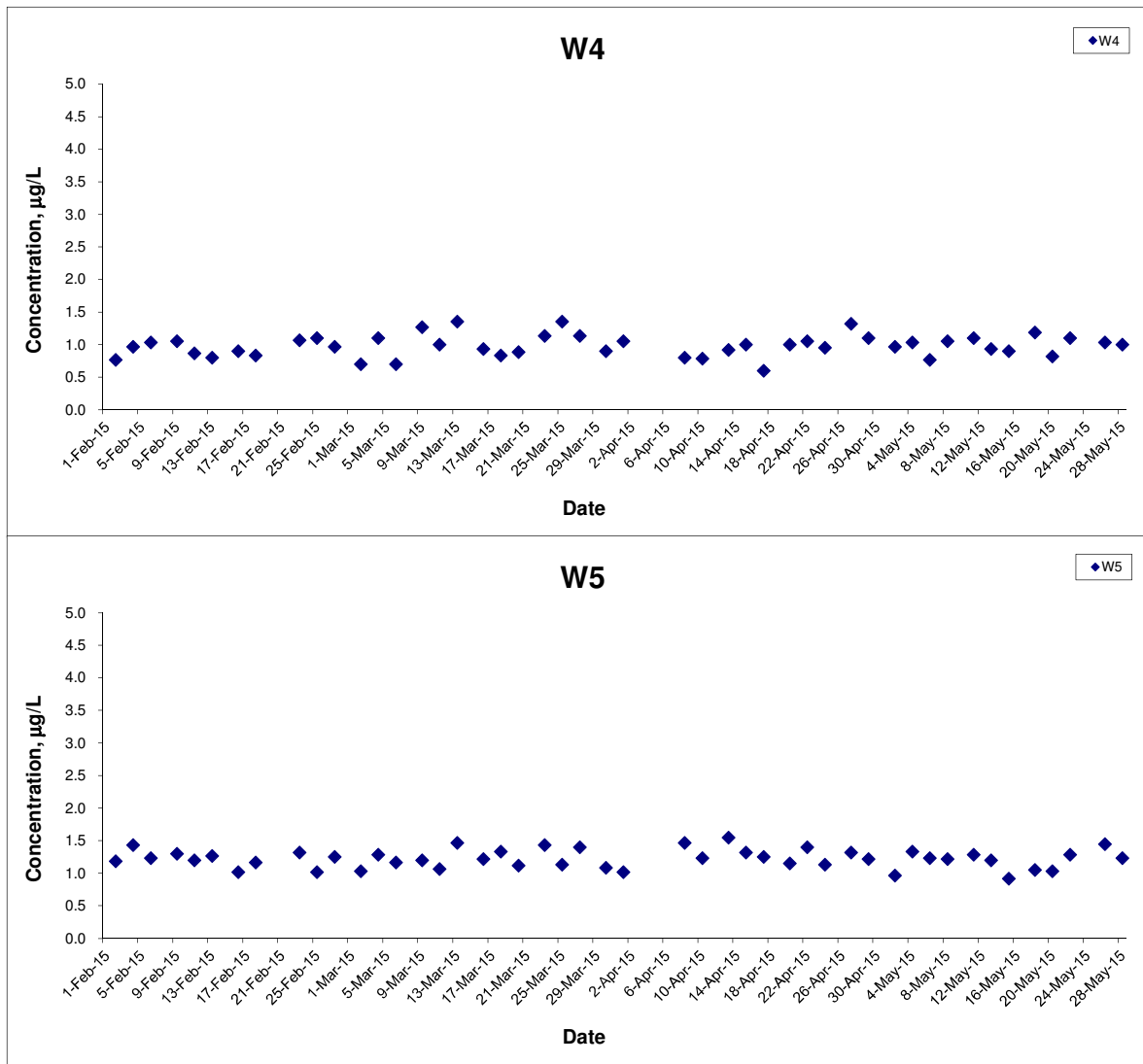
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Lead (Depth-averaged) at Mid-Flood Tide



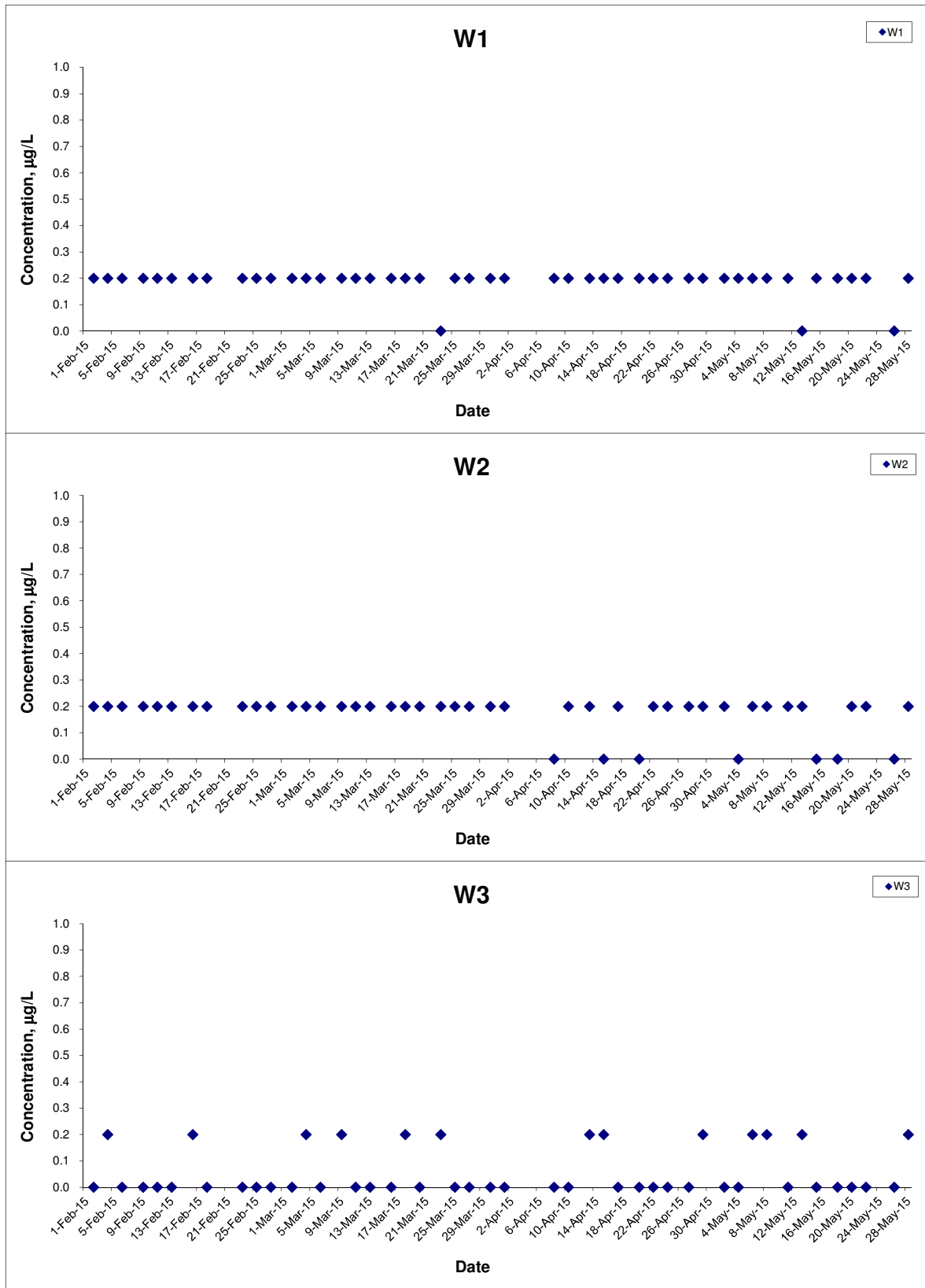
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale	N.T.S	Project No. MA11017	CINOTECH
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Lead (Depth-averaged) at Mid-Flood Tide



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

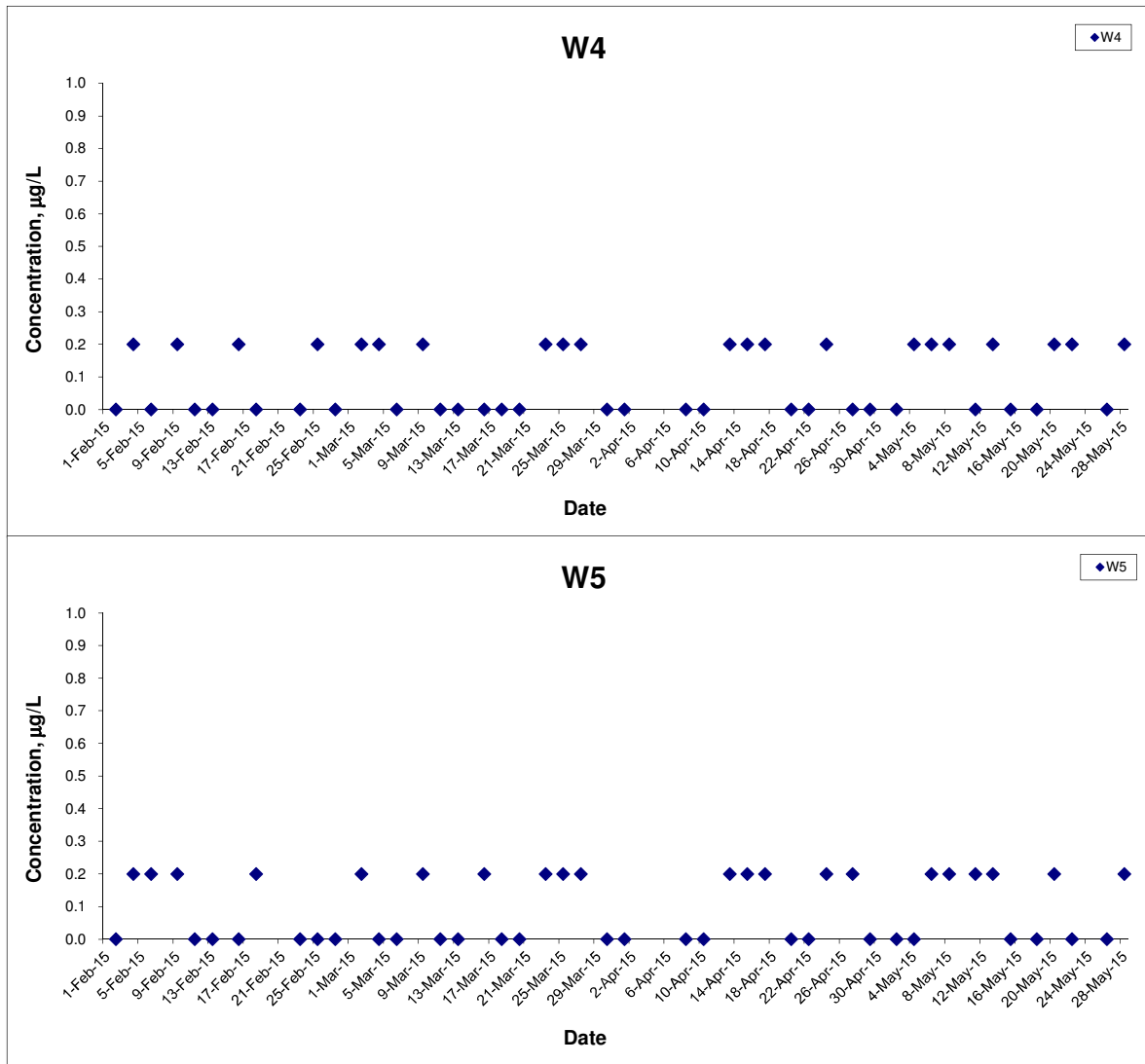
Silver (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

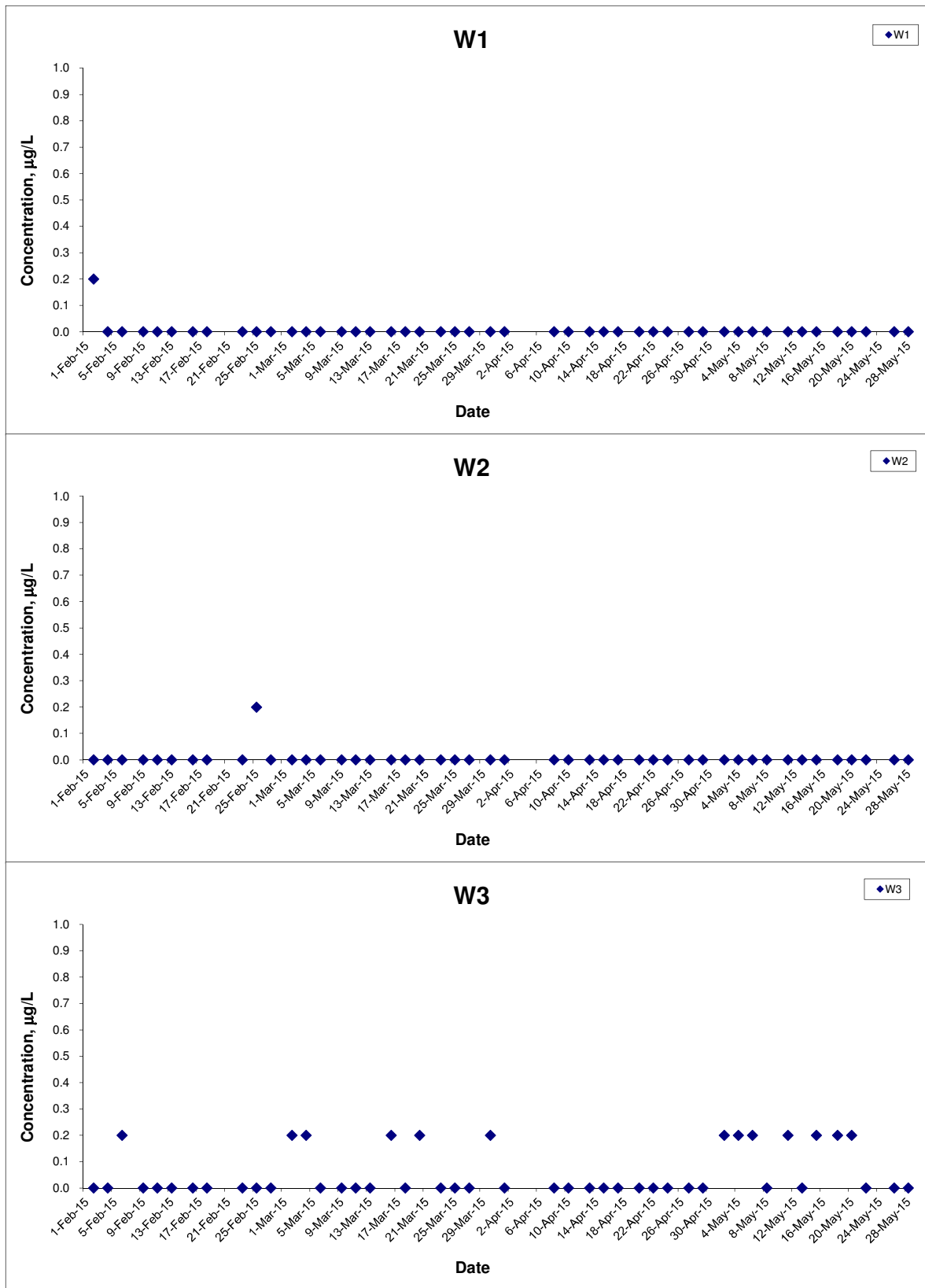
Silver (Depth-averaged) at Mid-Ebb Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

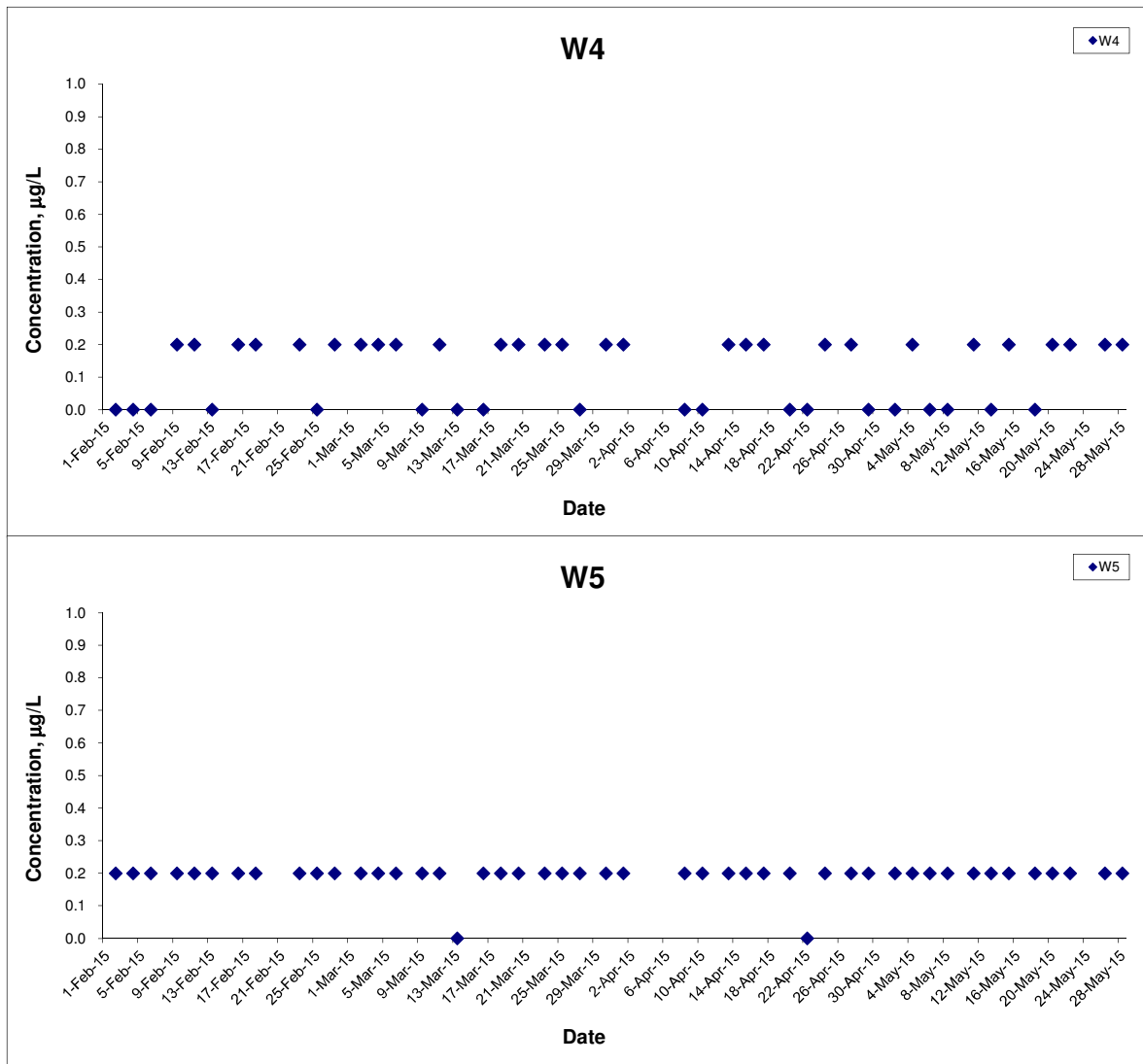
Silver (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <math><0.2\mu\text{g/L}</math>

Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

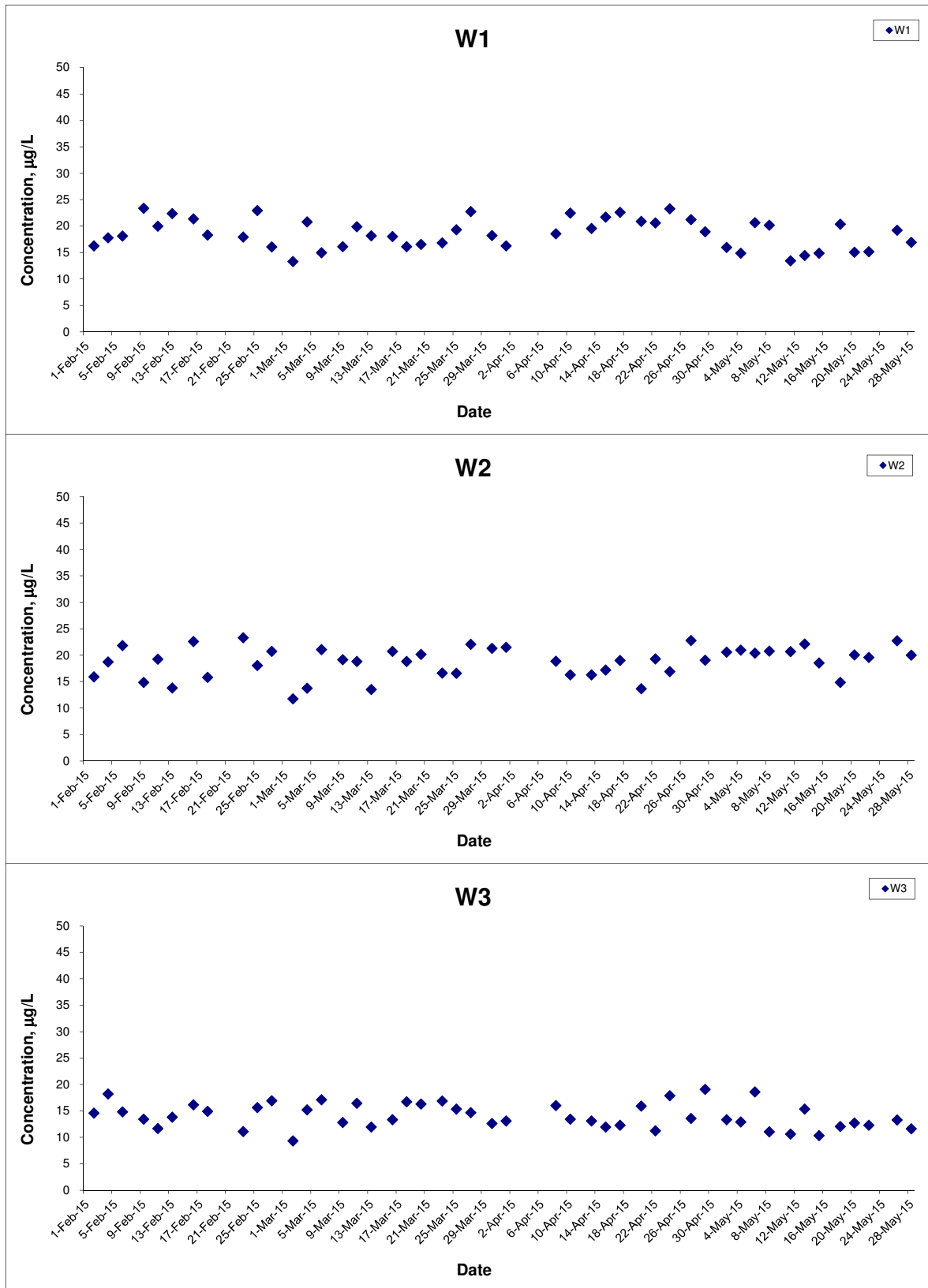
Silver (Depth-averaged) at Mid-Flood Tide



Remarks: The graphical point at zero concentration is presented as <0.2µg/L

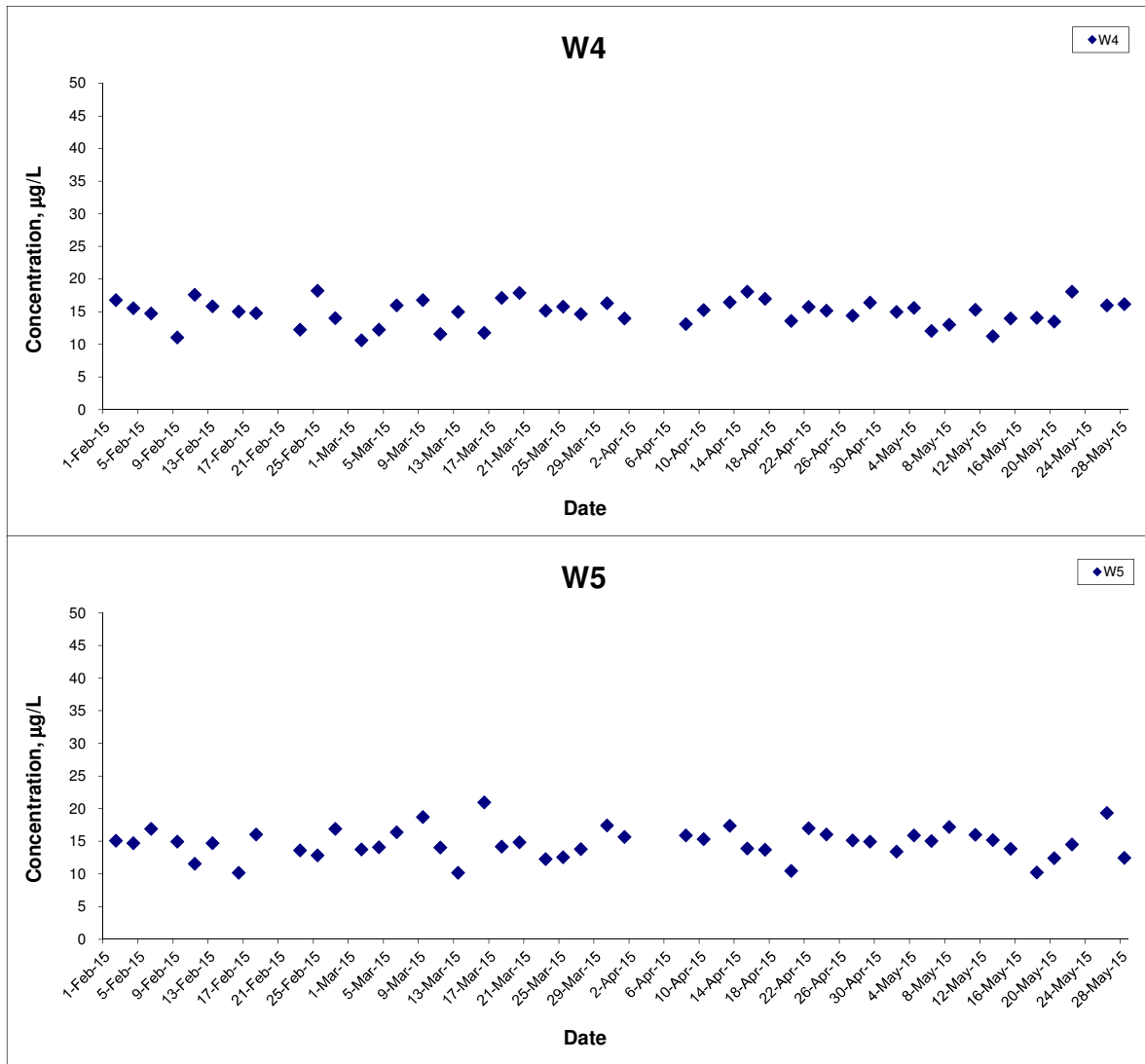
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

Zinc (Depth-averaged) at Mid-Ebb Tide



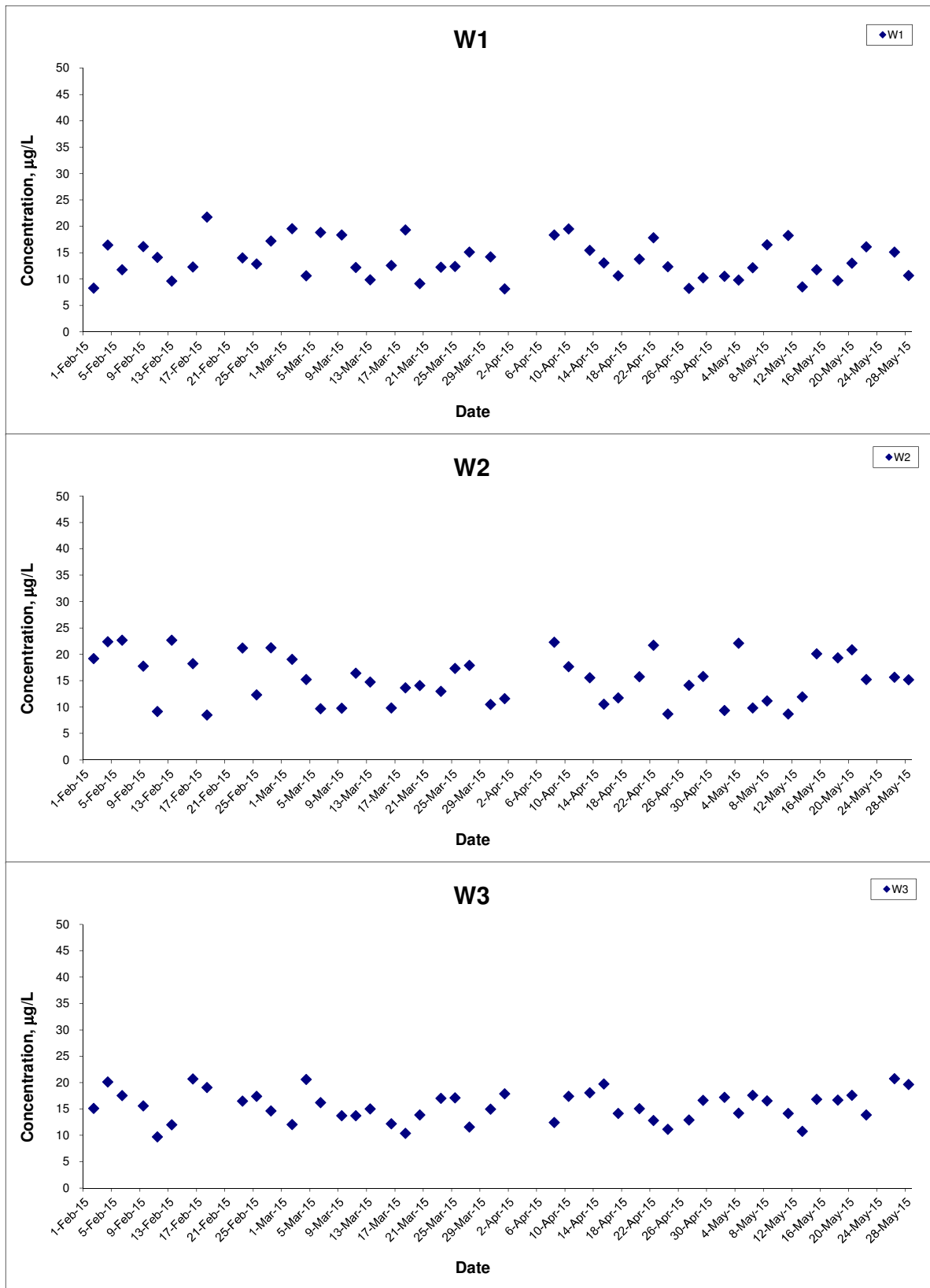
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Zinc (Depth-averaged) at Mid-Ebb Tide



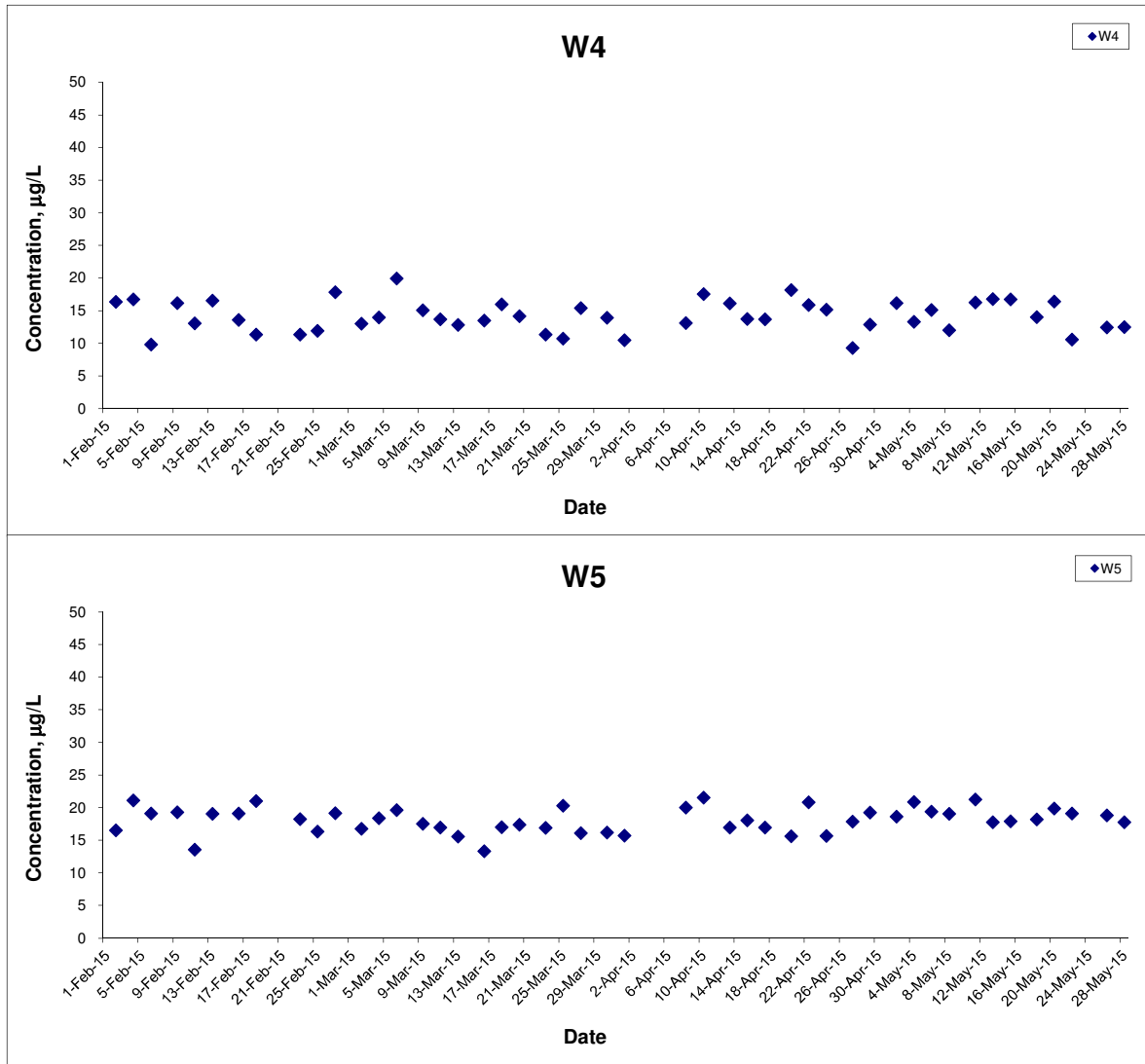
Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Zinc (Depth-averaged) at Mid-Flood Tide



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	
	Date May 15	Appendix E	

Zinc (Depth-averaged) at Mid-Flood Tide



Title Contract No. KL/2010/02 Kai Tak Development - Kai Tak Approach Channel and Kwun Tong Typhoon Shelter Improvement Works (Phase 1) Graphical Presentation of Water Quality Monitoring Results	Scale N.T.S	Project No. MA11017	CINOTECH
	Date May 15	Appendix E	

**APPENDIX F
LABORATORY TESTING REPORT
FOR WATER QUALITY
MONITORING**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150502

Sampling Date : 2015-05-02

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22354-1	22354-2	22354-3	22354-4	22354-5	22354-6
Suspended Solids (SS), mg/L	9.6	8.7	10.3	6.6	3.7	5.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	4.23	4.01	2.77	3.30	1.50	1.47
Cadmium (Cd), µg/L	0.3	0.4	0.1	0.2	0.1	0.2
Chromium (Cr), µg/L	2.8	2.9	1.7	2.8	1.7	2.5
Copper (Cu), µg/L	7.8	7.6	5.3	6.5	6.4	6.1
Mercury (Hg), µg/L	0.3	0.3	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	3.0	2.1	1.4	3.0	1.3	2.9
Lead (Pb), µg/L	1.3	1.1	0.5	1.2	0.6	1.6
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16.1	21.0	16.1	10.5	8.9	20.3

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22354-7	22354-8	22354-9	22354-10	22354-11	22354-12
Suspended Solids (SS), mg/L	3.1	5.5	4.7	3.9	8.4	9.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.47	1.47	1.47	1.47	0.55	0.62
Cadmium (Cd), µg/L	0.4	0.3	<0.1	0.5	0.1	0.2
Chromium (Cr), µg/L	1.2	1.1	1.4	1.8	2.6	1.9
Copper (Cu), µg/L	7.7	5.7	6.3	5.4	5.1	5.7
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.7	2.4	2.9	1.5	2.8	2.4
Lead (Pb), µg/L	1.6	1.0	1.2	1.4	0.6	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.5	11.0	18.5	10.7	10.6	9.5

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22354-13	22354-14	22354-15	22354-16	22354-17	22354-18
Suspended Solids (SS), mg/L	14.5	11.1	7.6	11.4	6.8	5.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.72	0.58	0.41	0.41	0.42	0.41
Cadmium (Cd), µg/L	0.3	0.4	0.1	0.1	0.2	0.4
Chromium (Cr), µg/L	1.1	3.0	1.0	2.8	2.1	2.8
Copper (Cu), µg/L	5.3	6.8	5.3	5.7	8.1	6.6
Mercury (Hg), µg/L	<0.2	0.2	0.3	<0.2	<0.2	0.2
Nickel (Ni), µg/L	1.2	2.7	1.3	2.4	2.8	1.4
Lead (Pb), µg/L	0.7	0.7	0.9	0.7	1.3	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16.1	18.0	8.7	19.2	20.7	22.3

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22354-19	22354-20	22354-21	22354-22	22354-23	22354-24
Suspended Solids (SS), mg/L	7.5	12.6	9.8	8.7	10.5	6.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.41	0.40	4.19	4.05	2.71	3.32
Cadmium (Cd), µg/L	0.5	0.3	0.3	0.4	0.1	0.2
Chromium (Cr), µg/L	2.2	2.8	2.8	2.8	1.7	2.7
Copper (Cu), µg/L	5.4	5.6	7.9	7.3	5.4	6.3
Mercury (Hg), µg/L	0.3	0.3	0.3	0.3	0.2	0.2
Nickel (Ni), µg/L	2.7	3.1	3.0	2.1	1.4	3.0
Lead (Pb), µg/L	0.9	1.3	1.3	1.1	0.5	1.1
Silver (Ag), µg/L	<0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	17.2	16.1	15.8	20.2	16.0	10.8

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22354-25	22354-26	22354-27	22354-28	22354-29	22354-30
Suspended Solids (SS), mg/L	3.7	5.5	3.2	5.7	4.6	3.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.49	1.48	1.47	1.46	1.45	1.45
Cadmium (Cd), µg/L	0.1	0.2	0.4	0.3	<0.1	0.5
Chromium (Cr), µg/L	1.7	2.4	1.2	1.2	1.4	1.8
Copper (Cu), µg/L	6.3	5.8	7.8	5.5	6.2	5.5
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	1.3	3.0	2.7	2.3	2.8	1.4
Lead (Pb), µg/L	0.6	1.5	1.6	1.0	1.1	1.4
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.1	20.4	15.5	11.0	18.8	10.5

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22354-31	22354-32	22354-33	22354-34	22354-35	22354-36
Suspended Solids (SS), mg/L	8.2	9.2	14.7	11.2	7.4	11.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.52	0.60	1.68	0.58	0.41	0.41
Cadmium (Cd), µg/L	0.2	0.2	0.3	0.4	0.1	0.1
Chromium (Cr), µg/L	2.7	1.8	1.1	2.9	1.0	2.9
Copper (Cu), µg/L	5.2	5.7	5.5	6.8	5.5	5.7
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	0.3	<0.2
Nickel (Ni), µg/L	2.8	2.4	1.2	2.7	1.2	2.5
Lead (Pb), µg/L	0.6	0.7	0.7	0.7	0.9	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.4	9.2	16.8	17.9	8.6	19.1

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22354-37	22354-38	22354-39	22354-40
Suspended Solids (SS), mg/L	6.7	6.0	7.5	12.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	0.41	0.41	0.40	0.41
Cadmium (Cd), µg/L	0.2	0.5	0.5	0.3
Chromium (Cr), µg/L	2.1	2.7	2.2	2.7
Copper (Cu), µg/L	7.8	6.6	5.5	5.6
Mercury (Hg), µg/L	<0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	2.8	1.4	2.8	3.0
Lead (Pb), µg/L	1.3	0.7	0.9	1.3
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	20.5	22.3	17.7	16.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150504

Sampling Date : 2015-05-04

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22361-1	22361-2	22361-3	22361-4	22361-5	22361-6
Suspended Solids (SS), mg/L	15.4	17.5	7.1	7.8	9.8	6.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.89	0.48	1.06	0.39	1.29	0.61
Cadmium (Cd), µg/L	0.4	0.4	0.3	0.1	0.4	0.1
Chromium (Cr), µg/L	2.8	2.2	1.3	2.3	1.4	2.0
Copper (Cu), µg/L	5.9	8.2	6.5	6.7	6.1	7.1
Mercury (Hg), µg/L	0.3	0.3	0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.2	2.6	2.5	1.1	3.0	1.8
Lead (Pb), µg/L	1.4	1.1	0.9	1.5	0.7	0.9
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	15.0	21.2	15.2	10.6	10.9	12.9

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22361-7	22361-8	22361-9	22361-10	22361-11	22361-12
Suspended Solids (SS), mg/L	7.1	11.8	5.0	5.2	16.0	13.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.32	0.55	0.28	0.31	1.08	1.39
Cadmium (Cd), µg/L	0.2	<0.1	0.2	0.5	0.1	0.4
Chromium (Cr), µg/L	1.8	1.2	1.2	2.2	2.0	1.9
Copper (Cu), µg/L	5.9	6.8	6.8	5.8	5.2	7.6
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.0	1.8	2.7	2.1	1.5	1.8
Lead (Pb), µg/L	1.1	0.7	1.6	0.6	1.4	0.6
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.3	20.2	9.2	18.8	9.9	22.4

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22361-13	22361-14	22361-15	22361-16	22361-17	22361-18
Suspended Solids (SS), mg/L	11.4	16.0	7.9	12.0	9.2	12.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.26	0.37	0.61	0.59	0.39	0.27
Cadmium (Cd), µg/L	0.4	0.2	0.2	0.4	0.3	0.4
Chromium (Cr), µg/L	1.4	1.3	2.5	1.8	2.1	2.3
Copper (Cu), µg/L	7.3	5.6	5.2	8.0	6.4	5.5
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.3	2.8	1.2	1.1	2.2	1.0
Lead (Pb), µg/L	0.9	0.6	1.0	0.7	1.4	1.5
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	12.7	15.7	16.4	13.2	10.1	19.4

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22361-19	22361-20	22361-21	22361-22	22361-23	22361-24
Suspended Solids (SS), mg/L	8.8	15.1	16.0	16.9	7.0	7.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.29	2.15	0.89	0.48	1.05	0.39
Cadmium (Cd), µg/L	0.5	0.4	0.4	0.4	0.3	0.1
Chromium (Cr), µg/L	1.1	2.8	2.7	2.2	1.3	2.3
Copper (Cu), µg/L	7.1	7.4	5.9	8.0	6.5	6.4
Mercury (Hg), µg/L	0.2	0.3	0.3	0.3	0.2	<0.2
Nickel (Ni), µg/L	2.6	2.6	2.1	2.5	2.5	1.1
Lead (Pb), µg/L	1.1	1.4	1.4	1.1	0.9	1.5
Silver (Ag), µg/L	<0.2	0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	20.9	22.8	14.7	20.7	15.1	10.8

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22361-25	22361-26	22361-27	22361-28	22361-29	22361-30
Suspended Solids (SS), mg/L	9.7	6.7	6.8	12.2	4.9	5.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.26	0.60	0.30	0.56	0.27	0.31
Cadmium (Cd), µg/L	0.4	0.1	0.2	<0.1	0.2	0.5
Chromium (Cr), µg/L	1.4	2.0	1.8	1.2	1.2	2.2
Copper (Cu), µg/L	6.1	7.0	5.8	6.7	6.9	5.5
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	2.8	1.9	1.9	1.8	2.7	2.0
Lead (Pb), µg/L	0.7	1.0	1.1	0.7	1.5	0.6
Silver (Ag), µg/L	<0.2	0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.7	13.4	23.2	19.5	9.5	18.3

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22361-31	22361-32	22361-33	22361-34	22361-35	22361-36
Suspended Solids (SS), mg/L	15.6	13.9	11.1	16.1	7.6	11.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.09	1.37	0.26	0.37	0.58	0.57
Cadmium (Cd), µg/L	0.2	0.4	0.5	0.2	0.2	0.4
Chromium (Cr), µg/L	2.0	1.9	1.4	1.3	2.5	1.8
Copper (Cu), µg/L	5.2	7.6	7.1	5.3	5.0	7.8
Mercury (Hg), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	1.5	1.8	1.3	2.7	1.3	1.1
Lead (Pb), µg/L	1.3	0.6	0.9	0.5	1.0	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.7	21.8	12.8	15.6	16.1	13.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22361-37	22361-38	22361-39	22361-40
Suspended Solids (SS), mg/L	9.4	12.3	8.5	15.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.38	0.27	0.30	2.13
Cadmium (Cd), µg/L	0.3	0.4	0.4	0.5
Chromium (Cr), µg/L	2.2	2.3	1.2	2.8
Copper (Cu), µg/L	6.3	5.5	7.2	7.2
Mercury (Hg), µg/L	0.2	0.2	0.2	0.3
Nickel (Ni), µg/L	2.1	1.0	2.7	2.5
Lead (Pb), µg/L	1.4	1.5	1.1	1.4
Silver (Ag), µg/L	0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	10.2	19.3	20.1	22.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150506

Sampling Date : 2015-05-06

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22375-1	22375-2	22375-3	22375-4	22375-5	22375-6
Suspended Solids (SS), mg/L	16.3	13.4	8.5	3.0	6.3	9.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.16	1.11	1.13	1.20	0.49	0.48
Cadmium (Cd), µg/L	0.3	0.4	0.3	0.3	0.4	0.1
Chromium (Cr), µg/L	3.0	2.8	1.7	2.4	1.3	1.3
Copper (Cu), µg/L	7.2	7.0	7.1	7.3	6.6	5.6
Mercury (Hg), µg/L	0.3	0.2	0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	3.0	3.0	1.6	2.9	1.5	2.8
Lead (Pb), µg/L	1.3	1.0	1.5	0.7	0.9	0.9
Silver (Ag), µg/L	0.2	0.2	0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	20.5	20.6	14.5	22.5	10.5	14.4

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22375-7	22375-8	22375-9	22375-10	22375-11	22375-12
Suspended Solids (SS), mg/L	7.7	3.5	8.5	13.0	9.2	7.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.49	0.49	0.48	0.47	1.16	1.23
Cadmium (Cd), µg/L	0.1	0.3	0.2	0.1	<0.1	0.2
Chromium (Cr), µg/L	2.6	1.0	1.3	1.3	1.9	1.8
Copper (Cu), µg/L	6.6	5.8	7.2	6.2	5.1	5.3
Mercury (Hg), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.8	1.8	1.8	3.1	1.9	2.7
Lead (Pb), µg/L	1.1	0.6	0.9	1.5	1.4	0.9
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.4	13.0	20.6	11.7	12.2	9.9

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22375-13	22375-14	22375-15	22375-16	22375-17	22375-18
Suspended Solids (SS), mg/L	5.9	11.3	17.2	4.4	5.9	5.1
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.97	1.63	0.43	0.50	0.44	0.47
Cadmium (Cd), µg/L	0.3	0.3	0.3	0.4	0.3	0.2
Chromium (Cr), µg/L	3.1	1.7	1.3	2.4	2.0	2.6
Copper (Cu), µg/L	6.8	5.6	7.6	8.0	5.3	7.1
Mercury (Hg), µg/L	0.2	0.2	<0.2	0.2	0.3	0.2
Nickel (Ni), µg/L	2.0	1.7	1.1	1.1	1.9	2.7
Lead (Pb), µg/L	0.8	1.6	0.6	1.1	0.6	1.2
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.3	22.4	8.1	23.0	13.9	22.1

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22375-19	22375-20	22375-21	22375-22	22375-23	22375-24
Suspended Solids (SS), mg/L	12.4	19.1	16.5	12.7	8.7	3.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.47	0.45	1.05	1.15	1.17	1.14
Cadmium (Cd), µg/L	0.3	0.4	0.3	0.4	0.3	0.3
Chromium (Cr), µg/L	2.6	2.4	3.0	2.7	1.8	2.3
Copper (Cu), µg/L	6.6	7.6	7.2	6.8	7.0	7.4
Mercury (Hg), µg/L	0.2	0.3	0.3	0.2	0.2	<0.2
Nickel (Ni), µg/L	2.5	1.8	3.0	3.1	1.6	2.9
Lead (Pb), µg/L	1.0	1.5	1.2	1.0	1.5	0.7
Silver (Ag), µg/L	0.2	0.2	0.2	0.2	0.2	<0.2
Zinc (Zn), µg/L	13.9	21.8	20.8	20.2	14.5	22.8

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22375-25	22375-26	22375-27	22375-28	22375-29	22375-30
Suspended Solids (SS), mg/L	6.2	9.9	7.7	3.5	8.8	12.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.49	0.48	0.49	0.49	0.47	0.46
Cadmium (Cd), µg/L	0.4	0.1	0.1	0.2	0.2	0.1
Chromium (Cr), µg/L	1.3	1.3	2.6	1.0	1.3	1.3
Copper (Cu), µg/L	6.5	5.5	6.8	5.9	6.8	6.3
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.2	<0.2
Nickel (Ni), µg/L	1.4	2.8	2.7	1.8	1.8	3.0
Lead (Pb), µg/L	0.8	0.9	1.1	0.5	0.9	1.5
Silver (Ag), µg/L	0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.5	14.6	10.9	13.0	20.3	11.8

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22375-31	22375-32	22375-33	22375-34	22375-35	22375-36
Suspended Solids (SS), mg/L	8.9	7.4	5.9	11.0	17.0	4.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.18	1.13	0.99	1.60	0.43	0.50
Cadmium (Cd), µg/L	<0.1	0.2	0.3	0.3	0.3	0.4
Chromium (Cr), µg/L	1.9	1.8	3.0	1.7	1.3	2.3
Copper (Cu), µg/L	5.0	5.2	6.9	5.4	7.5	7.8
Mercury (Hg), µg/L	<0.2	0.2	0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	1.9	2.7	2.0	1.7	1.1	1.1
Lead (Pb), µg/L	1.4	0.8	0.8	1.5	0.6	1.1
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.1	9.8	12.4	23.3	8.4	23.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22375-37	22375-38	22375-39	22375-40
Suspended Solids (SS), mg/L	5.8	5.1	11.9	19.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.43	0.47	0.47	0.45
Cadmium (Cd), µg/L	0.3	0.2	0.3	0.4
Chromium (Cr), µg/L	2.0	2.6	2.5	2.3
Copper (Cu), µg/L	5.2	7.3	6.5	7.8
Mercury (Hg), µg/L	0.2	0.2	0.2	0.3
Nickel (Ni), µg/L	1.9	2.6	2.6	1.8
Lead (Pb), µg/L	0.6	1.2	1.0	1.5
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	13.4	22.7	13.6	22.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150508

Sampling Date : 2015-05-08

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22395-1	22395-2	22395-3	22395-4	22395-5	22395-6
Suspended Solids (SS), mg/L	9.9	10.2	4.7	9.6	11.1	6.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	2.33	2.45	2.44	2.70	1.25	1.25
Cadmium (Cd), µg/L	0.4	0.3	0.1	0.1	0.3	0.1
Chromium (Cr), µg/L	3.1	2.1	2.3	2.5	1.5	1.1
Copper (Cu), µg/L	7.4	7.8	5.9	7.8	4.9	6.3
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	2.4	2.8	1.1	2.5	1.2	2.7
Lead (Pb), µg/L	1.1	1.2	0.6	1.4	1.0	0.8
Silver (Ag), µg/L	0.2	0.2	0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	19.9	21.0	8.7	13.5	7.9	11.6

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22395-7	22395-8	22395-9	22395-10	22395-11	22395-12
Suspended Solids (SS), mg/L	8.2	8.9	7.9	8.3	3.5	5.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	1.23	1.23	1.23	1.24	2.35	2.48
Cadmium (Cd), µg/L	0.1	0.2	0.3	0.4	0.2	0.4
Chromium (Cr), µg/L	1.2	1.8	2.3	2.0	1.1	1.0
Copper (Cu), µg/L	7.9	5.8	6.5	7.5	8.1	6.9
Mercury (Hg), µg/L	<0.2	<0.2	0.3	0.3	0.2	<0.2
Nickel (Ni), µg/L	2.6	2.9	2.5	2.2	2.4	1.3
Lead (Pb), µg/L	0.7	1.0	1.0	1.6	1.4	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	19.8	15.6	21.8	13.8	16.2	11.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

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Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22395-13	22395-14	22395-15	22395-16	22395-17	22395-18
Suspended Solids (SS), mg/L	4.8	7.0	10.0	8.2	9.4	10.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.75	2.48	1.66	1.66	1.66	1.65
Cadmium (Cd), µg/L	0.1	0.4	<0.1	<0.1	0.3	0.5
Chromium (Cr), µg/L	2.1	2.9	2.7	2.6	1.6	2.0
Copper (Cu), µg/L	5.9	6.1	7.2	6.1	5.4	8.0
Mercury (Hg), µg/L	0.2	0.3	0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	2.0	1.7	1.8	1.7	1.3	2.9
Lead (Pb), µg/L	1.5	1.1	0.7	1.2	1.2	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.2	18.9	10.2	9.0	17.2	14.2

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22395-19	22395-20	22395-21	22395-22	22395-23	22395-24
Suspended Solids (SS), mg/L	4.5	9.4	9.8	10.6	4.7	9.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.66	1.66	2.39	2.49	2.26	2.64
Cadmium (Cd), µg/L	0.3	0.5	0.4	0.3	0.1	0.1
Chromium (Cr), µg/L	2.0	2.7	2.9	2.1	2.3	2.4
Copper (Cu), µg/L	7.5	5.9	7.5	7.6	5.8	7.8
Mercury (Hg), µg/L	0.2	0.3	0.3	0.3	<0.2	0.2
Nickel (Ni), µg/L	1.1	2.9	2.4	2.8	1.1	2.5
Lead (Pb), µg/L	1.3	1.4	1.1	1.1	0.6	1.4
Silver (Ag), µg/L	0.2	<0.2	0.2	0.2	0.2	<0.2
Zinc (Zn), µg/L	22.9	20.3	20.4	20.6	8.5	13.4

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22395-25	22395-26	22395-27	22395-28	22395-29	22395-30
Suspended Solids (SS), mg/L	10.7	6.7	8.3	8.9	8.2	8.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.26	1.23	1.23	1.22	1.23	1.25
Cadmium (Cd), µg/L	0.3	0.1	0.1	0.2	0.3	0.4
Chromium (Cr), µg/L	1.4	1.1	1.2	1.7	2.3	2.0
Copper (Cu), µg/L	5.1	6.1	7.9	5.9	6.6	7.4
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.3	0.2
Nickel (Ni), µg/L	1.2	2.7	2.4	2.7	2.5	2.2
Lead (Pb), µg/L	0.9	0.7	0.7	1.0	1.0	1.6
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	7.9	11.3	19.6	15.5	22.1	14.3

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22395-31	22395-32	22395-33	22395-34	22395-35	22395-36
Suspended Solids (SS), mg/L	3.5	5.0	4.8	6.7	9.7	8.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.44	2.34	2.70	2.30	1.66	1.66
Cadmium (Cd), µg/L	0.2	0.4	0.1	0.4	<0.1	<0.1
Chromium (Cr), µg/L	1.1	1.1	2.1	2.8	2.8	2.6
Copper (Cu), µg/L	8.0	7.0	5.9	6.1	6.8	6.4
Mercury (Hg), µg/L	0.2	<0.2	0.2	0.3	0.2	0.2
Nickel (Ni), µg/L	2.4	1.4	2.0	1.8	1.7	1.7
Lead (Pb), µg/L	1.4	0.5	1.5	1.1	0.7	1.3
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	16.8	11.2	14.3	18.7	9.7	9.1

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22395-37	22395-38	22395-39	22395-40
Suspended Solids (SS), mg/L	9.4	10.7	4.4	9.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.67	1.65	1.65	1.66
Cadmium (Cd), µg/L	0.3	0.5	0.3	0.5
Chromium (Cr), µg/L	1.6	2.0	2.0	2.8
Copper (Cu), µg/L	5.2	8.3	7.4	5.7
Mercury (Hg), µg/L	0.3	0.3	0.2	0.3
Nickel (Ni), µg/L	1.3	2.9	1.1	3.0
Lead (Pb), µg/L	1.2	0.9	1.4	1.4
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	16.8	14.1	22.7	20.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150511

Sampling Date : 2015-05-11

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22405-1	22405-2	22405-3	22405-4	22405-5	22405-6
Suspended Solids (SS), mg/L	12.2	12.7	12.7	13.4	9.5	6.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.51	2.39	2.43	2.28	0.38	0.37
Cadmium (Cd), µg/L	0.5	0.5	0.2	0.1	0.3	<0.1
Chromium (Cr), µg/L	1.7	2.2	1.2	2.5	2.0	1.2
Copper (Cu), µg/L	7.5	7.9	6.6	8.2	7.6	6.7
Mercury (Hg), µg/L	0.3	0.3	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	2.3	3.0	1.5	1.6	1.4	2.4
Lead (Pb), µg/L	1.5	1.0	1.1	1.3	0.9	0.9
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.4	21.0	8.8	12.3	18.8	14.5

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22405-7	22405-8	22405-9	22405-10	22405-11	22405-12
Suspended Solids (SS), mg/L	4.1	13.2	8.0	5.9	17.7	6.1
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.36	0.38	0.36	0.36	0.39	0.45
Cadmium (Cd), µg/L	<0.1	0.2	0.1	0.1	<0.1	0.1
Chromium (Cr), µg/L	1.2	1.3	1.6	2.5	1.9	1.8
Copper (Cu), µg/L	7.0	6.0	6.9	7.6	6.9	5.7
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.2	<0.2
Nickel (Ni), µg/L	2.9	1.2	1.9	1.6	1.9	1.6
Lead (Pb), µg/L	0.9	1.1	1.5	0.7	1.5	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.1	13.4	22.3	12.7	18.4	8.9

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

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Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22405-13	22405-14	22405-15	22405-16	22405-17	22405-18
Suspended Solids (SS), mg/L	6.7	13.2	18.6	14.2	8.5	15.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.41	0.38	0.43	0.41	0.40	2.52
Cadmium (Cd), µg/L	0.2	0.2	0.1	0.1	<0.1	0.1
Chromium (Cr), µg/L	1.7	2.1	1.3	2.9	1.3	2.0
Copper (Cu), µg/L	7.8	7.5	7.0	7.1	7.4	6.0
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.9	2.7	1.8	1.7	1.1	3.0
Lead (Pb), µg/L	1.5	1.0	1.0	1.1	1.2	1.4
Silver (Ag), µg/L	0.2	<0.2	0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	15.5	12.9	20.7	13.8	14.2	22.6

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22405-19	22405-20	22405-21	22405-22	22405-23	22405-24
Suspended Solids (SS), mg/L	18.4	16.8	12.4	12.6	13.0	13.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.41	2.53	2.48	2.42	2.44	2.22
Cadmium (Cd), µg/L	0.4	0.3	0.5	0.5	0.2	0.1
Chromium (Cr), µg/L	1.6	1.8	1.6	2.1	1.1	2.4
Copper (Cu), µg/L	6.5	7.6	7.5	8.1	6.4	8.2
Mercury (Hg), µg/L	0.2	0.3	0.3	0.3	<0.2	<0.2
Nickel (Ni), µg/L	2.2	2.7	2.3	2.9	1.4	1.7
Lead (Pb), µg/L	1.4	1.1	1.5	1.0	1.1	1.2
Silver (Ag), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.7	18.7	13.5	20.4	8.7	12.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

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Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22405-25	22405-26	22405-27	22405-28	22405-29	22405-30
Suspended Solids (SS), mg/L	9.6	7.0	4.0	13.4	7.9	5.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.38	0.36	0.38	0.38	0.36	0.36
Cadmium (Cd), µg/L	0.3	<0.1	<0.1	0.2	0.1	0.1
Chromium (Cr), µg/L	1.9	1.2	1.2	1.4	1.6	2.5
Copper (Cu), µg/L	7.5	6.6	7.1	5.7	6.8	7.4
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.4	2.4	2.9	1.2	1.9	1.6
Lead (Pb), µg/L	0.9	0.9	0.9	1.1	1.5	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	18.2	14.4	12.7	12.9	22.8	12.0

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22405-31	22405-32	22405-33	22405-34	22405-35	22405-36
Suspended Solids (SS), mg/L	18.2	6.2	6.8	13.2	18.1	13.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.38	0.44	0.40	0.38	0.43	0.41
Cadmium (Cd), µg/L	<0.1	0.1	0.2	0.2	0.1	0.1
Chromium (Cr), µg/L	2.0	1.8	1.8	2.2	1.3	2.8
Copper (Cu), µg/L	7.1	5.6	7.6	7.2	7.1	7.2
Mercury (Hg), µg/L	0.2	<0.2	0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.9	1.6	2.0	2.8	1.8	1.7
Lead (Pb), µg/L	1.5	0.5	1.5	1.0	1.0	1.1
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	18.1	8.5	15.6	12.5	21.4	13.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22405-37	22405-38	22405-39	22405-40
Suspended Solids (SS), mg/L	8.8	15.3	17.3	16.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	0.39	2.62	2.42	2.48
Cadmium (Cd), µg/L	<0.1	0.1	0.4	0.3
Chromium (Cr), µg/L	1.3	1.9	1.5	1.8
Copper (Cu), µg/L	7.2	6.0	6.4	7.7
Mercury (Hg), µg/L	0.2	0.2	0.2	0.3
Nickel (Ni), µg/L	1.1	3.0	2.2	2.6
Lead (Pb), µg/L	1.2	1.3	1.4	1.1
Silver (Ag), µg/L	<0.2	0.2	0.2	0.2
Zinc (Zn), µg/L	13.7	22.6	22.9	18.0

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water
Project No. : MA11017
Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
 & Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Custody No. : MA11017/150513
Sampling Date : 2015-05-13

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
 Laboratory Manager

TEST REPORT

Laboratory No.:	22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22417-1	22417-2	22417-3	22417-4	22417-5	22417-6
Suspended Solids (SS), mg/L	19.4	14.9	8.4	10.3	10.4	5.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.47	3.71	0.09	0.46	0.88	0.93
Cadmium (Cd), µg/L	0.4	0.4	0.3	0.1	0.2	0.3
Chromium (Cr), µg/L	3.0	2.3	1.5	1.5	1.6	2.3
Copper (Cu), µg/L	6.7	7.6	5.1	6.2	6.6	5.4
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.3	2.2	1.7	2.7	1.6	2.7
Lead (Pb), µg/L	1.3	1.3	1.3	0.6	0.9	1.1
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	14.4	22.2	8.1	21.7	12.0	12.8

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22417-7	22417-8	22417-9	22417-10	22417-11	22417-12
Suspended Solids (SS), mg/L	11.5	11.3	12.2	10.2	11.6	12.1
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.19	0.37	0.24	0.14	0.50	0.59
Cadmium (Cd), µg/L	0.5	0.4	0.2	0.5	0.1	0.2
Chromium (Cr), µg/L	2.5	1.4	2.6	2.9	1.4	1.6
Copper (Cu), µg/L	7.5	7.4	5.2	7.9	7.7	5.8
Mercury (Hg), µg/L	0.2	<0.2	<0.2	<0.2	0.2	<0.2
Nickel (Ni), µg/L	1.9	2.9	1.9	1.8	2.3	1.7
Lead (Pb), µg/L	1.6	0.6	1.0	1.3	0.7	1.1
Silver (Ag), µg/L	0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.1	20.7	13.9	10.8	8.6	11.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

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Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22417-13	22417-14	22417-15	22417-16	22417-17	22417-18
Suspended Solids (SS), mg/L	15.0	11.2	12.7	11.5	13.4	13.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.03	0.18	0.41	0.27	0.22	0.29
Cadmium (Cd), µg/L	0.4	0.2	0.2	0.1	<0.1	0.4
Chromium (Cr), µg/L	1.1	1.7	2.1	1.4	1.2	2.3
Copper (Cu), µg/L	4.8	5.4	5.4	5.9	6.2	6.4
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.7	1.3	2.3	2.4	2.0	1.9
Lead (Pb), µg/L	0.6	0.8	0.8	0.6	1.4	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.8	9.8	10.5	19.1	20.9	13.3

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22417-19	22417-20	22417-21	22417-22	22417-23	22417-24
Suspended Solids (SS), mg/L	13.5	12.7	19.4	15.3	8.5	10.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.21	0.20	0.47	3.61	0.09	0.47
Cadmium (Cd), µg/L	0.3	0.5	0.4	0.4	0.2	0.1
Chromium (Cr), µg/L	1.9	1.1	3.0	2.2	1.4	1.4
Copper (Cu), µg/L	6.7	6.7	6.6	7.4	5.1	6.3
Mercury (Hg), µg/L	0.2	0.2	0.3	0.3	<0.2	0.2
Nickel (Ni), µg/L	2.0	3.1	2.2	2.1	1.7	2.5
Lead (Pb), µg/L	1.5	1.1	1.4	1.3	1.4	0.5
Silver (Ag), µg/L	0.2	<0.2	<0.2	0.2	0.2	0.2
Zinc (Zn), µg/L	17.0	22.9	14.5	22.0	8.5	21.6

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22417-25	22417-26	22417-27	22417-28	22417-29	22417-30
Suspended Solids (SS), mg/L	10.1	5.4	11.3	11.2	12.6	9.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.86	0.90	0.19	0.37	0.24	0.14
Cadmium (Cd), µg/L	0.2	0.3	0.5	0.4	0.2	0.5
Chromium (Cr), µg/L	1.6	2.3	2.5	1.4	2.6	2.9
Copper (Cu), µg/L	6.7	5.4	7.5	7.5	5.3	7.8
Mercury (Hg), µg/L	<0.2	0.2	0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.6	2.7	2.0	2.9	1.9	1.8
Lead (Pb), µg/L	0.9	1.1	1.5	0.6	1.0	1.3
Silver (Ag), µg/L	<0.2	0.2	0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	11.9	12.6	9.1	20.0	14.5	11.2

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22417-31	22417-32	22417-33	22417-34	22417-35	22417-36
Suspended Solids (SS), mg/L	11.8	11.5	14.8	10.6	11.9	10.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.45	0.62	1.14	0.18	0.42	0.26
Cadmium (Cd), µg/L	0.1	0.2	0.5	0.2	0.2	0.1
Chromium (Cr), µg/L	1.4	1.6	1.1	1.6	2.1	1.4
Copper (Cu), µg/L	7.6	5.6	4.9	5.2	5.4	6.0
Mercury (Hg), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.3	1.7	2.7	1.4	2.3	2.4
Lead (Pb), µg/L	0.7	1.1	0.6	0.8	0.8	0.6
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	8.4	12.2	11.7	9.7	10.5	18.3

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22417-37	22417-38	22417-39	22417-40
Suspended Solids (SS), mg/L	13.5	12.7	13.3	12.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.22	0.30	0.21	0.19
Cadmium (Cd), µg/L	<0.1	0.4	0.3	0.5
Chromium (Cr), µg/L	1.3	2.3	1.8	1.1
Copper (Cu), µg/L	6.2	6.2	6.6	6.4
Mercury (Hg), µg/L	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	2.1	1.9	2.0	3.2
Lead (Pb), µg/L	1.4	1.0	1.5	1.1
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	21.3	13.4	17.4	22.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150515

Sampling Date : 2015-05-15

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22430-1	22430-2	22430-3	22430-4	22430-5	22430-6
Suspended Solids (SS), mg/L	15.6	14.8	6.8	6.2	7.3	13.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.00	2.04	2.04	1.87	0.36	0.28
Cadmium (Cd), µg/L	0.5	0.4	0.3	0.1	0.1	0.2
Chromium (Cr), µg/L	2.5	2.2	1.3	1.1	1.9	2.7
Copper (Cu), µg/L	6.1	6.0	5.4	6.2	8.0	5.0
Mercury (Hg), µg/L	0.3	0.2	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.2	2.9	2.9	1.1	2.9	1.7
Lead (Pb), µg/L	1.1	1.1	1.0	1.4	0.6	0.9
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.1	18.9	9.2	11.4	10.9	8.3

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22430-7	22430-8	22430-9	22430-10	22430-11	22430-12
Suspended Solids (SS), mg/L	12.9	13.5	13.3	11.0	12.4	9.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.34	0.29	0.36	0.83	2.02	2.15
Cadmium (Cd), µg/L	0.3	0.2	0.3	0.5	0.2	0.3
Chromium (Cr), µg/L	2.6	2.8	1.3	1.9	2.4	2.7
Copper (Cu), µg/L	7.6	6.2	7.9	6.2	5.5	5.8
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	2.8	1.3	1.3	1.9	1.3	2.8
Lead (Pb), µg/L	0.9	1.4	0.6	0.6	0.8	0.7
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.3	14.1	11.7	16.2	11.9	20.1

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22430-13	22430-14	22430-15	22430-16	22430-17	22430-18
Suspended Solids (SS), mg/L	9.1	7.3	8.8	10.7	4.4	8.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.08	2.03	1.28	1.29	1.28	1.28
Cadmium (Cd), µg/L	0.1	0.5	0.4	0.1	0.3	0.2
Chromium (Cr), µg/L	2.5	2.4	1.1	2.4	2.5	2.7
Copper (Cu), µg/L	7.7	5.6	6.7	5.1	6.3	6.7
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	1.1	2.6	2.4	2.5	1.6	2.7
Lead (Pb), µg/L	0.9	0.9	0.8	0.8	1.1	1.2
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	14.5	19.1	21.1	17.7	11.8	19.6

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22430-19	22430-20	22430-21	22430-22	22430-23	22430-24
Suspended Solids (SS), mg/L	9.8	11.8	15.9	14.8	6.9	6.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.27	1.28	2.02	2.00	2.03	1.92
Cadmium (Cd), µg/L	0.3	0.3	0.5	0.4	0.3	0.1
Chromium (Cr), µg/L	2.6	2.7	2.5	2.2	1.3	1.1
Copper (Cu), µg/L	5.2	7.6	6.1	5.7	5.2	6.1
Mercury (Hg), µg/L	0.2	0.3	0.3	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.8	1.9	2.1	2.9	3.0	1.1
Lead (Pb), µg/L	0.5	1.1	1.2	1.1	1.0	1.4
Silver (Ag), µg/L	0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	19.0	15.5	14.6	18.2	9.1	11.5

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22430-25	22430-26	22430-27	22430-28	22430-29	22430-30
Suspended Solids (SS), mg/L	7.6	12.7	12.7	13.1	13.8	10.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.36	0.27	0.34	0.29	0.37	0.82
Cadmium (Cd), µg/L	0.1	0.2	0.3	0.2	0.3	0.5
Chromium (Cr), µg/L	1.9	2.8	2.6	2.8	1.4	1.8
Copper (Cu), µg/L	7.9	4.9	7.6	5.9	7.7	6.0
Mercury (Hg), µg/L	<0.2	0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	2.9	1.7	2.8	1.3	1.3	1.9
Lead (Pb), µg/L	0.6	0.9	0.9	1.3	0.6	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.7	8.2	23.2	13.5	11.6	16.0

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22430-31	22430-32	22430-33	22430-34	22430-35	22430-36
Suspended Solids (SS), mg/L	12.2	9.8	9.0	7.2	8.7	10.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.91	2.01	1.89	2.05	1.28	1.30
Cadmium (Cd), µg/L	0.2	0.3	0.1	0.5	0.4	0.1
Chromium (Cr), µg/L	2.4	2.7	2.4	2.4	1.1	2.4
Copper (Cu), µg/L	5.4	6.1	7.6	5.3	6.7	5.3
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	1.2	2.8	1.1	2.5	2.5	2.4
Lead (Pb), µg/L	0.9	0.7	1.0	0.9	0.8	0.8
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	11.6	20.1	14.5	19.1	21.1	17.3

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22430-37	22430-38	22430-39	22430-40
Suspended Solids (SS), mg/L	4.4	8.5	9.7	11.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.27	1.27	1.28	1.28
Cadmium (Cd), µg/L	0.3	0.2	0.3	0.3
Chromium (Cr), µg/L	2.5	2.8	2.5	2.7
Copper (Cu), µg/L	6.3	6.5	5.2	7.6
Mercury (Hg), µg/L	0.2	0.2	0.2	0.3
Nickel (Ni), µg/L	1.5	2.7	2.8	1.9
Lead (Pb), µg/L	1.1	1.1	0.5	1.1
Silver (Ag), µg/L	0.2	0.2	0.2	<0.2
Zinc (Zn), µg/L	11.3	19.3	18.7	15.4

Remarks: 1) <= less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150518

Sampling Date : 2015-05-18

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22444-1	22444-2	22444-3	22444-4	22444-5	22444-6
Suspended Solids (SS), mg/L	10.2	14.1	5.9	8.1	3.1	4.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.97	3.14	3.06	3.46	0.56	0.56
Cadmium (Cd), µg/L	0.3	0.2	0.1	0.3	<0.1	<0.1
Chromium (Cr), µg/L	3.0	2.9	1.7	1.9	1.2	2.9
Copper (Cu), µg/L	6.6	7.0	6.1	5.0	6.1	7.7
Mercury (Hg), µg/L	0.3	0.2	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	1.8	1.7	2.5	1.4	2.1	1.8
Lead (Pb), µg/L	1.3	1.2	1.5	0.8	1.1	1.4
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	20.4	15.1	15.8	8.3	15.3	11.6

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22444-7	22444-8	22444-9	22444-10	22444-11	22444-12
Suspended Solids (SS), mg/L	6.2	9.9	5.5	9.2	7.6	4.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.56	0.57	0.56	0.57	0.92	0.97
Cadmium (Cd), µg/L	<0.1	0.1	0.2	0.1	0.3	0.1
Chromium (Cr), µg/L	1.2	1.3	1.2	2.0	1.9	1.3
Copper (Cu), µg/L	6.8	8.2	7.8	8.0	6.6	6.7
Mercury (Hg), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.8	1.3	1.1	2.7	2.1	1.9
Lead (Pb), µg/L	1.4	0.9	1.4	0.5	1.0	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.3	10.0	10.0	10.8	9.8	19.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22444-13	22444-14	22444-15	22444-16	22444-17	22444-18
Suspended Solids (SS), mg/L	3.5	10.0	3.3	4.0	3.1	4.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.07	1.09	0.48	0.46	0.50	0.49
Cadmium (Cd), µg/L	<0.1	0.1	0.1	0.2	0.2	0.2
Chromium (Cr), µg/L	2.1	1.7	1.7	1.1	2.5	1.8
Copper (Cu), µg/L	7.3	7.2	7.1	7.9	5.4	7.5
Mercury (Hg), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.2	1.3	1.1	1.9	2.3	1.2
Lead (Pb), µg/L	0.5	1.3	1.4	0.7	1.5	0.7
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	10.1	23.1	14.5	13.5	14.3	11.1

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22444-19	22444-20	22444-21	22444-22	22444-23	22444-24
Suspended Solids (SS), mg/L	5.8	9.0	9.8	13.8	6.0	7.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.50	0.50	2.00	3.03	3.06	3.32
Cadmium (Cd), µg/L	0.2	0.5	0.3	0.2	0.1	0.3
Chromium (Cr), µg/L	1.6	2.7	3.0	2.9	1.7	2.0
Copper (Cu), µg/L	6.2	7.3	6.8	6.9	6.0	4.8
Mercury (Hg), µg/L	0.3	<0.2	0.3	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.7	2.8	1.8	1.7	2.5	1.4
Lead (Pb), µg/L	1.2	1.3	1.3	1.2	1.5	0.8
Silver (Ag), µg/L	0.2	0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.5	21.2	20.3	14.6	15.7	8.3

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22444-25	22444-26	22444-27	22444-28	22444-29	22444-30
Suspended Solids (SS), mg/L	3.2	4.5	6.1	10.0	5.3	9.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.56	0.54	0.55	0.56	0.57	0.59
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1	0.1	0.2	0.1
Chromium (Cr), µg/L	1.2	2.8	1.2	1.3	1.2	2.0
Copper (Cu), µg/L	6.3	7.5	6.7	8.5	7.6	7.9
Mercury (Hg), µg/L	0.2	0.2	<0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.1	1.8	1.9	1.3	1.0	2.8
Lead (Pb), µg/L	1.2	1.4	1.3	0.9	1.4	0.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.8	11.5	14.9	10.0	9.7	10.8

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22444-31	22444-32	22444-33	22444-34	22444-35	22444-36
Suspended Solids (SS), mg/L	7.6	4.0	3.4	10.0	3.3	4.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.96	0.98	1.05	1.09	0.48	0.46
Cadmium (Cd), µg/L	0.3	0.1	<0.1	<0.1	0.1	0.2
Chromium (Cr), µg/L	2.0	1.2	2.1	1.7	1.7	1.1
Copper (Cu), µg/L	6.7	6.6	7.3	7.1	7.0	7.9
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.2	1.9	2.2	1.2	1.1	1.9
Lead (Pb), µg/L	1.0	0.9	0.5	1.3	1.4	0.7
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.6	19.5	9.7	23.8	14.8	12.9

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22444-37	22444-38	22444-39	22444-40
Suspended Solids (SS), mg/L	3.2	4.9	5.9	8.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.52	0.48	0.50	0.50
Cadmium (Cd), µg/L	0.2	0.2	0.2	0.5
Chromium (Cr), µg/L	2.5	1.8	1.6	2.7
Copper (Cu), µg/L	5.2	7.7	6.1	7.0
Mercury (Hg), µg/L	<0.2	0.2	0.3	<0.2
Nickel (Ni), µg/L	2.2	1.1	2.6	2.8
Lead (Pb), µg/L	1.4	0.7	1.1	1.3
Silver (Ag), µg/L	<0.2	<0.2	0.2	0.2
Zinc (Zn), µg/L	13.9	11.2	22.1	21.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150520

Sampling Date : 2015-05-20

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ ⁻ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22459-1	22459-2	22459-3	22459-4	22459-5	22459-6
Suspended Solids (SS), mg/L	11.0	9.1	5.2	5.9	5.0	4.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.66	0.65	0.62	0.65	0.62	0.80
Cadmium (Cd), µg/L	0.5	0.3	0.3	0.2	0.4	0.1
Chromium (Cr), µg/L	2.6	2.7	1.3	2.7	2.5	2.3
Copper (Cu), µg/L	7.9	7.1	5.2	6.4	5.4	7.9
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.2	2.8	1.4	2.6	2.6	2.2
Lead (Pb), µg/L	1.2	1.1	0.8	0.9	1.0	1.4
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	15.3	20.0	9.1	16.5	10.2	15.9

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22459-7	22459-8	22459-9	22459-10	22459-11	22459-12
Suspended Solids (SS), mg/L	7.7	6.1	5.9	6.8	7.8	4.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.74	0.81	0.71	0.70	0.78	0.70
Cadmium (Cd), µg/L	0.2	0.2	0.3	0.2	<0.1	<0.1
Chromium (Cr), µg/L	1.7	3.1	3.0	2.7	2.3	2.1
Copper (Cu), µg/L	5.3	7.5	7.6	7.8	5.6	6.4
Mercury (Hg), µg/L	0.2	<0.2	<0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.4	2.7	3.0	1.8	1.1	1.6
Lead (Pb), µg/L	1.0	0.7	0.8	0.8	0.6	0.8
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	14.8	15.0	11.7	10.6	12.8	21.3

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

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Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22459-13	22459-14	22459-15	22459-16	22459-17	22459-18
Suspended Solids (SS), mg/L	5.8	6.3	5.4	7.6	7.3	4.1
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.20	2.60	2.12	2.22	1.66	1.69
Cadmium (Cd), µg/L	0.2	0.2	<0.1	0.3	0.4	0.3
Chromium (Cr), µg/L	3.1	1.2	1.3	2.5	1.2	2.5
Copper (Cu), µg/L	6.2	7.2	6.6	5.5	5.3	5.6
Mercury (Hg), µg/L	<0.2	0.2	<0.2	0.3	<0.2	0.2
Nickel (Ni), µg/L	1.8	1.8	2.2	1.4	1.1	3.0
Lead (Pb), µg/L	1.0	0.9	0.8	1.0	0.6	1.0
Silver (Ag), µg/L	<0.2	0.2	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	16.0	19.4	16.9	21.4	11.1	16.0

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22459-19	22459-20	22459-21	22459-22	22459-23	22459-24
Suspended Solids (SS), mg/L	4.8	10.7	10.9	9.2	5.3	5.9
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.72	1.56	0.63	0.62	0.61	0.67
Cadmium (Cd), µg/L	0.4	0.2	0.5	0.3	0.3	0.2
Chromium (Cr), µg/L	1.4	3.0	2.6	2.8	1.2	2.6
Copper (Cu), µg/L	7.1	5.2	8.1	7.1	5.2	6.5
Mercury (Hg), µg/L	0.3	0.3	0.3	0.3	<0.2	0.2
Nickel (Ni), µg/L	1.2	1.3	2.2	2.8	1.4	2.6
Lead (Pb), µg/L	1.5	0.6	1.2	1.1	0.8	0.9
Silver (Ag), µg/L	<0.2	0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	20.9	22.6	14.8	20.1	8.7	16.6

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

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Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22459-25	22459-26	22459-27	22459-28	22459-29	22459-30
Suspended Solids (SS), mg/L	4.9	4.5	7.7	6.3	6.0	6.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.61	0.79	0.73	0.78	0.73	0.69
Cadmium (Cd), µg/L	0.4	0.1	0.2	0.2	0.2	0.2
Chromium (Cr), µg/L	2.5	2.3	1.7	3.1	3.1	2.8
Copper (Cu), µg/L	5.3	7.7	5.2	7.4	7.5	8.0
Mercury (Hg), µg/L	<0.2	0.2	0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.5	2.2	1.3	2.6	3.1	1.8
Lead (Pb), µg/L	0.9	1.4	1.0	0.6	0.8	0.8
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	10.2	15.5	14.3	15.4	11.2	10.7

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22459-31	22459-32	22459-33	22459-34	22459-35	22459-36
Suspended Solids (SS), mg/L	7.7	4.7	5.6	6.2	5.1	7.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.80	0.73	2.25	2.56	2.02	2.20
Cadmium (Cd), µg/L	<0.1	<0.1	0.2	0.2	<0.1	0.3
Chromium (Cr), µg/L	2.4	2.0	3.0	1.2	1.3	2.4
Copper (Cu), µg/L	5.6	6.4	6.0	7.0	6.6	5.4
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.3
Nickel (Ni), µg/L	1.0	1.6	1.8	1.8	2.2	1.3
Lead (Pb), µg/L	0.6	0.8	1.0	0.9	0.8	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	13.2	20.5	16.1	18.9	16.6	21.5

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

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Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22459-37	22459-38	22459-39	22459-40
Suspended Solids (SS), mg/L	7.2	4.2	5.0	10.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	1.67	1.74	1.70	1.56
Cadmium (Cd), µg/L	0.4	0.3	0.4	0.2
Chromium (Cr), µg/L	1.2	2.6	1.4	3.1
Copper (Cu), µg/L	5.3	5.6	7.1	5.3
Mercury (Hg), µg/L	<0.2	0.2	0.3	0.3
Nickel (Ni), µg/L	1.0	2.9	1.2	1.3
Lead (Pb), µg/L	0.7	1.0	1.5	0.6
Silver (Ag), µg/L	<0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	10.9	15.9	21.3	22.6

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150522

Sampling Date : 2015-05-22

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22468-1	22468-2	22468-3	22468-4	22468-5	22468-6
Suspended Solids (SS), mg/L	7.9	8.7	7.8	5.5	9.1	4.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	4.85	4.84	4.84	4.96	2.12	2.11
Cadmium (Cd), µg/L	0.4	0.4	0.1	0.4	<0.1	0.1
Chromium (Cr), µg/L	1.9	1.9	2.0	1.9	1.8	2.2
Copper (Cu), µg/L	6.5	7.0	6.5	7.7	5.8	7.9
Mercury (Hg), µg/L	0.3	0.3	0.2	<0.2	0.3	0.2
Nickel (Ni), µg/L	2.9	2.3	2.0	2.2	1.8	1.8
Lead (Pb), µg/L	1.2	1.4	1.4	1.4	0.7	1.1
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	15.3	19.5	9.2	15.6	9.9	21.5

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22468-7	22468-8	22468-9	22468-10	22468-11	22468-12
Suspended Solids (SS), mg/L	8.3	7.2	8.1	7.4	6.1	6.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	2.11	2.11	2.11	2.11	2.87	2.86
Cadmium (Cd), µg/L	0.1	<0.1	0.2	0.2	0.4	0.2
Chromium (Cr), µg/L	2.2	1.2	2.1	3.1	1.1	1.4
Copper (Cu), µg/L	5.4	5.3	6.7	7.1	6.3	7.1
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	0.3	0.2
Nickel (Ni), µg/L	1.7	3.0	1.6	3.0	1.8	2.0
Lead (Pb), µg/L	1.4	0.7	0.6	1.3	1.3	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	22.9	10.4	10.8	22.5	16.2	15.4

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

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Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22468-13	22468-14	22468-15	22468-16	22468-17	22468-18
Suspended Solids (SS), mg/L	5.9	8.9	8.4	6.3	10.9	7.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	3.02	3.12	2.12	2.12	2.11	2.12
Cadmium (Cd), µg/L	0.4	0.4	0.1	0.3	0.4	0.4
Chromium (Cr), µg/L	2.2	1.4	2.6	1.2	1.9	2.9
Copper (Cu), µg/L	7.3	7.9	7.9	7.1	7.7	7.3
Mercury (Hg), µg/L	<0.2	<0.2	0.2	0.2	0.2	0.3
Nickel (Ni), µg/L	2.5	1.6	1.5	1.1	1.2	2.1
Lead (Pb), µg/L	0.8	1.3	0.6	1.5	1.2	1.5
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	10.0	18.1	9.3	12.5	9.6	13.2

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22468-19	22468-20	22468-21	22468-22	22468-23	22468-24
Suspended Solids (SS), mg/L	7.0	10.7	7.6	8.6	8.1	5.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.12	2.12	4.73	4.92	4.93	4.77
Cadmium (Cd), µg/L	0.5	0.3	0.4	0.4	0.1	0.4
Chromium (Cr), µg/L	2.9	1.6	1.9	1.9	2.0	1.9
Copper (Cu), µg/L	6.6	8.1	6.4	7.2	6.4	7.5
Mercury (Hg), µg/L	0.2	0.3	0.3	0.3	0.2	<0.2
Nickel (Ni), µg/L	1.8	2.9	2.9	2.3	2.0	2.2
Lead (Pb), µg/L	1.1	1.2	1.2	1.4	1.4	1.3
Silver (Ag), µg/L	0.2	<0.2	0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	21.6	22.8	15.0	19.7	9.2	15.1

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22468-25	22468-26	22468-27	22468-28	22468-29	22468-30
Suspended Solids (SS), mg/L	8.7	4.2	8.3	6.9	8.1	7.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.12	2.11	2.11	2.11	2.11	2.11
Cadmium (Cd), µg/L	<0.1	0.1	0.1	<0.1	0.2	0.2
Chromium (Cr), µg/L	1.7	2.3	2.2	1.2	2.1	3.1
Copper (Cu), µg/L	5.5	8.0	5.2	5.3	6.8	6.9
Mercury (Hg), µg/L	0.2	0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.8	1.8	1.7	2.8	1.5	3.0
Lead (Pb), µg/L	0.7	1.1	1.4	0.7	0.6	1.2
Silver (Ag), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	9.9	21.2	23.0	10.0	10.9	22.6

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22468-31	22468-32	22468-33	22468-34	22468-35	22468-36
Suspended Solids (SS), mg/L	6.2	6.9	6.0	8.8	8.6	6.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.98	2.72	3.07	3.26	2.12	2.12
Cadmium (Cd), µg/L	0.4	0.2	0.3	0.3	0.1	0.3
Chromium (Cr), µg/L	1.1	1.4	2.2	1.4	2.7	1.2
Copper (Cu), µg/L	6.3	7.1	7.4	7.9	8.0	6.8
Mercury (Hg), µg/L	0.3	0.2	<0.2	<0.2	0.2	0.2
Nickel (Ni), µg/L	1.9	2.1	2.6	1.6	1.5	1.1
Lead (Pb), µg/L	1.4	1.5	0.8	1.4	0.6	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	16.0	15.1	10.2	17.1	9.5	12.6

Remarks: 1) < = less than

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TEST REPORT

Laboratory No.:	22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

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Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22468-37	22468-38	22468-39	22468-40
Suspended Solids (SS), mg/L	10.9	7.0	7.1	10.6
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	2.11	2.12	2.12	2.12
Cadmium (Cd), µg/L	0.4	0.5	0.5	0.3
Chromium (Cr), µg/L	1.9	2.8	2.8	1.7
Copper (Cu), µg/L	7.7	7.3	6.6	8.3
Mercury (Hg), µg/L	0.2	0.3	0.2	0.3
Nickel (Ni), µg/L	1.2	2.0	1.8	2.9
Lead (Pb), µg/L	1.2	1.5	1.1	1.3
Silver (Ag), µg/L	<0.2	0.2	0.2	<0.2
Zinc (Zn), µg/L	9.8	13.5	20.9	22.8

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water

Project No. : MA11017

Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
& Kwun Tong Typhoon Shelter Improvement Works (Phase 1)

Custody No. : MA11017/150526

Sampling Date : 2015-05-26

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

Page: 2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22486-1	22486-2	22486-3	22486-4	22486-5	22486-6
Suspended Solids (SS), mg/L	19.4	16.2	12.1	16.2	5.8	14.0
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.57	0.58	0.58	0.56	0.54	0.61
Cadmium (Cd), µg/L	0.3	0.5	<0.1	0.3	0.1	0.1
Chromium (Cr), µg/L	3.1	2.4	1.5	3.0	1.5	2.6
Copper (Cu), µg/L	6.7	7.7	6.5	7.7	6.0	5.2
Mercury (Hg), µg/L	0.3	0.3	<0.2	0.2	0.2	0.2
Nickel (Ni), µg/L	2.5	3.0	2.0	1.4	2.2	1.8
Lead (Pb), µg/L	1.5	1.3	0.6	0.9	1.0	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	19.1	22.8	10.7	15.7	18.1	18.1

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22486-7	22486-8	22486-9	22486-10	22486-11	22486-12
Suspended Solids (SS), mg/L	13.8	14.1	11.7	7.9	13.3	15.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.56	0.56	0.53	0.51	0.55	0.56
Cadmium (Cd), µg/L	0.3	<0.1	0.1	0.1	0.1	0.3
Chromium (Cr), µg/L	1.1	1.2	1.2	1.4	2.5	1.1
Copper (Cu), µg/L	5.0	6.9	7.6	5.9	6.1	5.4
Mercury (Hg), µg/L	0.2	0.2	<0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.1	1.6	2.0	1.4	2.9	1.6
Lead (Pb), µg/L	1.6	1.1	1.0	0.9	0.7	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	12.2	13.8	21.9	22.5	14.9	15.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22486-13	22486-14	22486-15	22486-16	22486-17	22486-18
Suspended Solids (SS), mg/L	4.8	11.5	4.9	5.0	6.8	6.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.57	0.56	0.58	0.58	0.58	0.60
Cadmium (Cd), µg/L	<0.1	0.2	0.1	0.3	0.4	0.3
Chromium (Cr), µg/L	1.5	2.9	1.5	1.2	1.6	2.4
Copper (Cu), µg/L	5.8	6.2	5.1	6.2	7.7	7.9
Mercury (Hg), µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.7	2.2	1.1	1.6	1.5	2.0
Lead (Pb), µg/L	0.7	0.9	1.4	1.0	0.7	1.5
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	21.0	21.3	11.0	13.8	12.7	18.8

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22486-19	22486-20	22486-21	22486-22	22486-23	22486-24
Suspended Solids (SS), mg/L	6.0	16.4	20.1	15.4	13.0	17.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.67	0.61	0.58	0.60	0.58	0.56
Cadmium (Cd), µg/L	0.2	0.4	0.3	0.5	<0.1	0.3
Chromium (Cr), µg/L	3.0	2.0	3.0	2.5	1.5	3.0
Copper (Cu), µg/L	6.2	6.7	6.7	7.5	6.4	8.0
Mercury (Hg), µg/L	0.3	<0.2	0.3	0.3	<0.2	0.2
Nickel (Ni), µg/L	3.0	2.5	2.5	2.9	2.0	1.4
Lead (Pb), µg/L	1.5	1.3	1.6	1.3	0.6	0.9
Silver (Ag), µg/L	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	18.2	19.0	19.3	22.7	10.7	16.0

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22486-25	22486-26	22486-27	22486-28	22486-29	22486-30
Suspended Solids (SS), mg/L	5.7	14.5	13.6	14.1	11.9	7.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.53	0.61	0.55	0.55	0.52	0.51
Cadmium (Cd), µg/L	0.1	0.1	0.3	<0.1	0.1	0.1
Chromium (Cr), µg/L	1.5	2.5	1.1	1.2	1.2	1.4
Copper (Cu), µg/L	5.9	5.1	4.8	7.0	7.9	5.9
Mercury (Hg), µg/L	0.2	0.2	0.2	0.2	<0.2	0.2
Nickel (Ni), µg/L	2.1	1.8	2.1	1.6	2.0	1.4
Lead (Pb), µg/L	1.0	1.0	1.6	1.1	0.9	0.9
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	17.8	17.5	12.1	13.6	21.2	23.1

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22486-31	22486-32	22486-33	22486-34	22486-35	22486-36
Suspended Solids (SS), mg/L	13.7	17.1	4.7	10.6	4.9	5.1
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.57	0.58	0.54	0.54	0.59	0.56
Cadmium (Cd), µg/L	0.1	0.3	<0.1	0.2	0.1	0.3
Chromium (Cr), µg/L	2.6	1.1	1.4	2.7	1.5	1.2
Copper (Cu), µg/L	6.2	5.3	5.8	6.4	5.0	6.3
Mercury (Hg), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	2.8	1.5	1.7	2.4	1.1	1.6
Lead (Pb), µg/L	0.7	1.0	0.7	0.9	1.4	1.0
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	15.3	15.6	19.9	20.8	10.5	13.7

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22486-37	22486-38	22486-39	22486-40
Suspended Solids (SS), mg/L	6.8	6.7	5.8	16.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	0.56	0.61	0.66	0.61
Cadmium (Cd), µg/L	0.4	0.3	0.2	0.4
Chromium (Cr), µg/L	1.6	2.4	2.9	2.0
Copper (Cu), µg/L	7.3	7.6	6.2	6.6
Mercury (Hg), µg/L	<0.2	<0.2	0.3	<0.2
Nickel (Ni), µg/L	1.5	2.0	3.0	2.5
Lead (Pb), µg/L	0.7	1.6	1.5	1.3
Silver (Ag), µg/L	0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	12.8	19.3	19.0	18.5

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

ATTN: Miss Mei Ling Tang

Page: 1 of 5

Sample Description : 40 liquid samples as received by customer said to be water
Project No. : MA11017
Project Name : Contract No. KL/2010/02 Kai Tak Development – Kai Tak Approach Channel
 & Kwun Tong Typhoon Shelter Improvement Works (Phase 1)
Custody No. : MA11017/150528
Sampling Date : 2015-05-28

Test Requested & Methodology:

Item	Parameters	Ref. Method	Limit of Reporting
1	Suspended Solids (SS)	APHA 17ed 2540 D	*0.5 mg/L
2	Nitrate-nitrogen (NO ₃ -N)	In-house method SOP056 (FIA)	*0.01 mg NO ₃ -N/L
3	Cadmium (Cd)	In-house method SOP053 (ICP-AES) and SOP076 (ICP-MS)	*0.1 µg/L
4	Chromium (Cr)		*0.2 µg/L
5	Copper (Cu)		*0.2 µg/L
6	Mercury (Hg)		*0.2 µg/L
7	Nickel (Ni)		*0.2 µg/L
8	Lead (Pb)		*0.2 µg/L
9	Silver (Ag)		*0.2 µg/L
10	Zinc (Zn)		*0.4 µg/L

Remark: 1) * Limit of Reporting is reported as Detection Limit

PREPARED AND CHECKED BY:
For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03
Page:	2 of 5

Results:

Sample ID	W1-a	W2-a	W3-a	W3-a	W4-a	W4-a
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22499-1	22499-2	22499-3	22499-4	22499-5	22499-6
Suspended Solids (SS), mg/L	13.0	8.9	9.6	8.0	8.9	7.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	3.77	1.70	0.42	2.21	0.71	0.44
Cadmium (Cd), µg/L	0.5	0.3	0.2	0.4	0.5	0.4
Chromium (Cr), µg/L	2.1	3.1	1.8	3.1	3.0	1.6
Copper (Cu), µg/L	7.0	8.0	5.4	8.2	8.2	7.7
Mercury (Hg), µg/L	0.3	0.3	0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.9	3.0	1.5	1.1	2.1	2.2
Lead (Pb), µg/L	1.6	1.3	0.6	0.7	0.6	0.9
Silver (Ag), µg/L	0.2	0.2	<0.2	0.2	0.2	0.2
Zinc (Zn), µg/L	17.0	19.9	15.0	8.3	21.0	13.3

Sample ID	W4-a	W5-a	W5-a	W5-a	W1-a	W2-a
Sampling Depth	B	S	M	B	M	M
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Flood	Mid-Flood
Sample Number	22499-7	22499-8	22499-9	22499-10	22499-11	22499-12
Suspended Solids (SS), mg/L	7.2	6.0	7.9	9.3	9.6	6.4
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.26	0.47	0.42	0.31	0.76	0.77
Cadmium (Cd), µg/L	<0.1	0.1	0.2	0.5	0.4	0.3
Chromium (Cr), µg/L	1.1	1.9	1.1	1.4	2.1	1.6
Copper (Cu), µg/L	5.8	6.4	5.1	6.5	6.9	5.1
Mercury (Hg), µg/L	0.2	<0.2	<0.2	0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.2	1.5	2.4	2.3	1.0	2.1
Lead (Pb), µg/L	1.0	0.6	0.9	1.5	0.9	0.9
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	13.9	15.0	12.8	9.7	10.8	15.0

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

Page: 3 of 5

Results:

Sample ID	W3-a	W3-a	W4-a	W4-a	W4-a	W5-a
Sampling Depth	S	B	S	M	B	S
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22499-13	22499-14	22499-15	22499-16	22499-17	22499-18
Suspended Solids (SS), mg/L	6.8	6.9	8.0	9.1	8.4	7.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	1.51	0.75	0.81	0.80	0.77	0.81
Cadmium (Cd), µg/L	0.5	0.3	0.3	0.3	0.4	0.4
Chromium (Cr), µg/L	2.9	1.1	1.6	1.1	1.4	2.6
Copper (Cu), µg/L	6.4	5.3	7.5	6.6	5.9	6.6
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.8	1.8	2.7	1.7	1.5	2.1
Lead (Pb), µg/L	1.4	1.3	0.7	1.2	1.1	1.1
Silver (Ag), µg/L	<0.2	<0.2	<0.2	0.2	<0.2	<0.2
Zinc (Zn), µg/L	20.7	18.6	18.0	9.4	10.0	17.7

Sample ID	W5-a	W5-a	W1-b	W2-b	W3-b	W3-b
Sampling Depth	M	B	M	M	S	B
Tide	Mid-Flood	Mid-Flood	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22499-19	22499-20	22499-21	22499-22	22499-23	22499-24
Suspended Solids (SS), mg/L	4.1	9.8	13.2	8.7	9.2	8.3
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.84	0.83	3.69	1.70	0.42	2.18
Cadmium (Cd), µg/L	0.3	0.5	0.5	0.3	0.2	0.4
Chromium (Cr), µg/L	2.8	3.1	2.1	3.2	1.7	3.0
Copper (Cu), µg/L	6.1	5.8	6.9	7.9	5.5	8.2
Mercury (Hg), µg/L	<0.2	0.3	0.3	0.3	0.2	<0.2
Nickel (Ni), µg/L	1.1	2.8	2.0	3.1	1.4	1.1
Lead (Pb), µg/L	1.3	1.3	1.6	1.2	0.6	0.7
Silver (Ag), µg/L	0.2	<0.2	0.2	0.2	<0.2	0.2
Zinc (Zn), µg/L	13.5	22.1	16.8	20.1	14.5	8.6

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

Page: 4 of 5

Results:

Sample ID	W4-b	W4-b	W4-b	W5-b	W5-b	W5-b
Sampling Depth	S	M	B	S	M	B
Tide	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb	Mid-Ebb
Sample Number	22499-25	22499-26	22499-27	22499-28	22499-29	22499-30
Suspended Solids (SS), mg/L	8.6	7.4	7.0	5.8	7.9	9.7
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.69	0.43	0.26	0.47	0.41	0.31
Cadmium (Cd), µg/L	0.5	0.4	<0.1	0.1	0.2	0.4
Chromium (Cr), µg/L	3.0	1.6	1.0	1.9	1.1	1.3
Copper (Cu), µg/L	7.8	7.5	5.8	6.5	4.8	6.4
Mercury (Hg), µg/L	<0.2	<0.2	0.2	<0.2	<0.2	0.2
Nickel (Ni), µg/L	2.2	2.1	1.2	1.5	2.4	2.4
Lead (Pb), µg/L	0.7	0.8	1.0	0.6	0.9	1.6
Silver (Ag), µg/L	0.2	0.2	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	21.0	13.6	14.0	14.7	12.7	9.8

Sample ID	W1-b	W2-b	W3-b	W3-b	W4-b	W4-b
Sampling Depth	M	M	S	B	S	M
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22499-31	22499-32	22499-33	22499-34	22499-35	22499-36
Suspended Solids (SS), mg/L	9.9	6.6	6.7	6.7	7.8	9.2
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.73	0.73	1.45	0.77	0.83	0.80
Cadmium (Cd), µg/L	0.4	0.3	0.5	0.4	0.5	0.3
Chromium (Cr), µg/L	2.1	1.6	2.8	1.1	1.6	1.0
Copper (Cu), µg/L	6.8	4.9	6.3	5.5	7.4	6.9
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	1.0	2.2	1.7	1.9	2.8	1.7
Lead (Pb), µg/L	0.9	0.9	1.4	1.3	0.7	1.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Zinc (Zn), µg/L	10.5	15.4	21.4	17.8	18.4	9.1

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

TEST REPORT

Laboratory No.:	22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

Page: 5 of 5

Results:

Sample ID	W4-b	W5-b	W5-b	W5-b
Sampling Depth	B	S	M	B
Tide	Mid-Flood	Mid-Flood	Mid-Flood	Mid-Flood
Sample Number	22499-37	22499-38	22499-39	22499-40
Suspended Solids (SS), mg/L	8.4	7.6	4.1	9.8
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	0.75	0.82	0.82	0.83
Cadmium (Cd), µg/L	0.4	0.4	0.3	0.5
Chromium (Cr), µg/L	1.4	2.6	2.8	3.0
Copper (Cu), µg/L	6.0	6.4	6.1	5.8
Mercury (Hg), µg/L	<0.2	<0.2	<0.2	0.3
Nickel (Ni), µg/L	1.5	2.0	1.1	2.7
Lead (Pb), µg/L	1.1	1.1	1.3	1.3
Silver (Ag), µg/L	<0.2	<0.2	0.2	<0.2
Zinc (Zn), µg/L	9.9	17.6	13.5	22.2

Remarks: 1) < = less than

2) S = Surface, M = Middle, B = Bottom

*****END OF REPORT*****

**APPENDIX G
QUALITY CONTROL REPORT FOR
WATER QUALITY MONITORING**

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	93	95	80-120%
Nitrate-nitrogen (NO ₃ -N), %	93	99	80-120%
Cadmium (Cd), %	96	94	80-120%
Chromium (Cr), %	93	94	80-120%
Copper (Cu), %	92	97	80-120%
Mercury (Hg), %	95	98	80-120%
Nickel (Ni), %	96	100	80-120%
Lead (Pb), %	98	94	80-120%
Silver (Ag), %	97	94	80-120%
Zinc (Zn), %	97	96	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22354

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22354
Date of Issue:	2015-05-07
Date Received:	2015-05-02
Date Tested:	2015-05-02
Date Completed:	2015-05-07

Page: 2 of 2

Sample Spike

Parameter	22354-1 spk	22354-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	96	93	80-120%
Cadmium (Cd), %	92	90	80-120%
Chromium (Cr), %	98	86	80-120%
Copper (Cu), %	95	91	80-120%
Mercury (Hg), %	88	92	80-120%
Nickel (Ni), %	97	98	80-120%
Lead (Pb), %	96	92	80-120%
Silver (Ag), %	98	97	80-120%
Zinc (Zn), %	95	89	80-120%

Sample Duplicate

Parameter	22354-20 chk	22354-40 chk	Acceptance
Suspended Solids (SS), %	3	5	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	6	7	RPD _≤ 20%
Cadmium (Cd), %	6	6	RPD _≤ 20%
Chromium (Cr), %	4	7	RPD _≤ 20%
Copper (Cu), %	6	4	RPD _≤ 20%
Mercury (Hg), %	6	3	RPD _≤ 20%
Nickel (Ni), %	7	5	RPD _≤ 20%
Lead (Pb), %	3	7	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	7	6	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22354

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	95	98	80-120%
Nitrate-nitrogen (NO ₃ -N), %	92	97	80-120%
Cadmium (Cd), %	93	98	80-120%
Chromium (Cr), %	92	96	80-120%
Copper (Cu), %	95	97	80-120%
Mercury (Hg), %	90	95	80-120%
Nickel (Ni), %	101	94	80-120%
Lead (Pb), %	95	93	80-120%
Silver (Ag), %	97	94	80-120%
Zinc (Zn), %	100	95	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22361

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22361
Date of Issue:	2015-05-08
Date Received:	2015-05-04
Date Tested:	2015-05-04
Date Completed:	2015-05-08

Page: 2 of 2

Sample Spike

Parameter	22361-1 spk	22361-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	97	95	80-120%
Cadmium (Cd), %	85	95	80-120%
Chromium (Cr), %	98	98	80-120%
Copper (Cu), %	100	95	80-120%
Mercury (Hg), %	96	97	80-120%
Nickel (Ni), %	98	94	80-120%
Lead (Pb), %	94	96	80-120%
Silver (Ag), %	98	94	80-120%
Zinc (Zn), %	90	96	80-120%

Sample Duplicate

Parameter	22361-20 chk	22361-40 chk	Acceptance
Suspended Solids (SS), %	5	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	4	RPD _≤ 20%
Cadmium (Cd), %	3	3	RPD _≤ 20%
Chromium (Cr), %	7	6	RPD _≤ 20%
Copper (Cu), %	3	4	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	4	4	RPD _≤ 20%
Lead (Pb), %	4	4	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	4	5	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22361

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	97	89	80-120%
Nitrate-nitrogen (NO ₃ -N), %	95	98	80-120%
Cadmium (Cd), %	90	99	80-120%
Chromium (Cr), %	91	88	80-120%
Copper (Cu), %	92	93	80-120%
Mercury (Hg), %	92	91	80-120%
Nickel (Ni), %	93	96	80-120%
Lead (Pb), %	89	91	80-120%
Silver (Ag), %	97	96	80-120%
Zinc (Zn), %	92	96	80-120%

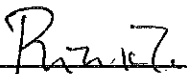
Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22375

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22375
Date of Issue:	2015-05-12
Date Received:	2015-05-06
Date Tested:	2015-05-06
Date Completed:	2015-05-12

Page: 2 of 2

Sample Spike

Parameter	22375-1 spk	22375-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	93	93	80-120%
Cadmium (Cd), %	95	92	80-120%
Chromium (Cr), %	93	89	80-120%
Copper (Cu), %	96	99	80-120%
Mercury (Hg), %	97	91	80-120%
Nickel (Ni), %	90	98	80-120%
Lead (Pb), %	90	88	80-120%
Silver (Ag), %	91	94	80-120%
Zinc (Zn), %	86	98	80-120%

Sample Duplicate

Parameter	22375-20 chk	22375-40 chk	Acceptance
Suspended Solids (SS), %	3	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	5	RPD _≤ 20%
Cadmium (Cd), %	3	4	RPD _≤ 20%
Chromium (Cr), %	6	4	RPD _≤ 20%
Copper (Cu), %	3	5	RPD _≤ 20%
Mercury (Hg), %	4	4	RPD _≤ 20%
Nickel (Ni), %	7	4	RPD _≤ 20%
Lead (Pb), %	4	5	RPD _≤ 20%
Silver (Ag), %	4	4	RPD _≤ 20%
Zinc (Zn), %	4	5	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22375

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	92	94	80-120%
Nitrate-nitrogen (NO ₃ -N), %	89	98	80-120%
Cadmium (Cd), %	94	94	80-120%
Chromium (Cr), %	95	91	80-120%
Copper (Cu), %	92	97	80-120%
Mercury (Hg), %	97	100	80-120%
Nickel (Ni), %	96	95	80-120%
Lead (Pb), %	94	97	80-120%
Silver (Ag), %	92	98	80-120%
Zinc (Zn), %	97	93	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22395

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22395
Date of Issue:	2015-05-14
Date Received:	2015-05-08
Date Tested:	2015-05-08
Date Completed:	2015-05-14

Page: 2 of 2

Sample Spike

Parameter	22395-1 spk	22395-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	97	95	80-120%
Cadmium (Cd), %	91	89	80-120%
Chromium (Cr), %	90	93	80-120%
Copper (Cu), %	98	98	80-120%
Mercury (Hg), %	91	93	80-120%
Nickel (Ni), %	92	100	80-120%
Lead (Pb), %	93	92	80-120%
Silver (Ag), %	97	95	80-120%
Zinc (Zn), %	94	98	80-120%

Sample Duplicate

Parameter	22395-20 chk	22395-40 chk	Acceptance
Suspended Solids (SS), %	3	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	4	RPD _≤ 20%
Cadmium (Cd), %	6	5	RPD _≤ 20%
Chromium (Cr), %	4	5	RPD _≤ 20%
Copper (Cu), %	3	6	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	3	6	RPD _≤ 20%
Lead (Pb), %	4	6	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	6	3	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22395

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ ⁻ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	94	92	80-120%
Nitrate-nitrogen (NO ₃ -N), %	100	92	80-120%
Cadmium (Cd), %	96	101	80-120%
Chromium (Cr), %	98	96	80-120%
Copper (Cu), %	99	99	80-120%
Mercury (Hg), %	92	94	80-120%
Nickel (Ni), %	91	97	80-120%
Lead (Pb), %	88	98	80-120%
Silver (Ag), %	91	98	80-120%
Zinc (Zn), %	94	93	80-120%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22405

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22405
Date of Issue:	2015-05-15
Date Received:	2015-05-11
Date Tested:	2015-05-11
Date Completed:	2015-05-15

Page: 2 of 2

Sample Spike

Parameter	22405-1 spk	22405-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	91	96	80-120%
Cadmium (Cd), %	99	92	80-120%
Chromium (Cr), %	91	97	80-120%
Copper (Cu), %	93	95	80-120%
Mercury (Hg), %	93	93	80-120%
Nickel (Ni), %	96	91	80-120%
Lead (Pb), %	88	93	80-120%
Silver (Ag), %	91	98	80-120%
Zinc (Zn), %	94	89	80-120%

Sample Duplicate

Parameter	22405-20 chk	22405-40 chk	Acceptance
Suspended Solids (SS), %	5	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	6	6	RPD _≤ 20%
Cadmium (Cd), %	5	3	RPD _≤ 20%
Chromium (Cr), %	3	5	RPD _≤ 20%
Copper (Cu), %	6	4	RPD _≤ 20%
Mercury (Hg), %	5	4	RPD _≤ 20%
Nickel (Ni), %	3	3	RPD _≤ 20%
Lead (Pb), %	6	3	RPD _≤ 20%
Silver (Ag), %	4	4	RPD _≤ 20%
Zinc (Zn), %	4	4	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22405

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

ATTN: Miss Mei Ling Tang

Page: 1 of 2

QC report:
Method Blank

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	95	101	80-120%
Nitrate-nitrogen (NO ₃ -N), %	99	90	80-120%
Cadmium (Cd), %	99	95	80-120%
Chromium (Cr), %	91	93	80-120%
Copper (Cu), %	97	91	80-120%
Mercury (Hg), %	94	96	80-120%
Nickel (Ni), %	97	98	80-120%
Lead (Pb), %	99	95	80-120%
Silver (Ag), %	96	99	80-120%
Zinc (Zn), %	92	100	80-120%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22417

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22417
Date of Issue:	2015-05-19
Date Received:	2015-05-13
Date Tested:	2015-05-13
Date Completed:	2015-05-19

Page: 2 of 2

Sample Spike

Parameter	22417-1 spk	22417-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	92	94	80-120%
Cadmium (Cd), %	86	89	80-120%
Chromium (Cr), %	87	91	80-120%
Copper (Cu), %	87	91	80-120%
Mercury (Hg), %	92	97	80-120%
Nickel (Ni), %	95	88	80-120%
Lead (Pb), %	95	88	80-120%
Silver (Ag), %	101	88	80-120%
Zinc (Zn), %	98	90	80-120%

Sample Duplicate

Parameter	22417-20 chk	22417-40 chk	Acceptance
Suspended Solids (SS), %	4	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	3	5	RPD _≤ 20%
Cadmium (Cd), %	6	5	RPD _≤ 20%
Chromium (Cr), %	7	4	RPD _≤ 20%
Copper (Cu), %	3	5	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	5	3	RPD _≤ 20%
Lead (Pb), %	4	7	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	4	7	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22417

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	94	95	80-120%
Nitrate-nitrogen (NO ₃ -N), %	99	93	80-120%
Cadmium (Cd), %	91	95	80-120%
Chromium (Cr), %	99	95	80-120%
Copper (Cu), %	96	97	80-120%
Mercury (Hg), %	96	91	80-120%
Nickel (Ni), %	94	96	80-120%
Lead (Pb), %	101	97	80-120%
Silver (Ag), %	99	100	80-120%
Zinc (Zn), %	98	93	80-120%

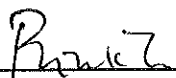
Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22430

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22430
Date of Issue:	2015-05-21
Date Received:	2015-05-15
Date Tested:	2015-05-15
Date Completed:	2015-05-21

Page: 2 of 2

Sample Spike

Parameter	22430-1 spk	22430-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	90	93	80-120%
Cadmium (Cd), %	100	94	80-120%
Chromium (Cr), %	90	93	80-120%
Copper (Cu), %	86	85	80-120%
Mercury (Hg), %	89	90	80-120%
Nickel (Ni), %	89	100	80-120%
Lead (Pb), %	84	92	80-120%
Silver (Ag), %	87	96	80-120%
Zinc (Zn), %	100	92	80-120%

Sample Duplicate

Parameter	22430-20 chk	22430-40 chk	Acceptance
Suspended Solids (SS), %	3	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	7	6	RPD _≤ 20%
Cadmium (Cd), %	7	7	RPD _≤ 20%
Chromium (Cr), %	4	3	RPD _≤ 20%
Copper (Cu), %	4	4	RPD _≤ 20%
Mercury (Hg), %	3	4	RPD _≤ 20%
Nickel (Ni), %	6	3	RPD _≤ 20%
Lead (Pb), %	4	6	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	4	6	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22430

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	95	94	80-120%
Nitrate-nitrogen (NO ₃ -N), %	97	93	80-120%
Cadmium (Cd), %	96	90	80-120%
Chromium (Cr), %	91	91	80-120%
Copper (Cu), %	96	100	80-120%
Mercury (Hg), %	88	95	80-120%
Nickel (Ni), %	93	97	80-120%
Lead (Pb), %	102	89	80-120%
Silver (Ag), %	98	97	80-120%
Zinc (Zn), %	95	92	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22444

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22444
Date of Issue:	2015-05-22
Date Received:	2015-05-18
Date Tested:	2015-05-18
Date Completed:	2015-05-22

Page: 2 of 2

Sample Spike

Parameter	22444-1 spk	22444-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	96	99	80-120%
Cadmium (Cd), %	93	96	80-120%
Chromium (Cr), %	96	98	80-120%
Copper (Cu), %	96	91	80-120%
Mercury (Hg), %	92	91	80-120%
Nickel (Ni), %	93	89	80-120%
Lead (Pb), %	100	94	80-120%
Silver (Ag), %	98	94	80-120%
Zinc (Zn), %	94	90	80-120%

Sample Duplicate

Parameter	22444-20 chk	22444-40 chk	Acceptance
Suspended Solids (SS), %	4	3	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	6	4	RPD _≤ 20%
Cadmium (Cd), %	5	4	RPD _≤ 20%
Chromium (Cr), %	3	6	RPD _≤ 20%
Copper (Cu), %	6	3	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	4	5	RPD _≤ 20%
Lead (Pb), %	4	3	RPD _≤ 20%
Silver (Ag), %	4	5	RPD _≤ 20%
Zinc (Zn), %	5	5	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22444

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

ATTN: Miss Mei Ling Tang

Page: 1 of 2

QC report:
Method Blank

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	94	98	80-120%
Nitrate-nitrogen (NO ₃ -N), %	91	92	80-120%
Cadmium (Cd), %	93	98	80-120%
Chromium (Cr), %	98	91	80-120%
Copper (Cu), %	98	89	80-120%
Mercury (Hg), %	96	99	80-120%
Nickel (Ni), %	93	91	80-120%
Lead (Pb), %	92	95	80-120%
Silver (Ag), %	100	95	80-120%
Zinc (Zn), %	92	93	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22459

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**



PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22459
Date of Issue:	2015-05-27
Date Received:	2015-05-20
Date Tested:	2015-05-20
Date Completed:	2015-05-27

Page: 2 of 2

Sample Spike

Parameter	22459-1 spk	22459-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	93	90	80-120%
Cadmium (Cd), %	92	98	80-120%
Chromium (Cr), %	93	98	80-120%
Copper (Cu), %	98	91	80-120%
Mercury (Hg), %	96	93	80-120%
Nickel (Ni), %	90	99	80-120%
Lead (Pb), %	94	90	80-120%
Silver (Ag), %	89	100	80-120%
Zinc (Zn), %	88	93	80-120%

Sample Duplicate

Parameter	22459-20 chk	22459-40 chk	Acceptance
Suspended Solids (SS), %	5	3	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	5	RPD _≤ 20%
Cadmium (Cd), %	4	8	RPD _≤ 20%
Chromium (Cr), %	3	6	RPD _≤ 20%
Copper (Cu), %	5	6	RPD _≤ 20%
Mercury (Hg), %	5	3	RPD _≤ 20%
Nickel (Ni), %	5	6	RPD _≤ 20%
Lead (Pb), %	5	5	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	3	4	RPD _≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22459

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22468
Date of Issue:	2015-05-29
Date Received:	2015-05-22
Date Tested:	2015-05-22
Date Completed:	2015-05-29

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	98	98	80-120%
Nitrate-nitrogen (NO ₃ -N), %	91	96	80-120%
Cadmium (Cd), %	94	100	80-120%
Chromium (Cr), %	96	95	80-120%
Copper (Cu), %	95	96	80-120%
Mercury (Hg), %	91	93	80-120%
Nickel (Ni), %	94	96	80-120%
Lead (Pb), %	99	94	80-120%
Silver (Ag), %	91	97	80-120%
Zinc (Zn), %	94	88	80-120%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22468

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.: QC22468
Date of Issue: 2015-05-29
Date Received: 2015-05-22
Date Tested: 2015-05-22
Date Completed: 2015-05-29

Page: 2 of 2

Sample Spike

Parameter	22468-1 spk	22468-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	92	87	80-120%
Cadmium (Cd), %	99	91	80-120%
Chromium (Cr), %	88	94	80-120%
Copper (Cu), %	93	88	80-120%
Mercury (Hg), %	93	90	80-120%
Nickel (Ni), %	96	97	80-120%
Lead (Pb), %	93	86	80-120%
Silver (Ag), %	90	93	80-120%
Zinc (Zn), %	93	98	80-120%

Sample Duplicate

Parameter	22468-20 chk	22468-40 chk	Acceptance
Suspended Solids (SS), %	5	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	6	RPD _≤ 20%
Cadmium (Cd), %	7	3	RPD _≤ 20%
Chromium (Cr), %	3	4	RPD _≤ 20%
Copper (Cu), %	3	3	RPD _≤ 20%
Mercury (Hg), %	4	4	RPD _≤ 20%
Nickel (Ni), %	3	5	RPD _≤ 20%
Lead (Pb), %	4	6	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	4	4	RPD _≤ 20%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22468

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	90	97	80-120%
Nitrate-nitrogen (NO ₃ -N), %	98	96	80-120%
Cadmium (Cd), %	94	95	80-120%
Chromium (Cr), %	98	93	80-120%
Copper (Cu), %	94	92	80-120%
Mercury (Hg), %	92	94	80-120%
Nickel (Ni), %	95	95	80-120%
Lead (Pb), %	100	93	80-120%
Silver (Ag), %	89	93	80-120%
Zinc (Zn), %	97	97	80-120%

Remarks: 1) < = less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22486

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22486
Date of Issue:	2015-06-01
Date Received:	2015-05-26
Date Tested:	2015-05-26
Date Completed:	2015-06-01

Page: 2 of 2

Sample Spike

Parameter	22486-1 spk	22486-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	90	87	80-120%
Cadmium (Cd), %	100	98	80-120%
Chromium (Cr), %	91	99	80-120%
Copper (Cu), %	101	94	80-120%
Mercury (Hg), %	97	85	80-120%
Nickel (Ni), %	90	89	80-120%
Lead (Pb), %	91	99	80-120%
Silver (Ag), %	99	89	80-120%
Zinc (Zn), %	92	88	80-120%

Sample Duplicate

Parameter	22486-20 chk	22486-40 chk	Acceptance
Suspended Solids (SS), %	5	3	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	4	5	RPD _≤ 20%
Cadmium (Cd), %	N/A	N/A	RPD _≤ 20%
Chromium (Cr), %	5	4	RPD _≤ 20%
Copper (Cu), %	4	5	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	4	3	RPD _≤ 20%
Lead (Pb), %	5	4	RPD _≤ 20%
Silver (Ag), %	4	5	RPD _≤ 20%
Zinc (Zn), %	4	5	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22486

*****END OF REPORT*****

TEST REPORT

APPLICANT: Cinotech Consultants Limited
RM 1710, Technology Park,
18 On Lai Street,
Shatin, N.T., Hong Kong

Laboratory No.:	QC22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

ATTN: Miss Mei Ling Tang
QC report:
Method Blank

Page: 1 of 2

Parameter	MB 1	MB 2	Acceptance
Suspended Solids (SS), mg/L	<0.5	<0.5	<0.5
Nitrate-nitrogen (NO ₃ -N), mg NO ₃ -N/L	<0.01	<0.01	<0.01
Cadmium (Cd), µg/L	<0.1	<0.1	<0.1
Chromium (Cr), µg/L	<0.2	<0.2	<0.2
Copper (Cu), µg/L	<0.2	<0.2	<0.2
Mercury (Hg), µg/L	<0.2	<0.2	<0.2
Nickel (Ni), µg/L	<0.2	<0.2	<0.2
Lead (Pb), µg/L	<0.2	<0.2	<0.2
Silver (Ag), µg/L	<0.2	<0.2	<0.2
Zinc (Zn), µg/L	<0.4	<0.4	<0.4

Method QC

Parameter	MQC1	MQC2	Acceptance
Suspended Solids (SS), %	92	92	80-120%
Nitrate-nitrogen (NO ₃ -N), %	92	92	80-120%
Cadmium (Cd), %	90	93	80-120%
Chromium (Cr), %	100	91	80-120%
Copper (Cu), %	94	97	80-120%
Mercury (Hg), %	96	100	80-120%
Nickel (Ni), %	99	91	80-120%
Lead (Pb), %	97	95	80-120%
Silver (Ag), %	95	96	80-120%
Zinc (Zn), %	96	96	80-120%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22499

PREPARED AND CHECKED BY:

For and On Behalf of **WELLAB Ltd.**


PATRICK TSE
Laboratory Manager

TEST REPORT

Laboratory No.:	QC22499
Date of Issue:	2015-06-03
Date Received:	2015-05-28
Date Tested:	2015-05-28
Date Completed:	2015-06-03

Page: 2 of 2

Sample Spike

Parameter	22499-1 spk	22499-21 spk	Acceptance
Suspended Solids (SS)	N/A	N/A	N/A
Nitrate-nitrogen (NO ₃ -N), %	100	93	80-120%
Cadmium (Cd), %	98	89	80-120%
Chromium (Cr), %	88	89	80-120%
Copper (Cu), %	93	91	80-120%
Mercury (Hg), %	89	92	80-120%
Nickel (Ni), %	96	89	80-120%
Lead (Pb), %	95	93	80-120%
Silver (Ag), %	87	90	80-120%
Zinc (Zn), %	92	85	80-120%

Sample Duplicate

Parameter	22499-20 chk	22499-40 chk	Acceptance
Suspended Solids (SS), %	5	4	RPD _≤ 20%
Nitrate-nitrogen (NO ₃ -N), %	7	4	RPD _≤ 20%
Cadmium (Cd), %	7	3	RPD _≤ 20%
Chromium (Cr), %	3	3	RPD _≤ 20%
Copper (Cu), %	3	6	RPD _≤ 20%
Mercury (Hg), %	N/A	N/A	RPD _≤ 20%
Nickel (Ni), %	4	5	RPD _≤ 20%
Lead (Pb), %	6	6	RPD _≤ 20%
Silver (Ag), %	N/A	N/A	RPD _≤ 20%
Zinc (Zn), %	4	4	RPD _≤ 20%

Remarks: 1) <= less than

2) N/A = Not applicable

3) This report is the summary of quality control data for report number 22499

*****END OF REPORT*****

**APPENDIX H
EVENT AND ACTION PLAN FOR
MARINE WATER QUALITY**

Appendix H Event and Action Plan for Water Quality

EVENT	ACTION			
	ET	IEC	Engineer	Contractor
<p>Action level being exceeded by one sampling day</p>	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all work process and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p> <ol style="list-style-type: none"> 6. Repeat measurement on next day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess the effectiveness of the implemented mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all work process and methods; 4. Consider changes of working methods or slow down the work process; 5. Discuss with ET and IEC and propose mitigation measures to IEC and the Engineer; 6. Implement the agreed mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>

EVENT	ACTION			
	ET	IEC	Engineer	Contractor
Action level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Identify source(s) of impact; 2. Inform IEC and Contractor; 3. Check monitoring data, all work process and Contractor's working methods; 4. Discuss mitigation measures with IEC and Contractor; 5. Ensure mitigation measures are implemented; 6. Prepare to increase the monitoring frequency to daily; <p>The above actions should be taken within 1 working day after the exceedance is identified)</p> <ol style="list-style-type: none"> 7. Repeat measurement on next working day of exceedance. 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess the effectiveness of the implemented mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check work process and methods; 4. Consider changes of working methods or slow down the work process; 5. Discuss with ET and IEC and propose mitigation measures to IEC and the Engineer within 3 working days; 6. Implement the agreed mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> 1. Repeat <i>in-situ</i> measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, Contractor and EPD; 4. Check monitoring data, all 	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor 	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all work process and methods; 4. Consider changes of working methods

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	<p>work process and Contractor's working methods;</p> <p>5. Discuss mitigation measures with IEC, the Engineer and Contractor;</p> <p>6. Ensure mitigation measures are implemented;</p> <p>7. Increase the monitoring frequency to daily until no exceedance of Limit Level.</p> <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>and advise the Engineer accordingly;</p> <p>3. Assess the effectiveness of the implemented mitigation measures.</p> <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>3. Make agreement on the mitigation measures to be implemented;</p> <p>4. Assess the effectiveness of the implemented mitigation measures.</p> <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<p>or slow down the work process;</p> <p>5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days;</p> <p>6. Implement the agreed mitigation measures.</p> <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>

EVENT	ACTION			
	ET	IEC	Engineer	Contractor
Limit level being exceeded by more than one consecutive sampling days	<ol style="list-style-type: none"> 1. Identify source(s) of impact; 2. Inform IEC, Contractor and EPD; 3. Check monitoring data, all work process and Contractor's working methods; 4. Discuss mitigation measures with IEC, Engineer and Contractor; 5. Ensure mitigation measures are implemented; 6. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the Engineer accordingly; 3. Assess the effectiveness of the implemented mitigation measures. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all work process and methods; 4. Consider changes of working methods or slow down the work process; 5. Discuss with ET, IEC and Engineer and propose mitigation measures to IEC and Engineer within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the Engineer, to slow down or to stop all or part of the marine work. <p>(The above actions should be taken within 1 working day after the exceedance is identified)</p>